Calls for service: Understanding police demand, the role of the police, and the role of call-handlers in managing demand.

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RESTRICTED ACCESS
This thesis contains sensitive police data which identifies the police force and as such should not be disseminated to anyone other than the internal and external examiners without the explicit consent of the author.

Glossary

ACPO: Association of Chief Police Officers

APCC: Association of Police and Crime Commissioners

CH: Call Handler

COP: College of Policing

FMS: Force Management Statement

HMIC: Her Majesty's Inspectorate of Constabulary.

HMICFRS: Her Majesty's Inspectorate of Constabulary and Fire & Rescue Services

HMICS: Her Majesty's Inspectorate of Constabulary in Scotland.

IMD: Indices of Multiple Deprivation

LSOA: Lower layer Super Output Areas

NPCC: National Police Chiefs Council

NPIA: National Policing Improvement Agency.

SLB: Street Level Bureaucrats

For the purpose of this thesis, the term 'police forces' will refer to forces in England and Wales unless otherwise stated. Policing activities can be performed by a variety of people, including private firms. This thesis will therefore use the terms 'police' and 'policing' to refer to the 43 territorial police forces in England and Wales and their employees.

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Abstract

Police forces in England and Wales have been under growing pressure to respond to increasingly complex crimes with diminishing resources. To ensure the most effective and efficient use of limited police resources, an accurate understanding of demand and resource requirements is vital. Using one police force as a case study this thesis offers a fresh account of police reactive demand through analysis of police call data alongside data from Freedom of Information requests, police.uk, the Crime Survey for England and Wales and the Index of Multiple Deprivation The findings highlight little appears to have changed since Goldstein (1968) posited that police function in two worlds (related and unrelated to criminal justice processes). Findings from this thesis suggest the social role of policing is still dominant with calls relating to 'Public Safety and Welfare' accounting for almost half of incidents (46.8%) in the force studied and crimes only accounting for 15.6%.

To further explore the themes highlighted within the secondary data analysis, data was collected via a survey and semi-structured interviews to examine the role of police Call Handlers (CH) in managing demand and resources. The thesis explores the unique role of the CH as gatekeeper to police resources; with call data suggesting CHs resolved 19% of calls and 25.3% of mental-health related calls without the need to dispatch any resources. It was shown that the use of telephone resolution as a demand management practice increased. There is also evidence of CHs having to determine the merits of a police response within a risk-averse culture and observing the 'just in case' principle (Ekblom and Heal, 1985). Findings suggest that CHs appear to have some discretion when prioritising calls for service.

Drawing upon the findings from both phases of the research, the thesis presents a new theoretical framework in the form of a Call Handler Decision Making Model (CHDMM) which outlines factors which influence decision making within a Force Control Room (FCR). Taken together, this is the largest and most detailed exploration of police reactive demand and decision making in the police FCR.

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Chapter 1 – Introduction – Why Police Demand?

The 2008 global recession has had long-term implications for police services across Europe, the United States and Australia, with the United States and the United Kingdom, in particularly, recognising the need to manage and reduce demand (Ruddell and Jones, 2014). Police forces in England and Wales have faced extreme pressure to adapt to changes in demand coupled with substantial reductions in their resources. The increasing complexity of crimes, such as child exploitation, and the increase in incidents involving mental health concerns and public safety and welfare have necessitated forces to prioritise the deployment of their resources (Institute for Government, 2020; College of Policing, 2015). Between 2010/2011 and 2018/19 central government funding for forces in England and Wales fell by 30% in real terms, with total funding falling by 19% (National Audit Office, 2018). With a reduction in overall funding, forces had to reduce their total workforce. Indeed, police forces were functioning with almost 45,000 fewer members of staff in 2018 than in 2010, including approximately 20,000 fewer police officers, 17,000 fewer police staff, and 7,000 fewer community support officers (Home Office, 2020a). This resulted in difficult choices having to be made regarding how to respond to demands for service while still ensuring the public have confidence in the police (HMICFRS, 2018a). Although the current government promised to recruit an additional 20,000 police officers in England and Wales by 2023, this will only return the numbers to 2010 levels (HMICFRS, 2021), with no mention of reversing the cuts to police staff.

The traditional view (or measure) of police demand is responding to calls for service and significant police resources are required to do so (College of Policing, 2015). (This measure of demand will be the focus of this thesis. There is evidence that forces have either failed to meet this demand properly or have inappropriately managed it, in some cases putting vulnerable people at serious risk of harm. Two such examples are police forces downgrading the severity of calls and emergency calls being placed in queues, mainly due to the lack of officers available to respond (HMICFRS, 2018a). Having an accurate understanding of demand is crucial to the design and delivery of policing services as well as the efficient and effective management of resources

(National Police Chiefs' Council (NPCC), 2017a). Much of the discussion regarding police demand focuses on funding and the number of police officers and staff available in each force, with little attention given to how the police call-handler (CH) manages the pressures associated with increased demands and diminished resources (see College of Policing, 2015; NPCC, 2017a). Of the 23.9 million calls received by police forces in England and Wales in 2017/18, on average, only 14% of calls and 24% of incidents[1] resulted in a crime report (Home Affairs Committee, 2018). Effective call handling and demand management are therefore imperative to allow forces to make best use of their available resources, ensure appropriate responses, and to provide a first-rate service to the public (Home Office, 2005). Ensuring accurate and complete information is obtained from the caller and that incidents are appropriately graded are examples of good practice in effective call handling (ibid).

The aforementioned financial pressures and reductions in resources combined with the increasingly complex nature of police work, places even more importance on having a clear understanding of what service the police are there to provide. There is a need to understand this to ascertain the resources and capabilities required to meet police demand. However, there has been a long-standing dispute in the UK about the role of the police (what they currently do) in particular what the police mandate (what they should be doing) is (Higgins, 2020). A consensus emerged from early research in the early 1970's that less than 20% of calls for service to the police were crime-related (Reiss, 1971; Webster, 1970; Wilson, 1970). Despite its importance, more recent research on the function of the police and police demand is sparse.

Although the police mandate will be discussed, recommending what the police mandate should be is beyond the remit of this thesis (as to consider this properly should involve discussions with other agencies to ascertain key issues and where responsibilities lie). However, this thesis will provide an important contribution to the ongoing debate by using police call data (999 and 101 calls for service– also referred to as incidents) to provide a fresh account of both the demands placed upon police forces

[1] Incidents are when a police force creates an incident log. Not all Command and Control calls will generate a log.

and the current role of the police in England and Wales. Due to the relatively well-documented growth in incidents involving people with mental health problems (College of Policing, 2015) which increased by 28% between 2014 and 2018 across 26 forces (The Police Foundation, 2022), this thesis will also examine these incidents as a specific form of demand placed upon the police. Although the police role consists of ensuring safety and providing protection, which applies to the way the police interact with people with mental health issues, there is uncertainty within policing as to whether dealing with mental health incidents is part of the traditional police role (Adelman, 2003).

The role of staff in force control rooms (FCRs) (and specifically that of the CH) in managing demand has also been overlooked by scholars. This thesis will address this gap in the research by examining how CHs prioritise calls and make resourcing decisions. Resources in this context is defined by the number of resources (officers) deployed to incidents. Indeed, the thesis will assess the resource data to identify resource intensive incident types and the most common types of resources used as this influences demand. It also considers their views on the role and remit of the police. It will provide a theoretical framework through which to better understand decision-making within the FCR, in particular which factors influence decision-making. The 999/101 call data is complemented with surveys and interviews with FCR staff to help address these gaps in the literature.

1.1 Aims and Objectives

The aims of this thesis are threefold:

1. To provide a picture of the role of the police and the nature of police demand and assess how forces are currently dealing with their demand, including mental health related demand.
2. To identify the role of the CH in managing demand, specifically in relation to their role as gatekeepers to police resources and whether their discretion has the potential to lead to the inequitable distribution of police services.
3. To provide a theoretical basis to identify the decision-making processes within control rooms and increase understanding of the decision-making process. The study will build a model which incorporates aspects of existing theories as well

as adopting specific contextual and situational factors that can influence CHs decision-making.

The objectives are:

1. To undertake an in-depth analysis of calls for service (999 and 101 calls) recorded on Force Command and Control systems which require a police presence or use of police resources to assess current demand and the response to incidents. It will also identify the current role of policing and ascertain whether this has changed over time (Aims 1 and 3).
2. To conduct temporal and geographical analysis using call and resource data to identify where and when incidents are being reported and where resources are being deployed. The call data will also be used to ascertain any inequitable distribution of police services across time and linked to the Indices of Multiple Deprivation to ascertain any inequitable distribution of police services across space (Aims 1 and 2 and 3).
3. To link both resource data and open-source crime data to the Indices of Multiple Deprivation to identify any link between socio-economic factors and the deployment of resources (Aim 1).
4. To identify the effectiveness of decision-making tools utilised by call handlers (Aims 1 and 3).
5. To examine and evaluate the current decision-making processes in relation to response to calls for service (Aim 3).
6. To explore decision-making theories to provide a theoretical basis for understanding the decision-making processes to improve the quality and outcome of decisions (Aim 3).

1.2 Scope

The study was conducted in two stages combining both qualitative methods (using data from surveys and semi-structured interviews (Aims 2 and 3)) and quantitative methods (using call data derived from the Command and Control system, open-source data, and Freedom of Information data (Aim1). The research questions and the approaches used to answer them are shown in Table 1.1.

The thesis analysed four years of incident (999/101 calls) data, including resource data for a large anonymous police force in the UK (hereafter known as F1) alongside data from the Indices of Multiple Deprivation (IMD) 2019, Freedom of Information (FOI), Crime Survey for England and Wales (CSEW) and an open-source website (police.uk). In addition, data was collected from 118 FCR staff via surveys and interviews. Collectively, to the author's knowledge, this represents the largest and most detailed exploration of police demand, the role of CHs in managing demand, and decision-making within police FCRs providing a vast quantity of informative data.

Table 1.1: Research Questions

Research Question (Objective)	Research Question	Data/Research Tools	Approaches
RQ1 (1)	What is the nature of police demand in relation to calls for service from the public?	Police recorded incident data/open-source crime data/FOI data/CSEW data	Analysis was conducted on the call data to ascertain what was occurring, when incidents were occurring, and the volume of incidents to identify the nature of demands placed on policing.
RQ2 (1)	How are forces currently managing their demand?	Police recorded incident data/ academic and police literature/FOI data/surveys and interviews with control room staff	Analysis was conducted on the call data to identify any changes to the way police were dealing with demand from their calls for service.
RQ3 (1)	What is the current role of policing and has this changed in recent years?	Police recorded incident data/ academic and police literature	Analysis was conducted on the call data to identify the types of incidents police were dealing with and whether this changed over the four-year period, including incidents involving mental health issues.
RQ4 (2)	Which incident types are resource intensive?	Police recorded incident data/ IMD2019 data	Analysis was conducted on the call data to identify resource intensive incidents to help inform police decision-making and manage demand.
RQ5 (2,3)	Is there a link between socio-economic factors and where resources were deployed to?	Police recorded incident data/ Open-source crime data/ IMD2019 data	Geospatial analysis was conducted on the resource data (derived from the incident data) to identify where resources are being utilised. Open-source crime data was also utilised with both linked to the IMD2019 to identify any links between socio-economic factors, crimes, and the deployment of resources.

RQ6 (2)	Are resources equitably distributed across LSOAs and IMD2019 deciles?	Police recorded incident data/open-source crime data, IMD2019 data	The resource data and IMD2019 data were used to assess the equitable distribution of police services across IMD2019 deciles. As with RQ7, the data were used to assess the role of the call handler and the equitable distribution of resources across space.
RQ7 (5,6)	What is the role of the CH, and what level of discretion do CHs have?	Police recorded incident data/ IMD2019 data/ academic and police literature/surveys and interviews.	Information derived from literature as well as conducting analysis, including temporal and geographical analysis, to assess levels of CHs discretion and equity in response grading over time and space using both call data and IMD2019 data at the LSOA level.
RQ8 (4)	How effective are current decision-making tools used by call-handlers/Dispatchers in the FCR?	Surveys/ interviews with control room staff	The survey and interview data were analysed to ascertain the decision-making tools currently utilised within FCRs, and how useful they are.
RQ9 (5,6)	What are the main challenges faced by call-handlers/Dispatchers when making decisions?	Surveys/interviews with control room staff	The survey/interview data were analysed to ascertain challenges faced by control room staff when making decisions.
RQ10 (5,6)	What additional factors influence decision-making in FCRs?	Surveys/interviews with control room staff	The analysis of survey and interview data provided a theoretical basis for understanding the decision-making processes within FCRs.

The RQs were addressed in two stages, with the first stage seeking to answer RQ1-6, focusing on the role of the police examining calls for service and the distribution of police resources. The second stage focused on the role of CHs in managing demand and decision-making within the FCR in order to answer RQ7-10.

This thesis recognises that police demand is larger than just calls for service, however the scope of this thesis does not extend to assessing the totality of police demand which can be categorised into three types:

- Public demand (also known as reactive demand). This relates predominantly to calls for service from the public to respond to incidents and crimes that have already occurred.
- Protective demand (also known as pre-emptive demand). This involves gathering intelligence and acting proactively, for example, patrolling areas to prevent crime.
- Internal – this is the core demand which exists within the organisation, encompassing processes, protocols, and administrative tasks (NPCC, 2017a).

This thesis will focus on public demand, utilising call data, namely 999 and 101 calls for service to F1 to address research questions 1 through 6 and to a certain extent RQ7. Although understanding and identifying the totality of police demand can be complex, using call data (a key driver of demand) as a direct measurement of demand is more reliable than any other components, where data may not exist or be hard to retrieve from police systems, such as time spent by officers dealing with incidents or engaging in proactive work (Laufs et al. 2020).

Although previous studies on police demand and the role of the police advanced our understanding of what the police do, the variations in how incidents were categorised among the studies limits the accuracy and comparability of the findings. This study will use a standardised list of nationally agreed categories and sub-categories provided by the National Standard for Incident Recording which was introduced to ensure consistency in the way forces in England and Wales record their incidents (NPIA, 2011).

This standardised measure should produce a clearer picture of the role of the police and the extent of calls for service which are crime-related while allowing the study to be replicable.

The scope of this thesis extends beyond the role of policing and current demand and seeks to advance theoretical perspectives of decision-making. Due to the belief that there is considerable scope to expand the knowledge of decision-making within the FCR, the second central theme of this thesis is the role of the CH in managing police demand. They provide a crucial link between the public and police and play an important role in managing police demand. A central critique from the researcher, is that police decision-making studies have mainly focused on police officers, often neglecting the role of the CH and Dispatchers (with some exceptions: for example, see Black and Lumsden, 2019). CHs and Dispatchers work closely together, with Dispatchers directing and deploying police resources to incidents CHs have originally assessed and graded (Avon and Somerset Police, 2022). Understanding decision-making processes within the fast-paced environment of the FCR is vital as CHs set the agenda and act as gatekeepers to police resources (Antunes and Scott, 1981; Scott, 1981; Garner and Johnson, 2006). CHs often deal with sensitive situations and are responsible for assessing risk, vulnerability, and harm, as well as deciding on the most appropriate police response (Her Majesty's Inspectorate of Constabulary and Fire & Rescue Services (HMICFRS, 2018a). Unlike most of the daily decisions we all make, poor decision-making by CHs and Dispatchers could result in death or injury (Antunes and Scott, 1981). Dispatcher's decision-making can improve efficiency by ensuring that the most appropriate resources are used, however they are not always provided with sufficient information to make an informed decision (Dunnett, Leigh and Jackson, 2018). Due to the importance of dispatching resources to incidents graded as immediate or priority, it is crucial that Dispatchers can make timely and informed decisions on the allocation of resources (ibid). It is therefore vital for CHs to provide adequate information to the Dispatcher. CHs have a great deal of discretion in their decision-making and this thesis will also assess whether their discretion has the potential to lead to an inequitable distribution of police services.

The thesis will provide a theoretical basis for understanding the decision-making processes, focusing on control room staff and proposes a Call Handler Decision-Making Model (CHDMM) which incorporates aspects of existing theories as well as adopting specific contextual and situational factors that can influence decision-making within a FCR. The model focuses on the role of the CH, however the importance of decision-making by Dispatchers is also acknowledged throughout the thesis. Whilst CHs are the first point of contact between the public and the police, Dispatchers are the main point of contact for police officers. Dispatchers have the unenviable task of allocating police resources to incidents after assessing the risk and importance of the incident (College of Policing, 2021). In relation to managing demand, Dispatchers are guided by CHs grading decisions (Scott, 1981).

1.3 NPCC Understanding Demand Project

In the United Kingdom, attempts to measure demand on police forces have previously focused on levels of recorded crime, however it has been recognised that this only represents a portion of police workloads and does not provide an accurate assessment of total demand (College of Policing, 2015). With cuts to funding impacting on police capability and capacity and emphasising the importance of understanding demand and being able to meet new types of demand with fewer resources, the National Police Chiefs Council commissioned the demand project in an attempt to develop a greater understanding of demand on the police service. The College of Policing (2015) conducted the first stage of the project to quantify the totality of demand which found increased levels of demand in incidents relating to people with mental health problems and identified that non-crime related incidents accounted for 83% of all calls for service. Data also suggested that the largest category of recorded incidents, for some forces, were public safety and concern for welfare (ibid).

Keen to increase understanding and awareness of demand across the service, the NPCC established a second phase to gain a fresh understanding of the totality of demand and to highlight the demand passed to the police from other parts of the public sector. The project highlighted the increased role and scope of the police and recommended increased collaborative working across various sectors (public, private,

and voluntary) to gain a clear understanding of the roles and scope of the services provided by each sector (NPCC, 2017a). The report cautioned that the police cannot be viewed in isolation and are part of a wider system of services that work together to deliver public safety (ibid).

This thesis builds on these findings by providing an in-depth analysis of police call data, including temporal and geospatial analysis, which offers a significant insight into police demand. The study will also consider the source of reporting identifying any trends in demand and takes a unique approach by focusing on the role of CH in managing police demand.

1.4 Original Contribution to Knowledge

Although the available literature has contributed to our knowledge of police demand and the role of the police, it is somewhat dated, and we therefore only have a vague understanding of the current role of policing. This thesis makes several contributions to the body of policing-related research, specifically to the literature on the role of the police and decision-making in the FCR. Firstly, it fills the gaps in current knowledge by providing a comprehensive review of police reactive demand and the role of current policing. By doing so this thesis helps contribute to the long-standing debate surrounding the current role of the police. It has the potential to elicit important questions regarding the appropriateness of the police being the service of first resort (HMIC, 2017a), promote debate regarding the responsibilities of various sectors, and help inform future policy and practice changes. It also offers a unique insight into non-crime demand with previous studies focusing on crimes which account for a small amount of police demand.

Secondly, although Waddington (1993) examined how FCR staff interpreted and responded to calls from members of the public, this is the first empirical study, to the authors knowledge, to explore the factors that influence CHs decision-making within police FCRs in relation to managing demand. Gaining access to both police call data and FCR staff provides the scope to fill the gaps in the literature which will offer a greater understanding of how resource decisions are made in the FCR. This thesis will

employ the views of CHs as key to understanding decision-making within the FCR. The lack of interest in this field is surprising, with little understanding the role of CHs have in managing police demand and the factors that influence CHs resource decisions as well as how Dispatchers manage the police response to calls. An improved understanding of key internal and external factors which may or may not influence decision-making can help provide a better insight into how forces manage their resources and help effectively design FCR training packages and assist in identifying and improving professional good practice across forces (NPCC, 2017a). This study offers an insight into a relatively unexplored area of decision-making within the FCR, and the findings can help inform future academic research in this area.

Thirdly, the thesis seeks to advance decision-making theoretical perspectives focusing on the role of the CH and, in response to gaps in the literature, introduces a new theoretical framework in relation to decision-making within the FCR by means of an original Call-Handler Decision-making Model. This evidence-based model incorporates aspects of existing theories as well as adopting specific contextual and situational factors that can influence decision-making identified from the surveys and interviews conducted for this research. This provides a theoretical framework to improve the understanding of decision-making within FCRs which can help practitioners improve the delivery of police services, with the model creating the foundations of an evidence base which academics can build on with future research and practitioners can utilise to create effective training packages. The model will also contribute to improved decision-making tools to assist decision-making, in turn increasing the accuracy of resource allocation and reductions in failure demand.

Finally, this thesis will assess the level of discretion CHs have in their decision-making and whether this has the potential to lead to inequitable response grading and the distribution of police services. Inconsistencies in graded responses among CHs and indeed across police forces can result in the inequitable distribution of police resources. The findings can be instrumental in informing policy and practice within FCR as well as providing academics with the opportunity to build on the findings (discussed further in Chapter 9).

Although the first stage of this study uses one police force as a case study, the findings may be generalisable to the other police forces across England and Wales especially those within similar Most Similar Groups (MSGs[2]). The force in question police a medium sized city with a significant number of towns and rural areas as well as comprising of a mixture of demographics (such as age, race, and gender) and therefore this study has the potential to be replicated with similar results. Further research would be required on forces covering large urban conurbations such as the Metropolitan Police. This is the first study, to the authors knowledge, to provide a more rounded view of demand incorporating call data, interviews with FCR staff, surveys and IMD/CSEW and FOI data.

1.5 The Structure of the Thesis

The thesis is comprised of nine chapters, with chapter two providing an overview of the relevant literature on the role of police. It also discusses the limitations of many of the early studies on police demand and the role of policing and highlights the lack of recent studies. The social role of policing and the issues with non-crime demand are then discussed, and as this thesis will provide evidence to inform police of their reactive demand, the current role of the police and the CH, the chapter will conclude with a discussion on how Evidence-Based Policing (EBP) can be applied to the findings of this thesis.

Chapter three reviews current demand management practices and police effectiveness in dealing with their demand, before considering both the role of the CH and Dispatcher. The chapter proceeds to demonstrate the importance of effective call handling and presents the argument that CHs are Street Level Bureaucrats with high levels of discretion, before outlining the theoretical framework which underpins the thesis. Traditional and Naturalistic Decision-making models are debated, followed by an overview of dual process theories and Kahneman's (2011) two systems of thought. It concludes by offering a preliminary Call Handler Decision-making Model (CHDMM)

[2] Groups of police force areas found to be similar to each other based on an analysis of demographic, social and economic characteristics

based on FCR policies and procedures, the theoretical framework of the thesis and previous research (Waddington, 1993; Fahsing, 2019; MIND, 2019) The CHDMM will be developed throughout the thesis and tested and evaluated through the survey and interview data to help provide a theoretical basis for understanding the decision-making processes within FCRs.

Chapter four provides an outline of the methodology and methods used to address the research questions. The chapter discusses the mixed methods approach used in this thesis providing an in-depth discussion of the research design, the data used, and the rationale for the multi-methodological approach.

Chapter five reports on the findings from the quantitative analysis which draws on four sources of data: police call data; information from Freedom of Information (FOI) requests; Crime Survey for England and Wales (CSEW) information; and open-source police crime data available from police.uk (2021a). The chapter provides an in-depth analysis of the reactive demand placed upon a police force in England (F1) and reviews how this demand is currently managed. It also provides an overview of incidents involving a Mental Health Qualifier. The chapter concludes with a discussion on equity in response grading in particular assessing CHs discretion and equity in response grading over time and space.

To further understand the reactive demand placed on F1, chapter six discusses the findings from analysis of the resource data, firstly by identifying resource intensive incident types and the most common types of resources used, before discussing the resources required to respond to mental health related incidents. To better understand the geographical and social distribution of the resources used by F1, the chapter concludes with a summary of findings based on analysis of the resource data, combined with Indices of Multiple Deprivation (IMD) and open-source crime data at the LSOA level. The chapter concludes with a discussion of the equity of the distribution of resources after the response grading was provided to Dispatchers.

Chapter seven reports on the findings from the survey and interviews. The interviews were influenced by both the themes identified from survey responses and the theoretical framework of the thesis. Key themes and sub-themes are explored, alongside the proposed decision-making model, which incorporates aspects of existing theories as well as adopting specific contextual and situational factors that may influence decision-making in the FCR.

Chapter eight integrates evidence and theory, taking a thematic approach to provide an in-depth discussion of how the vast amount of data utilised answers the research questions.

The final chapter offers some concluding remarks as well as recommendations for future research, policy, and training within the FCR, while detailing the original contribution to knowledge this thesis has made to the field of British Policing and decision-making within the FCR.

Chapter 2 - The Role of Police

2.1 Objective and Outline

The aim of this thesis is to provide evidence to inform police of their reactive demand, assess how forces are currently dealing with their demand, identify the role of the CH in managing demand and provide a picture of the current role of police. The main objective of this chapter therefore is to review the key studies into the nature of police demand and the function of policing to help identify gaps in the current knowledge. The role of the police and the demands placed on policing have been of interest to academics and practitioners since the advent of the radio and-dispatched patrol car (Rubenstein, 1973) (see Section 2.2). Due to financial pressures and increased demands, there has been a growing interest in what the police actually do, often researched under the area of economics which is mainly concerned with reduced budgets, operational costs, and fiscal accountability (Wuschke et al. 2018). Various reviews of police research have identified several areas of interest such as the link between rapid response to calls for service and arrests and public satisfaction (see Reiner, 1992; Sviridoff, 1982; Manning, 2005a; Cordner, 1979), however one area of research that merits further investigation are the findings from several studies that show between 70-80% of reported incidents to the police are not crime related. This thesis will therefore examine the demands placed on policing from the public, the police response to those demands and what the police do. Evidence-based practice and the use of research to inform police practices and policies is now commonplace in universities and police forces in the UK (Bullock, Fielding and Holdaway, 2020; Holdaway, 2020). The chapter will therefore conclude with a discussion on how Evidence-Based Policing (EBP) can be applied to the findings of this thesis.

Although is it imperative that police forces understand their demand to use their resources effectively and efficiently, there is a surprising dearth of studies in this area, particularly in the UK. The following review seeks to identify the role of police, police demand, and policing incidents involving mental health issues. It will also identify any gaps in knowledge and consider the influence of these studies to this thesis. The

chapter begins with reactive demand, discussing key early studies into police demand and activities, followed by an analysis of the police function, incorporating additional early studies into the role of policing. It then deliberates current police demand and the limited studies into this, before proceeding to discuss the issues surrounding non-crime demand and the social role of policing. The chapter will conclude with a brief discussion on evidence-based policing (EBP) and how the findings of this thesis can provide evidence to help inform police policies, practices, and decisions.

2.2 The Advent of Reactive Demand

'New' policing was established by Robert Peel in 1829 which witnessed a move towards officers patrolling neighbourhoods and local communities preventing and responding to crimes and civil disputes within their beat, with an emphasis on preventative policing (Reiss, 1992; Manning, 1992; Emsley, 2003; Reiner, 2000). In the United States, the introduction of the telephone, patrol car, and two-way radio increased the capacity for police to allocate resources and respond to citizens calls for assistance in the 1930's (Manning, 1992). Such advances in technology resulted in a move from prevention to reactive patrol with citizens having the ability to phone police for assistance and dispatch officers were mobilised rapidly to reported incidents (Reiss, 1992). In the United States, during the 1970's, rapid response to all calls for service became a key objective for police departments and this, coupled with the introduction of the centralised emergency contact number, led to a drain on police resources (Reiss, 1992; Spelman and Brown, 1984).

Similarly, in the United Kingdom police officers in cars with radios were rapidly deployable resulting in the "bobby on the beat" becoming a scarcity, with foot patrols restricted to high-density urban areas (HMIC, 2006:68). Influenced by research, the Home Office encouraged forces, in the late 1960's, to reduce the numbers of officers patrolling the street on foot and move towards 'unit beat policing', whereby officers patrolled in cars allowing them to cover wider geographical areas over a 24-hour period (Newburn, 2003). This new system coupled with newly provided radios allowed officers to respond more quickly to calls for service (ibid). The increase in calls for

assistance however impacted on police resources with the public quickly getting used to receiving a rapid response (HMIC, 2006) and police forces were becoming aware in both Britain and the United States that with increased demands and less resources, rapid response for all calls for service was not sustainable and began looking for alternatives (Spelman and Brown, 1984).

The advances in technology of police communication systems, in both the United States and United Kingdom, such as the telephone, the two-way radio system, centralised call systems (emergency number), centralised communication centres, and computer aided dispatch had a major impact on policing, with demand outweighing police resources resulting in police forces introducing decision-making models aimed at prioritising calls (Reiss, 1992; Manning, 1988). Interest in police response to calls for service led to several studies which identified that the most incidents police respond to were not crime related.

2.3 Early Studies into Police Activity

Citizens call the police for a number of reasons, with requests for service encompassing a variety of incidents. Early police patrol workload studies identified that much police patrol work was not directly related to crime or law-enforcement incidents. Several American ethnographic studies were carried out in the 1960s, largely concerned with identifying the level of police activity not related to law enforcement, concluding that typical activities of patrol officers were not those of a law officer, but those of a peace officer (Skolnick, 2011; Banton, 1964). Indeed, Banton (1964) found that the police are one of "society's agents of social control" (ibid:87) with police officers time spent responding to requests for assistance and patrolling the streets, with very little time spent enforcing the law.

Banton's (1964) innovative UK observational study significantly influenced further British research in policing (Reiner, 1992; Murji, 2009) with the use of participant observation replicated by many later British studies in policing (Reiner, 1992) (see Cain, 1973; Chatterton, 1975; Holdaway, 1977 and 1983). Further interest in calls for service emerged utilising USA police dispatch records (Reiss, 1971; Webster, 1970; Wilson,

1970) which found that less than 20% of calls were crime related. Furthermore, a study utilising UK self-recording surveys (police activity reports recorded by officers) (Martin and Wilson, 1969) discovered on average, only 28% of police time was spent dealing with crime. Indeed, Webster (1970) found that the role of the police was more that of a social worker than a law enforcement officer. Reiss (1971) found that what citizens regarded as a criminal matter were often treated by the police as non-criminal matters and after comparing one day of citizens requests for service found that although citizens defined 58% of their complaints as criminal matters, only 17% were documented as such. Reiss (1971) argued that citizens call the police for non-criminal matters as they do not know who else to call.

As a result of these early studies, the idea that police officers spend most of their time as 'amateur social workers' rather than law officers has become a common theme amongst academics (Shearing and Leon, 1976). However, Shearing and Leon (1976) caution against classifying police work into law enforcement and social service arguing that the presence of the police, in most cases, allows officers to deal with incidents without having to resort to law enforcement. Nonetheless, there appears to be a consensus among early studies that the majority of police time is spent dealing with non-criminal incidents (see also Misner, 1967; Goldstein, 1968; Lilly, 1978; Antunes and Scott, 1981). Such early studies, therefore, challenge the perception that police officers are simply law enforcement officers, highlighting additional police roles such as social workers and peacekeepers. However, such findings lead to the question "If the police aren't directly fighting crime, what are they doing?" (Bayley, 2005:142) and what is the police mandate?

2.4 What is the Police Mandate?

The police service in the United Kingdom was created due to the concern with law and order at the beginning of the 19th century, with the primary objective being the prevention of crime (Punch and Naylor, 1973). According to Bittner (2005), everyone knows of the existence of the police and can request their services when required, however very few people are able to define what the police actually do. Although defining the role of the police is problematic, as it is variable over time and changes in

response to public demands and legal constraints (Manning, Elmer, and Brooks, 2014), several definitions are available. An early study by Wilson (1970:4), identified that police work is more than crime prevention and enforcing laws, and encompasses public service functions[3], which he argues "are only intended to please the client and no one else". Goldstein (1968:417) argues that "the police function in two worlds". Firstly, they are an essential part of the criminal justice system, with the primary responsibility of initiating criminal action against people who break the law. Their second and less defined role, which (previous research suggests) contributes to most of the police workload, includes a wide range of functions unrelated or further removed from the criminal justice processes, such as preventing crimes, resolving disputes, controlling crowds, and providing information (Goldstein,1968). Reiss (1971) noted that citizens consider the function of the police to extend beyond law enforcement and peace keeping roles, arguing that citizens depend on the police to assist them in times of trouble or crises, and believe that the police should provide assistance when requested.

The Statement of Common Purpose and Values for the Police Service states that:

> The purpose of the police service is to uphold the law fairly and firmly; to prevent crime; to pursue and bring to justice those who break the law; and to keep the Queen's Peace; to protect, help and reassure the community; and to be seen to do all this with integrity, common sense, and sound judgement (Home Affairs Select Committee, 2008:9).

The Code of Ethics for police forces across the UK, states that "the policing profession has a duty to protect the public and prevent crime" (College of Policing, 2014b), and in a speech in 2011 Theresa May, the then Home Secretary, said that the police should be "tough, no nonsense crime fighters" stating that their one clear objective was to cut crime (May, 2011).

[3] For example, providing first aid, helping animals and assisting the elderly.

Modern policing, however, encompasses a wide range of duties, with some scholars suggesting that the police are 'Jack of all Trades, Master of None' (Choi, Lee, and Shin, 2014); 'The Secret Social Service' (Punch, 1979); a 'Philosopher, Guide and Friend' (Cumming, Cumming and Edell, 1965); and 'Street Corner Psychiatrists' (Teplin and Pruett, 1992). Manning (2005b) believes that the police have an impossible mandate, while Punch and Naylor (1973) argue that due to their wide range of functions the police service has inadvertently amassed a broad range of 'welfare' functions and go as far as to describe the police service as "The only 24 hour, fully mobile, social service" (Punch and Naylor, 1973:358). More recently, the Police Foundation (2022:11) independent strategic review defines the core role of the police as being:

'To promote public safety by maintaining order and upholding the law, which their unique powers enable them to do, and to carry out other activities which enable them to perform this core role legitimately, effectively and with minimum reliance on those powers'.

The review recommends that the functions of the police are to respond to calls for help and refer cases to the appropriate services, safeguard vulnerable people, prevent crime and harm, investigate crimes, disrupt criminal activity, and bring offenders to justice, provide victims of crime access to justice and support and to offer visible local policing working with other public services to solve problems. The review calls for greater partnership working with mental health services to help prevent complex social problems (The Police Foundation, 2022). Police forces do have some statutory responsibilities which they are obliged to carry out. In relation to disrupting criminal activity and preventing crime and harm, the 1998 Crime and Disorder Act sets out the statutory requirements for police forces to work with other public services and voluntary agencies to develop and implement crime reduction strategies to help tackle crime and disorder (Loveday, 2000). This has resulted in the creation of Community Safety Partnerships (CSPs) which involves collaborative working, to reduce crime and disorder in local communities, between the police, local authorities, health partners, fire and rescue and the probation service (Home Office and Ministry of Justice, 2010).

CSPs identify key responsibilities for each partner and have an obligation to produce strategies to help target and reduce reoffending and tackle crime and disorder, anti-social behaviour and social issues such as substance misuse (ibid).

Early social science studies have identified the social service function of the police (Cumming, Cumming, and Edell, 1965; Punch and Naylor, 1973; Bercal, 1970). Cumming, Cumming, and Edell (1965) surmised that the police are often called as they are available when other agencies are not. However, although the Punch and Naylor (1973) study found 'service' requests such as family disputes, attempted suicide and missing persons accounted for 59% of calls they found no significant rise in calls received after social service departments closed for the day, concluding that it was quicker and easier to call the police than anyone else, suggesting that the public view the police as the first social service (ibid). This study led Punch and Naylor (1973:360-361) to consider that the police provide several services that are not deemed as their primary function, detailing their explicit service roles as: "veterinary surgeons; mental welfare officers; marriage guidance counsellors; home-help to the infirm; welfare workers; accommodation officers, and a friend and confidant".

While such studies provide valuable information in relation to the role of the police, some early studies only categorised calls into whether the incident was criminal or not, which leads to misunderstandings and misconceptions of the police role and are based on inadequately explained and subjective criteria (Shearing, 1984). Some studies are based on the classification the operator makes and others on the classification the officer makes, and there are often discrepancies regarding the initial call for police service and what the police subsequently find when they attend (ibid). Few early studies provided a thorough breakdown of calls with classifications of incidents varying across studies. How demands are categorised is a key determinant of identifying demand patterns (Scott, 1981). Without a detailed account of the type of calls comprising each category a cross-study comparison of citizens demands is not feasible (ibid). There appears to be no consensus amongst early studies of the extensive range of non-criminal services which encompasses an array of issues (ibid) (see Appendix 1 for a breakdown of classification systems used in early studies).

Further studies followed using more robust classification systems utilising several categories broken down (Scott, 1981; Shapland and Hobbs, 1989) with findings suggesting that less than 20% of calls were in relation to criminal incidents, corroborating findings cited earlier (Bercal, 1970; Wilson, 1970; Reiss, 1971). However, there was no consensus about how the calls were categorised with different studies using different categories (see Appendix 1). Furthermore, the calls in Scott's (1981) study were categorised according to the problem reported by the citizen as opposed to the operator's interpretation of the call, which lacks a degree of accuracy and limits the consistency of the types of incidents identified. Classifying incidents based on the interpretations of the callers is problematic (Shearing, 1984) as there are frequently conflicting interpretations, with citizens often mistaking incidents as criminal matters which are defined as non-criminal matters by the police (Reiss, 1971). Due to the difficulties in making comparisons, such studies have similar limitations to previous studies.

Using six categories[4], Waddington (1993) conducted a study in an English police force and although the study focused on how control room staff interpret and respond to calls from members of the public (and was influential in the survey design of this thesis) it found that only 12% of all calls received resulted in a crime being recorded. Waddington (1993) also found that the police often respond to calls that sound urgent and find when they attend that they are not required; something that was also observed during the Reiss (1971) study. Waddington (1993) argued that the aims and priorities of the police are determined by the public through the demands that they place on them.

Although limited, several international comparison police studies, in relation to the role of policing, have been conducted. Early work by Bayley (1990) across seven different countries (India, Singapore, Sri Lanka, France, Great Britain, Norway, and the United States) found that, in contrast to previous studies, with the exception of the United Kingdom, Norway, and Singapore, police work was primarily law related.

[4] Crime, help, messages, reports, trouble, and ABA (automatic burglary alarm)

However, Bayley (1990) acknowledges that as the study was based on police records of encounters rather than calls for service the study is not comparable with previous studies, highlighting that officers may be more focused on recording crime-related, rather than non-crime related incidents. Bayley (1990) also argued that calls for service identify the public's interpretation of the incident as opposed to the police categorisation of the event; an issue which has since been rectified by the introduction of both opening and closing codes[5] used in policing in England and Wales (see Chapter 4 for a discussion on the National Standard for Incident Recording).

The method used to collect and document data will invariably have an effect on the accuracy of the information. The information received from the countries where police work was identified as being primarily law-related, was retrieved mainly from hand-written diaries or activity sheets, as opposed to computerised systems (United Kingdom and Norway), or a mix of 999 call data and information books (Singapore). Subsequent research by Bayley (2005) conducted with 28 police forces in five countries: Australia, England and Wales, Canada, Japan, and the United States found during observations with patrol officers that police had very little to do with crime and most of the crime they were asked to deal with was minor. What was reported as a crime was often found not to be a crime when police attended. Bayley (2005) concluded that, in relation to dispatches, policing was extremely similar across all countries in the study.

Although data collection methods and incident classification systems used in early studies varied greatly, there is a general consensus that less than 30% of police incidents are crime related (Bercal, 1970; Wilson, 1970; Reiss, 1971; Waddington, 1993). Although limited, several international comparison studies found in relation to dispatches, that policing is similar across several countries (Bayley, 1990; 2005). Studies have shown that defining the role of the police is problematic, however the social service and peacekeeping functions of policing have consistently been identified. Nevertheless, police work does encompass an element of law enforcement, and the

[5] Closing codes may vary from the opening code once additional information is identified.

view of police as law enforcers and crime fighters may have been blurred by the interpretations of findings from such studies (Shearing and Leon, 1976).

The classification system used in early studies had an impact on the findings (Cordner, 1980). The variety of categories utilised in previous studies, many of which were not well defined, highlights the difficulties in providing an accurate comparison and although there are certain similarities in category labels amongst studies, it cannot be determined whether the content was comparable (Cordner, 1979). The range of categorisations used in a sample of previous studies (see Appendix 1) highlights the disparities and makes comparisons problematic. Wilson (1970) for example includes activities in the 'order maintenance' category, such as assault, which are classified as 'criminal incidents' or 'violent crimes' by Reiss (1971), Webster (1970), and Scott (1981). Domestic disputes are a further example of the variances amongst category labels, being placed in numerous groupings across the studies including: 'trouble', 'public disorder', 'service', 'order maintenance', and 'social service'.

Shapland and Hobbs (1989) acknowledged that in their study police officers regularly did not record calls reporting thefts of or from motor vehicles or non-injury traffic accidents, with callers advised to report these incidents at their local police station. Although any identified incidents on crime reports or crime files not on the message pads were added to the sample, it is not clear that all incidents were acknowledged. Furthermore, calls from citizens requesting information were not recorded, something that was included in the Scott (1981), Wilson (1970), and Cumming, Cumming and Adell (1965) studies. Waddington's (1993) study highlights another issue regarding the collection and categorising of data. The findings were based on what the public reported as opposed to how the police classified the incidents. The study found that 26% of calls were citizens reporting crimes, however only 39% of these calls resulted in a crime report. As previously discussed, citizens often mistake incidents as criminal matters which are defined as non-criminal matters by the police (Reiss, 1971).

2.5 Recent Studies in Demand

Technological advancements within control rooms and a standardised category list should produce a more accurate analysis of calls for service enhancing the validity and reliability of findings in more recent studies into police demand (see Chapters 3 and 4 for a discussion of control rooms and the National Standard for Incident Recording). In a recent attempt to understand demand on the UK police service a study by Boulton et al. (2017) found that only 27% of reported incidents were "traditional police business" categorised by the authors as acquisitive personal and household crime, vandalism/criminal damage, violence against the person and sexual offences, with officers utilising mediation and social skills rather than law enforcement skills, with welfare calls categorised by the authors as concern for safety, collapse/illness/injury, missing from home, truancy, accounted for almost 19% of calls. The study, however, was concerned with identifying the highest public demand for police resources from the most demanding addresses, and the people associated with these addresses, as opposed to an analysis of the totality of police reactive demand.

Interest in police demand is not limited to the UK and United States, with scholars engaging in studies in Canada yielding similar results. Wuschke et al. (2018) found that crime accounted for less than 20% of police incidents with much of the remaining 80% addressing public safety concerns which included assisting the public, suspicious people/activity, and assisting another criminal justice or social service agency. They concluded that the police provide a wide range of services beyond crime and crime control. These findings are consistent with several official reports suggesting that the minority of incidents result in a crime report. A College of Policing report (2015), estimating demand on the police service, identified that non-crime incidents account for 83% of all command and control calls in England and Wales and reported an increase in incidents involving people suffering with mental health issues. Similarly, a report by the Home Affairs Committee (2018) found that only 24% of incidents[6] and 14% of Command and Control calls were crime related. A level of ambiguity appears to exist around the reactive demands placed on policing, however although several

[6] Creation of an incident log. Not all calls will generate a log.

weaknesses in previous studies have been identified, in particular incident classifications which make comparisons problematic, the studies have shown that the majority of calls for service received by police forces are in relation to non-crime incidents. Due to the lack of recent studies, this thesis will provide a contemporary review of police demand based on calls for service. It will also determine both the proportion of and nature of the non-crime incidents which make up police demand.

2.6 Issues with Non-Crime Demand

As discussed, police forces have responsibilities that they are obliged to undertake, regardless of whether a crime has been committed. In relation to responding to emergencies, the Civil Contingencies Act (2004) provides a single framework for civil protection and sets out clear roles and responsibilities for agencies involved, including the police service (College of Policing, 2023). Although not crime-related demand, working with partners, police forces have several civil protection duties including assessing risk and implementing emergency plans (ibid). Local resilience forums allow organisations to work together at a local level to plan, prepare and coordinate responses (ibid).

However, in relation to day-to-day demand, police forces must prioritise in order to identify where limited resources should be invested. Current debate revolves around non-crime demand, which is perceived to include service failure by other public services, including attendance at incidents involving mental health issues, concerns for welfare calls from social service providers, reports of missing people from institutional settings and requests for police vehicles transporting patients to hospital in the absence of ambulances (Hales and Higgins, 2016).

With a consensus amongst scholars that the majority of calls for service are not crime related, should police officers be deployed to such incidents? A study by HMIC (2012), supported the claim that criminal incidents are a small part of police activity. However, they argued that although only 28% of recorded incidents were crime related, there was a potential for crime in 55% of the remaining incidents, concluding that almost 90% of incidents recorded in the six forces involved a crime or the potential for a crime

to happen. This pertinent point has also been raised by several scholars, who acknowledged that some non-criminal incidents such as disputes or threats have the potential to result in a criminal offence if the police do not attend (Goldstein, 1968; Scott, 1981; Wuschke et al. 2018; Boulton et al. 2017). An unintended consequence of police not attending non-crime incidents may be an increase in crime. This thesis will provide an evidence-based understanding of how police respond to different types of non-crime incidents.

2.7 The Social Role of Policing

The social role of policing is a common theme across previous studies. However, the increased responsibilities placed on the police to deal with social issues has raised concerns that they are filling gaps that should be provided by other services. The Stevens Commission (2013) was a substantial review of policing to inform future policy and proposed a radical shake up of policing in England and Wales. It called for greater clarity on the wider social mission for the police recommending that the social purpose of the police, such as order maintenance, managing conflict, and solving problems with the community, should be set out in law (Independent Police Commission, 2013). Social work provision, such as responding to social problems involving situations where police officers are required to provide intervention, mediation, or counselling services, has long been a function of policing (Patterson, 2012; Lamin and Teboh, 2016; Teplin and Pruett, 1992; Fielding, 1991). The role of police officers as 'street corner psychiatrists' has expanded (Teplin and Pruett, 1992) with officers often tasked with taking on a 'social' role in society. Early studies have demonstrated the social welfare role played by officers within the police service, which Punch (1979) describes as a 'secret social service' with police frequently acting as untrained and temporary social workers.

It is worth noting that the police service does have a statutory role in safeguarding vulnerable adults. In England, the Care Act (2014) requires that local authorities set up a Safeguarding Adults Board (SAB) which must include members from the local authority, the NHS and the police to develop plans for safeguarding of vulnerable adults (Home Office, nd). The police also have a crucial role in protecting children and

have a statutory duty to safeguard and support the wellbeing of children detailed in Section 11 of the Children Act 2004 (ibid).

However, incidents involving individuals with mental health issues are often complex and concerns have been raised that certain activities, such as dealing with problems with homelessness and settling family disputes, blur the boundary between police and social work which raises some difficult issues relating to social legislation and changing moral, ethical, and social norms (Punch, 1979; Holdaway, 1986). Social workers and police officers often deal with vulnerable people with complex needs and as much of the police workload involves a social service response it would be beneficial for both agencies to take a joined-up approach to help tackle these issues (Lamin and Teboh, 2016; Holdaway, 1986; Patterson, 2012).

Research by Higgins (2020), found that the public have a traditional view of policing and believe that mental health concerns and welfare concerns should largely be dealt with by other agencies, arguing that the police should prioritise tackling violent and sexual and organised crime. Nonetheless, research suggests that CHs also feel that the police are filling gaps within other organisations, such as social services, often referring to the '5pm Friday calls' received from social services as the critical period before the reduction of staff in these services over the weekend (Lumsden and Black, 2018). The use of the police as a social service is a consistent theme across several studies, with the College of Policing (2015) reporting an increase in incidents involving people suffering with mental health issues. Police are increasingly being called to MH incidents and regardless of whether this is deemed to be the role of the police, it has resulted in services such as the police, health and social services having to work together to build partnerships to help formulate and define roles (Thomas et al., 2022). The fact that the police have a legal requirement to respond to calls for service and are available 24/7 is partly why they continue to be involved in responding and dealing with MH incidents (ibid).

2.7.1 HMICFRS Reports and Mental Health

While HMICFRS (2018b) found that police forces are committed to supporting people with mental health problems, they also caution that this should not result in them filling gaps that should be provided by other services. Police are filling gaps in several ways, such as responding to concerns about missing persons with mental health issues, transporting people with mental health issues to hospital when an ambulance isn't available, waiting at hospital until a mental health place is found and checking on someone where there is a concern for their safety (ibid). Requests for such checks are usually when other services, such as social services or GP services, are ending their hours of service (ibid). Indeed, several studies discovered that many calls for police service relating to mental health occurred after other services were closed (HMIC et al. 2013; Vaughan et al. 2018; Lee, 2006). HMIC (2017a) has raised concerns about police forces being used increasingly as the service of first resort, particularly where people with mental health problems require urgent help. Individuals with mental health problems require expert support which should be available when they need it, and services must stop relying on the 24/7 availability of the police (HMICFRS, 2018b) as this extra demand can have an overwhelming effect on police resources (HMIC, 2014).

2.7.2 Policing and Mental Health

The police mandate consists of ensuring safety and providing protection, which applies to the way the police interact with people with mental health issues. However, there has been uncertainty among police officers as to whether dealing with mental health incidents is part of the traditional police mandate (Adelman, 2003). Knowing which services to provide when responding to people with mental health needs is one of the challenges highlighted in the Policing Vision 2025. A wide range of partnership working is required to ensure that appropriate assessments are conducted, and suitable support provided, while being conscious of the reductions in partner agencies capacity (APCC and NPCC, 2016). Although mental health training[7] is available to police officers in England and Wales to ensure vulnerable people are given access to the correct care and

[7] New Authorised Professional Practice provides guidance to forces in England and Wales on training on how to respond to people with mental health issues

support, they are not mental health professionals, and it is important that appropriate services are provided to people with mental health issues (College of Policing, 2016a). The Police Foundation (2022) argue for an increased capacity within the NHS to prevent mental health crises developing rather than improved police training. The NHS (2019) Long Term Plan sets out investment plans to expand crisis mental health services, which has been welcomed by the NPCC (2020). However, currently the demand from mental health related incidents outstrips the police capacity to deal with it (The Police Foundation, 2022). An increase in incidents involving people suffering with mental health issues, as reported by the College of Policing (2015), puts a strain on police resources resulting in an increase in demand. It is therefore imperative to work with partners to ensure access to relevant services and allow forces to reduce demand in an effective and appropriate manner.

Although most people with mental health issues will access support through primary care pathways or receive specialist treatment, there are some people, referred to by Thomas et al. (2022) as the "missing middle", where local support is either insufficient or they do not meet the threshold for MH services (ibid). In some cases, the response from statutory agencies dealing with people who are deemed to be vulnerable, such as victims of domestic violence, people who are homeless, socially isolated or suffering from mental health issues is inappropriate, with blame being apportioned to the individual rather than working with other agencies to find a solution to the underlying problem (Brookes, 2021). With resource issues and increased workloads, social workers, police officers and other SLBs are struggling to provide appropriate support to vulnerable members of society (Brookes, 2021). It is therefore imperative for forces to work with local partners to both identify and provide support for vulnerable individuals.

Setting out ways in which services can work together to improve care for people with mental health problems, the Mental Health Crisis Care Concordat was introduced in England in 2014, however, demands on the police service, in relation to dealing with individuals with mental health concern increased, with some forces witnessing more than a 50% increase in incidents from 2015/2016 to 2016/2017 (Home Affairs

Committee, 2018). Indeed, after an initial reduction some forces reported unprecedented mental health demand in 2020 during the beginning of the COVID-19 pandemic with suggestions by some forces that this was due to the stresses of lockdown, however others argued that the increase could be due to the new definition for recording mental health incidents (APCC, 2021).

The NPCC (2020) recommended that forces adopt the following definition of mental health incidents:

> Any police incident thought to relate to someone's mental health where their vulnerability is at the centre of the incident or where the police have had to do something additionally or differently because of it.

The College of Policing (2020a: 9) has adopted the following definition of vulnerability:

> A person is vulnerable if, as a result of their situation or circumstances, they are unable to take care of or protect themselves or others from harm or exploitation.

However, vulnerability is wide ranging and can also refer to online harms which can be complex issues, with the police service in recent years acknowledging the need to address online safety, with the potential for people who are more vulnerable offline to be more likely to be vulnerable online (Phippen and Bond, 2021). There can be an increase in online risk for individuals with mental health issues as well as people with alcohol and/or drug problems (ibid). The aim of the Online Safety Bill (due to pass in 2023) is to protect both children and adults online and outlines the duties of providers of services (Department for Science, Innovation and Technology and Department for Digital, Culture, Media & Sport, 2022), however it is too early to ascertain whether the included measures will protect the most vulnerable. A further challenge for forces when dealing with vulnerable people is the fact that vulnerability can change over time[8] and in some cases people may only be vulnerable for a temporary period[9] (Knox

[8] For example, mental health may decline, loneliness or domestic abuse.
[9] For example, a drop in temperature at night.

et al, 2021). Although it is important to identify and recognise people who are vulnerable, it is also important to keep the vulnerability status of callers under review (ibid).

There remains a lack of understanding about the extent of police incidents linked to mental health issues, with varied estimates. Determining the scale of calls for service involving mental health issues has become a priority in evidence-based policing research and practice (Langton et al. 2021). The College of Policing (2015) previously estimated that between 2% and 20% of police incidents were linked to mental health with HMICFRS (2018b) providing a more recent estimate of 2.8%. However, there is a great deal of uncertainty about the accuracy of such estimates, with concerns that the actual extent of mental health incidents is underestimated due to a lack of training and inconsistent recording practices (Langton et al. 2021). In order to better understand demand, forces in Wales found that 12% of calls for service were mental health related and assessed that officers spent on average, nearly four hours dealing with each mental health incident (HMICFRS, 2018b).

Recent studies on the scale of mental health incidents have produced varying findings. Similar to a Canadian study by Koziarski, Ferguson, and Huey (2022), Langton et al. (2021) concluded that existing recording practices underestimate mental health related demand indicating that such incidents use a considerable and disproportionate number of policing resources. In contrast, Kane, Cattell, and Wire (2021) found no indication that UK forces were under-recording mental health related incidents arguing that a large number of cases flagged as mental health incidents were related to other vulnerabilities rather than the individual's mental state, such as homelessness and drug and alcohol abuse. In contrast to the Langton et al. (2021) study, Kane, Cattell, and Wire (2021) found that, although some mental health incidents were complex to deal with and consumed police resources, they did not represent a disproportionate amount of demand on police time and resources compared to non-mental state-related incidents. However, almost half of forces admitted that their measure of the time spent on mental health related incidents was not very, or not at all accurate (ibid).

Whilst a minority of forces are not adequately responding to vulnerable people due to both the lack of available officers and being overwhelmed by call volume, it will take time for forces to develop an understanding of the nature and scale of their demand in relation to mental health (HMICFRS, 2018b). All forces now have a level of mental health support in the control room (HMICFRS, 2019a), emphasising the scale of this area of demand (HMICFRS, 2018b). Such support can include nurses and mental health professionals based within force control rooms or access to 24/7 helplines to specialist mental health nurses (ibid).

To provide an evidence-based understanding of demand, this thesis will provide an assessment of the role of police, police demand and will consider how forces are currently dealing with their demand, including an analysis of incidents involving mental health issues. With limited resources and increased demands, it is important for forces to use their resources effectively (Tilley and Laycock, 2017). Providing evidence to inform decision-making can reduce or eliminate aspects of ideology, self-interest, and prejudices from the decision-making process (ibid). The following section will briefly discuss how evidence-based practice has evolved within policing and explores the wide range of evidence that can be used to inform policing practices.

2.7.3 Wicked Problems

The police mandate has not changed much since the early studies discussed previously in this chapter, and police are still dealing with the same issues as described in studies by Cumming, Cumming, and Edell (1965), Bercal (1970) and Punch and Naylor (1973). Mental health issues and other vulnerabilities such as homelessness and drug and alcohol abuse can be depicted as 'wicked problems' described by Rittel and Webber (1973) as being complex and difficult to define social issues. Although such social issues are considered as policing problems, all have causes and possible preventative measures that lie outside of the remit of policing (Huey, Ferguson, and Schulenerg, 2022). Detecting and treating mental health issues, for example, would require a considerable amount of money to provide both adequate treatment and the provision

of services, however in reality there is a lack of understanding of both mental health issues and appropriate treatments (ibid).

The police also must deal with calls in relation to a broad range of challenging behaviours caused by alcohol and drug misuse (Huey, Ferguson, and Schulenerg, 2022) another 'wicked problem' linked to the complex relationship between an individual and alcohol and illegal drugs (ibid). Such social problems require a joined-up approach to address both the causes and potential solutions, something that the police cannot deal with in isolation. Although partnership working can encounter challenges such as legal, financial and political barriers, power clashes, differing objectives, agendas, strategies, and policies (McGuire and Agranoff, 2011), working in collaboration with other agencies and organisations can increase the understanding of the problem and the possibility of a solution being found due to the breadth of knowledge, insights, and experience (Head and Alford, 2015).

2.8 Evidence-Based Policing

Evidence-based practice is commonplace in health and medicine, education, and social welfare, and has recently extended to policing (Bullock, Fielding and Holdaway, 2020), with the use of research to inform police practices and policies now commonplace in universities and police forces in the UK (Holdaway, 2020). Sherman (1998: 3-4) introduced the concept of evidence-based policing (EBP) which he defined as the "use of the best available research on the outcomes of police work to implement guidelines and evaluate agencies, units, and officers…. It uses the best evidence to shape the best practice." EBP research does not tend to encompass the role of CHs, focussing mainly on crime reduction. However, FCR staff can use their intuition and knowledge to make decisions based on their local knowledge, and although this can be important it is contextual and complex (Fleming and Rhodes, 2018. It is therefore anticipated that the evidence provided in this thesis will help inform policy and training within FCRs and further research is recommended, involving CHs and Dispatchers, to ascertain how EBP can be applied to practices in FCRs to help benefit decision making.

The emphasis on experiments and rigorous scientific testing associated with EBP is partly due to the role Sherman has played in advocating it (Bullock, Fielding and Holdaway, 2020). However, it has been acknowledged that this original view of EBP restricts the use of research designs to produce evidence with a realisation that a wide range of research designs are suitable to inform police decision-making (Knuttson and Tompson, 2017). According to Sparrow (2016) the EBP process is not quick enough to inform operational policing decisions and eliminates innovative approaches to help police identify solutions to problems. More recently, Holdaway (2020) cautioned against the focus on systematic reviews and Randomised Control Trials (RCTs), calling for a wider use of evidence and research methods. Policing is complex, and as discussed earlier in this chapter the police mandate is unclear, with modern policing encompassing several approaches such as problem-orientated policing (POP), intelligence-led policing and hot spots policing which are all based on the idea of evidence informing police practice (Bullock, Fielding and Holdaway, 2020). With many forms of research evidence, the notion of utilising evidence to inform police decision-making is not a new concept with Herman Goldstein's (1979, 1990) 'problem-oriented policing' (POP) emphasising the use of evidence to improve policing. Several accessible resources are now available that collect and evaluate relevant research including the evidence-based policing matrix (Lum, Koper and Telep, 2010) and the College of Policing research map (Sidebottom and Tilley, 2020). The College of Policing is a professional policing body which develops research to improve the evidence of 'what works' to ensure that policing standards and practices are based on knowledge (College of Policing, 2020b). The College of Policing takes an evidence-based approach to policing by hosting the What Works Centre for Crime Reduction (WWCCR) working with academics (Lumsden and Goode, 2018) which offers, among other things, a crime reduction toolkit and research map of the UK detailing all ongoing police-related research projects. But what constitutes 'good' evidence?

EBP can encompass a range of methods to inform police decision-making, and although Sherman's version of EBP has influenced policing, evidence-based practice can include a wider range of evidence (Bullock, Fielding and Holdaway, 2020), such as crime analysis to help inform resource decision-making, using generalisations from

current research knowledge to inform practices, and exploring how forces use their technology to improve deployment processes (Lum and Koper, 2017). According to the College of Policing (2020c):

> "In an evidence-based policing approach, police officers and staff create, review, and use the best available evidence to inform and challenge policies, practices and decisions".

It is evident from the latest College of Policing definition of EBP that the reliance on RCTs has shifted and a much wider use of evidence is now accepted (Holdaway, 2020). The best available evidence, according to the College of Policing (2020c), should use appropriate research methods and sources, be peer reviewed and transparent about its methods, limitations, and how its conclusions were reached, with a clear theoretical basis. However, if gathered and documented appropriately, professional consensus can be regarded as the 'best available' evidence where there is little or no formal research. Lum and Koper (2017) argue that if forces understand what constitutes good research, all types of research can be applied to EBP including surveys and in-depth interviews. This thesis will provide an evidence base for decision-making within the FCR by means of call data analysis, surveys and in-depth interviews with FCR staff.

Although the evidence-based approach has generally concentrated on reducing crime, Sherman (2013) acknowledged that EBP can be applied more widely to other aspects of policing, citing that police should use evidence to target limited resources effectively and efficiently. As discussed, police have to make decisions on how to allocate finite resources and CHs within the FCR are, in effect, gatekeepers, therefore applying an evidence-based approach to call handling can help to ensure that police interventions are appropriate by identifying which practices are successful, ensuring that limited resources are used effectively and efficiently, as well as having the potential to identify present and future issues (Tilley and Laycock, 2017).

Although EBP within FCRs cannot replace CHs judgements based on experiences, it can help to inform, and in many cases, improve such judgements (Sherman, 2013). Indeed,

it could be argued that CHs judgements based on experiences are, in some cases, the best available evidence. Furthermore, although responding to calls for service professionally and lawfully is important, EBP can utilise research knowledge that can reduce demand (Lum, 2012). As discussed throughout this thesis, CHs have a great deal of discretion when making decisions which has the potential to lead to the inequitable provision of services. One thing missing from EBP is the lack of concerns about equity and perceptions of legitimacy (Engel and Eck, 2015). EBP appears to be more concerned with measuring effectiveness, whereas measures of equity should also be considered, and although making decisions based on research is valuable, focus should also be on issues of equity and fairness (ibid). This thesis will address this gap by assessing whether CHs discretion has the potential to lead to an inequitable distribution of police services. It will provide a general overview of deployment decisions utilising the opening codes of F1 call data to identify if any discrepancies exist in CHs response grading decisions measuring the equity in response grading over time and space.

Summary

Despite its importance, current literature on the function of the police and police demand is sparse and has generally been overlooked by recent scholars, particularly in the UK. There is strong evidence to suggest the police are struggling to cope with increased demands (Home Affairs Committee, 2018).

Findings from previous studies suggest that social service functions are persistent with little shift in the nature of the police role since the 1960's. It is argued that the findings from police call data and survey and interview data can help produce an evidence base to help support decision-making within the police service. The findings can not only be used by police forces to target limited resources effectively and efficiently but also to help inform practitioners and policy makers within the FCR improve decision-making practices. Where this chapter discussed the role of the police and the types of demands placed on the police service, the following chapter will focus specifically on how police manage that demand, including demand management practices and demand reduction proposals.

Chapter 3 - Demand Management

The previous chapter reviewed literature relating to the functions of the police and police demand, highlighting the increased demands currently being placed on the police service in England and Wales, whilst debating the wide range of evidence that can be used to inform policing practices. Challenges around capacity and capability resulting from austerity measures have, in effect, provided police forces with an opportunity to assess their demand and evaluate how they approach this. (NPCC, 2017a). To begin to address Aim 1 of this thesis, this chapter will review the existing literature regarding how effective police forces are at dealing with their reactive demand and evaluate demand management practices and proposals on how the police could reduce their demand. To address RQ4 it will then discuss previous research regarding the role of CHs within the FCR in managing demand and evaluate effective call handling practices. It will discuss the way in which CHs make decisions on how to respond to calls for service before discussing the role of the CH as a Street Level Bureaucrat and their levels of discretion. It will conclude by outlining the theoretical framework which underpins the thesis discussing several decision-making theories.

3.1 Police Effectiveness in Dealing with Demand

As discussed, demand on police services can be categorised into three types (see Chapter 1) with this thesis focusing on public or reactive demand. A 2018 report from HMICFRS found that forces were not meeting demand properly with almost a quarter either not meeting enough of their demand or inappropriately managing it, in some cases putting vulnerable people at serious risk of harm (HMICFRS, 2018a). Concerns were raised that some forces were incorrectly suppressing demand with instances of forces putting thousands of emergency calls in queues, mainly due to the lack of officers available to respond (ibid). Although HMICFRS (2019b) continued to find some forces struggling to respond to increasing demand, recent inspections have shown an improvement in how forces assess and manage their demand (HMICFRS, 2021).

The National Decision Model (NDM) (College of Policing, 2014a) is the primary decision-making model used in policing (see Section 3.5). However, discussions around demand management have led to the introduction of risk assessment models such as

THRIVE. This framework was designed to assess risk in a consistent manner and is based on Threat, Harm, Risk, Investigation, Vulnerability, and Engagement (NPCC, 2017a). The THRIVE model is used to assess risk at the point of contact to allow CHs to determine an appropriate response, however there are variations in risk models utilised by forces and limited work has been completed to identify a nationally agreed resourcing decision and risk assessment model at the first point of contact (ibid). Some forces believe that THRIVE is too subjective and not uniformly applied across all forces (Walley and Adams, 2019). HMICFRS (2019b) raised concerns that control room staff, in some forces, were unable to manage the pressures of demand and that improvements to their initial assessments of calls were required utilising THRIVE to prioritise calls more effectively.

With the effects of austerity on policing, demand management has become an important topic in policing although studies are scarce. One of the aims of this thesis is to explore the role of the CH as gatekeepers to police resources and how they manage demand. Previous work, completed in several forces, has identified that improved decision-making, often by the CH, can result in a reduction in the need to deploy to incidents (NPCC, 2017a). Research by Walley and Adams (2019:3) identified that the most common demand management practices across police forces in England and Wales were:

- Changes in the way work was prioritised and graded
- Protocols identifying types of demand police should be dealing with
- An increased use of telephone resolution
- The use of forecasting models to help identify demand variations
- The use of technology to help deal with demand

The study, evaluating demand management practices in police forces across the United Kingdom, highlighted that there was no consistent, agreed definition of what demand meant with few forces actually utilising their call data to identify resource requirements due to the complexity of the task (Walley and Adams, 2019). Although

forecasting models were used to identify demand, forces often looked at their average demand without considering typical variations (ibid). Demand variation can influence the level of demand the police can practicably meet at any given time. There appears to be a lack of consistency, with incidences of identical calls for service graded differently depending on the resources available on any given day (ibid). All components can be affected by random fluctuations or isolated spikes in demand (Laufs et al. 2020), with such variations making predicting demand problematic. Therefore, appropriate techniques are required utilising empirical data to ensure accurate analysis (NPCC, 2017a).

Dynamic demand is complex, varies in time, and includes several components:

- Baseline demand – The steady state demand i.e., the need for everyday policing
- Cyclical – Events occurring in a regular cycle, such as acquisitive crime at Christmas
- Seasonal – A form of cyclical demand, such as darkness in winter months
- Surge – Unexpected one-off incidents, such as the effects on communities caused by heavy snow or floods
- Trending demand – demand which increases or decreases over time, such as terrorism (NPCC, 2017a:22).

3.2 Demand Management Practices

Forces are increasingly using telephone resolutions to deal with incidents in an attempt to reduce the need for deployment (see Chapter 5). Several other attempts to reduce demand as well as proposals on how police could reduce demand are discussed below.

3.2.1 Single Non-Emergency Number

The roll-out of the non-emergency number in Wales in 2009 (BBC News, 2009) followed by England between 2011 and 2012 was designed to reduce the number of emergency calls and was seen as a useful way to reduce police deployments (Bain et

al. 2016). 101 was set up by the police service to take calls that could be dealt with not just by the police but other services such as housing, health, and social care (HMICFRS, 2020a). Other organisations however withdrew their support when their funding was reduced with much of current 101 demand not police work (ibid). A review of the service in one English region found that it was a valuable addition which was beneficial in gathering additional information providing a more precise picture of public demand. However, a number of citizens are still calling the emergency number for non-urgent or 'trivial' matters (ibid). Although there is no available national data to evaluate whether the introduction of 101 has decreased demand, a report by the College of Policing (2015) found that emergency 999 calls had decreased by 23% since their peak in 2006/07. They surmised that the introduction of the 101 non-emergency number may have contributed, in part, to later reductions.

Freedom of Information (FOI) requests submitted by the researcher for this thesis identified that 999 calls increased by 25% between 2015 and 2018 across forces in England and Wales, coupled with a reduction of 12% in 101 calls. Although increases were consistent across forces, trends differed with some witnessing much higher increases in 999 calls than others (see Chapter 5). It has been suggested that the public are calling 999 rather than waiting for a 101 call to be answered (HMICFRS, 2020a). Whilst the issue of long waits has not been addressed, calls to the 101 number have been free of charge since April 2020 which should benefit citizens reporting non-emergencies (Home Office, 2019). Further analysis would be required to ascertain if this has influenced reporting patterns.

3.2.2 Differential Police Response (DPR) Strategies

In an attempt to reduce the number of non-emergency calls for service receiving an immediate response and to increase the use of alternative responses (McEwan, Connors, and Cohen, 1986), differential police response studies emerged from the austerity challenges of the 1970's (Huey, Surrey, and Ricciardelli, 2016). According to Sumrall, Roberts, and Farmer (1981)., responding to calls for service is undoubtedly an important function of policing which accounts for the highest use of resources. A study by Sumrall, Roberts, and Farmer (1981) argued that as most calls for service do not

involve crimes, a rapid response to all requests was unjustifiable, recommending that to improve the delivery of police services forces must prioritise incidents.

Decision-making models are currently used by forces in England and Wales to help prioritise incidents, however, responses are still based on the CHs perception of each incident's severity or urgency (Home Office, 2011). National Contact Management Grades (2012) are also utilised by forces as they provide a nationally agreed process whereby all calls for service are risk assessed and then prioritised with the response ranging from an emergency deployment to a resolution without deployment. However, limited work has been completed to identify a nationally agreed resourcing decision and risk assessment tool at the first point of contact (NPCC, 2017a) (see Table 3.1 for National Contact Management Grades). Although the use of DPR strategies may help forces improve efficiency, they may result in the inequitable distribution of resources (see Chapters 5 and 6) and forces should therefore consider the trade-off between equity and efficiency when making DPR decisions (Worden, 1993). The Peelian Principles established the notion of policing by consent (Home Office, 2012) and rely on public confidence. However, the relationship between citizens and the police could be impacted if some parts of society are dissatisfied with the alternative response (Worden, 1993).

3.2.3 Service Shift

The role of the police in the 21st century is broader than it has ever been, and with unclear defined roles they often have to deal with a diverse range of incidents, regardless of whether it is appropriate for them to do so (Home Affairs Select Committee, 2008). This has led to calls by some scholars for a narrowing of the role of the police. Much valuable police work would be called into question if police were simply defined as Theresa May's "no-nonsense crime fighters" (Millie, 2014:53). Whilst cutting crime is important, the wider social service function of policing must be acknowledged. Millie (2014: 59) calls "for a return to the fundamental roles of police – these being crime control and social service and order maintenance". He argues, however, for the narrowing of these police activities maintaining that if their crime control, social service, and order maintenance functions are defined too widely it will

include tasks that could be taken on by other agencies. Boulton et al. (2017) argue for early intervention and a multi-agency approach, suggesting that a large amount of police work could be more suitably dealt with by other agencies or in partnership with other agencies which would free up resources, something the public agree with (Higgins, 2020). Some police forces have highlighted the danger of 'service-drift' from other agencies such as health and social care as their funding and capacity reduces (NPCC, 2018a). There is a distinct difference between service-drift and service-shift, with service-drift being the unintentional consequence of other agencies retracting from their core statutory responsibilities due to budget constraints, and service-shift being the intentional transference of core responsibilities from the police to partner agencies.

3.2.4 Channel Shift

Forces are beginning to understand the benefits of channel shift, which allows a large number of calls from the public to be shifted to digital channels such as online reporting, which is expected to reduce the number of 'immediate response' deployments with more incidents being resolved online (NPCC, 2017a). The Digital Public Contact (DPC) programme, part of the NPCC Digital Policing Portfolio (DPP), has created a standardised approach designed to allow citizens access to online crime and incident reporting, a self-help and knowledge base, financial transactions, and tracking of incidents and crimes. The creation of a "single online home', a single policing portal, is expected to provide the public with a way to communicate with their local force and access police services online (NPCC, 2017b). There are early signs that the volume of incidents being reported on the 'single online home' is growing steadily (HMICFRS, 2020a) and reducing demand on the 101 number, however further research would be required to assess any shift from 101 to online reporting.

3.2.5 Rationing

With the tendency for the public to call the police as a first resort and with demand, in some cases, exceeding supply, Fleming and Grabosky (2009) suggest rationing as a solution. The gap between demand for police services and the capacity of the police to

meet that demand is debated, in the Australian context, by Fleming and Grabosky (2009) whose discussion is based around the strategies identified by the New Zealand Ministry of Health (1998) to reduce demand on their services. The five strategies are discussed below:

- Deterrence – Whereby the public are discouraged from making demands on the police service
- Deflection – Requests for service are deflected to other agencies
- Delay – Response is held in queues
- Dilution – A service is provided, but in reduced quality or quantity
- Denial – The request is denied or ignored.

Fleming and Grabosky (2009) acknowledge that discouraging the public to contact the police with any concerns that they have is unacceptable. Instead, they discuss the notion of imposing charges, or the threat of charges, for certain services e.g., incidents involving irresponsible behaviour. However, previous attempts to claim costs for such behaviour by Australian police forces have resulted in public outrage (ibid). Paying for police services is not uncommon in the United Kingdom where it is appropriate for the police service to make charges to individuals or organisations to recover costs for a limited range of activities (NPCC, 2018b). For example, legislation allows for charges to be levied for the policing of special police services, such as events or football matches (Section 25 of the Police Act 1996); the provision of goods and services to third parties (Section 15 of the Police Reform and Social Responsibility Act 2011); charging for services to government agencies; and the provision of mutual aid to other police forces (Section 24 of the Police Act 1996) (NPCC, 2018b). However, as policing is seen as a public service (Ayling and Shearing, 2008) there are arguments that the private sector would be better placed to deal with requests such as shopping centres, hospitals, airports, and local communities paying for the services of additional policing (see Ayling and Shearing, 2008; Crawford and Lister, 2006). The allocation of officers to large events may have a negative impact on the availability of officers to attend their normal duties, and therefore it could be argued that policing for a private interest may not equate to the idea of public policing (Ayling and Shearing, 2008).

New Zealand police embraced the concept of deflection as a way of managing some of their out of hours non-policing demand. They created several alternatives to calling the police, including assisting the public to discover the best placed agency with an online reporting service (Kenny, 2017). They also re-direct callers to the most appropriate service via specialised telephone support centres with a focus on identifying which services are most appropriate to deal with the incident (ibid).

The concept of deflection to other services, delaying response and diluting services already exists in forces across England and Wales (personal correspondence and data from the surveys, interviews, and call data). Although recent research identified the introduction of denial (as a means of rationing) by several forces who have implemented policies refusing specific calls for service, such as noisy neighbours and lost property, most forces continue to conduct an initial risk assessment, assessing any aggravating factors, before deciding on whether to deploy resources (Walley and Adams, 2019). This approach is not limited to non-criminal incidents, with several forces introducing such practices to calls relating to crime, such as low value shoplifting (ibid).

3.2.6 Special Constables and Police Support Volunteers

Citizens who volunteer to support the police in England and Wales come under the umbrella of 'Citizens in Policing', including Special Constables and Police Support Volunteers (College of Policing, 2017; Millie, 2016). With cuts to funding, changes in demand, and capacity and capability concerns, procuring the unpaid services of volunteers can benefit police forces struggling to manage their demand. Members of the public offering unpaid assistance to the police is not a new concept. The Special Constabulary can be traced back to the 9th Century where unpaid members of the public enforced the law and kept the peace (Old Police Cells Museum, 2016). With the same powers as regular police officers, Special Constables (often referred to as 'Specials') are volunteer officers working with, and supporting, the police to tackle crime (College of Policing, 2019a). Their varied roles include ensuring public safety, preventing, investigating, and tackling crime, and securing convictions (ibid). Specials

can bring an abundance of skills and experience to policing, however according to the Home Office Workforce Statistics (2021a) numbers halved between 2011 and 2021. Forces need to acknowledge and utilise the skills and experience Specials bring and to focus on career development and training needs (Callender et al. 2018). For example, due to the complexity of emerging demand requiring specialist skills and experience (ibid), the National Crime Agency (NCA) building on the success of Special Constables, are enhancing their workforce by recruiting NCA specials with expertise in areas such as cyber security, academia, and the financial markets (NCA, 2022).

Police Support Volunteers (PSVs) are another important addition to policing, with forces increasingly using them to fill the gaps caused by government cuts to funding (Unison, 2018). PSVs undertake a wide variety of tasks such as administrative work, vehicle maintenance, CCTV monitoring, and criminal investigation support, however, unlike Specials they are unwarranted and usually non-uniformed (Millie, 2016). However, the ability to designate certain powers to PSVs was introduced in the 2017 Policing and Crime Act (s.38) (Millie, 2019). There are currently 8,014 PSVs providing support to police forces across England and Wales (Home Office, 2021b) and they can benefit police forces in several ways. Volunteers have an array of skills and experience and can provide fresh ideas and views about policing. This is especially important during a time of cuts to resources in that volunteers can provide struggling forces with additional capacity and capability to tackle rising demands (Britton and Knight, 2016).

3.2.7 Failure Demand

'Failure demand' can be defined as "demand caused by a failure to do something or do something right for the customer" (Seddon, 2003: 26). Seddon argues that within police forces 'failure demand' accounts for as much as 80-90% of contacts which are avoidable and unnecessary. Failing to do something, such as return a call or solve a problem when it arises creates further demand (Seddon, 2003). According to this concept, to reduce demand, police forces must understand the type and frequency of their demand. In an approach to demand management, the concept of 'failure demand' is utilised by Walley and Jennison-Phillips (2018). They analysed a sample of

non-urgent incidents and the response from one UK police region identifying three areas of avoidable demand:

1. Repeat demand – 36% of incidents had some repeat or failure demand, some of which could have been prevented. Incidents included domestic disputes, mental health related incidents and anti-social behaviour.
2. Preventative demand – Numerous examples of preventable demand had been missed i.e., where a previous opportunity to resolve a problem had been missed.
3. Excess provision of service or resource – Officers were unnecessarily deployed to a number of incidents. This was often capacity driven i.e., an officer was in the area and therefore deployed. In other cases, officers were deployed to reports of missing persons regardless of the circumstances (Walley and Jennison-Phillips, 2018).

Analysing failure demand was found to be beneficial in identifying types of demand that can be reduced without affecting the quality of the service. If all identifiable failure demand could be eradicated, resource requirements could be reduced by about 30%. However, much of the failure demand was produced by the prioritisation systems put in place to manage demand, with CHs often deploying additional resources when they were not required (Walley and Jennison-Phillips, 2018). However, CHs work within a risk-averse environment regularly having to make difficult decisions and often take a precautionary approach due to a fear of inaction (Black and Lumsden, 2019). This emphasises the important role of the CH who acts as a gatekeeper to police resources and plays an important part in managing demand and resources within the FCR.

The introduction of a centralised call-handling system[10] across England and Wales led to an increase in demand, which according to Seddon (2003), was a major cause of failure demand. This argument is supported by a study conducted by Gravelle and

[10] The general move towards centralised models and away from divisional control rooms began in 1997. By 2007, 88% of forces in England and Wales had a centralised contact centre function (HMIC, 2007).

Rogers (2012), which found that the introduction of a centralised call centre, in 2003, resulted in a 20-30% increase in demand. Prior to the introduction of centralised systems to manage calls citizens primarily called their local police station to report non-emergencies (Audit Scotland, 2007). A report by HM Inspectorate of Constabulary for Scotland (HMICS, 2004) estimated that almost 50% of calls to police stations in Scotland went unanswered, during busy times, before the implementation of centralised systems[11]. With concerns over the potential impact on police resources, HMICS advised forces to prepare for an increase in calls received via the new centralised systems (ibid). This was not necessarily an increase in calls or demand, but perhaps the realisation that more calls could now be answered.

Randle and Kippin (2014) argue that there are five types of demand (Failure, Avoidable, Excess, Preventable, Co-dependent (see Figure 3.1)) and highlight several key strategy questions that should be asked to better understand and manage demand (shown in Figure 3.2)

[11] All forces in Scotland had centralised how they managed calls by 2007.

Figure 3.1: Types of Demand: Adapted from Randle and Kippin (2014)

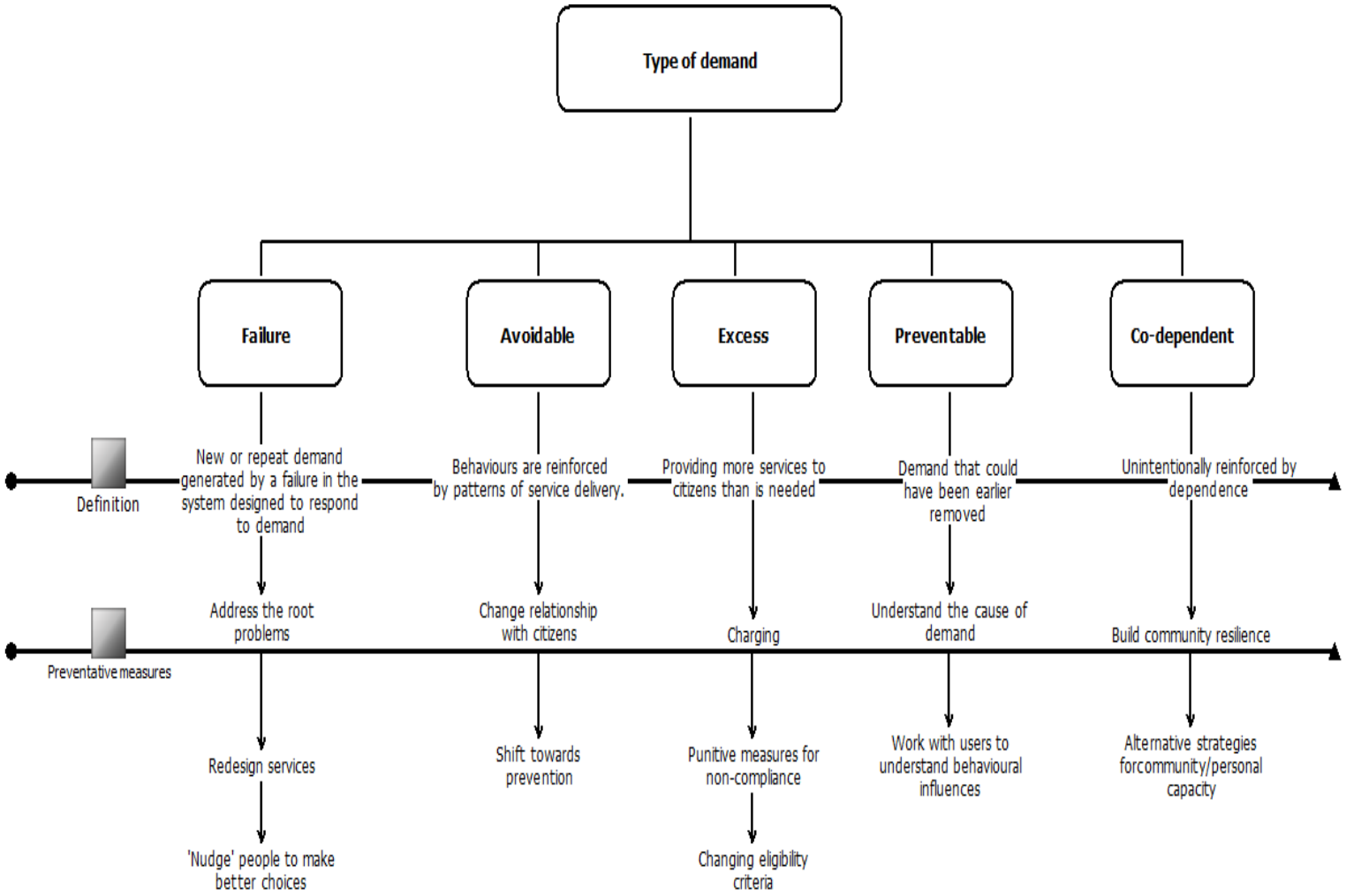
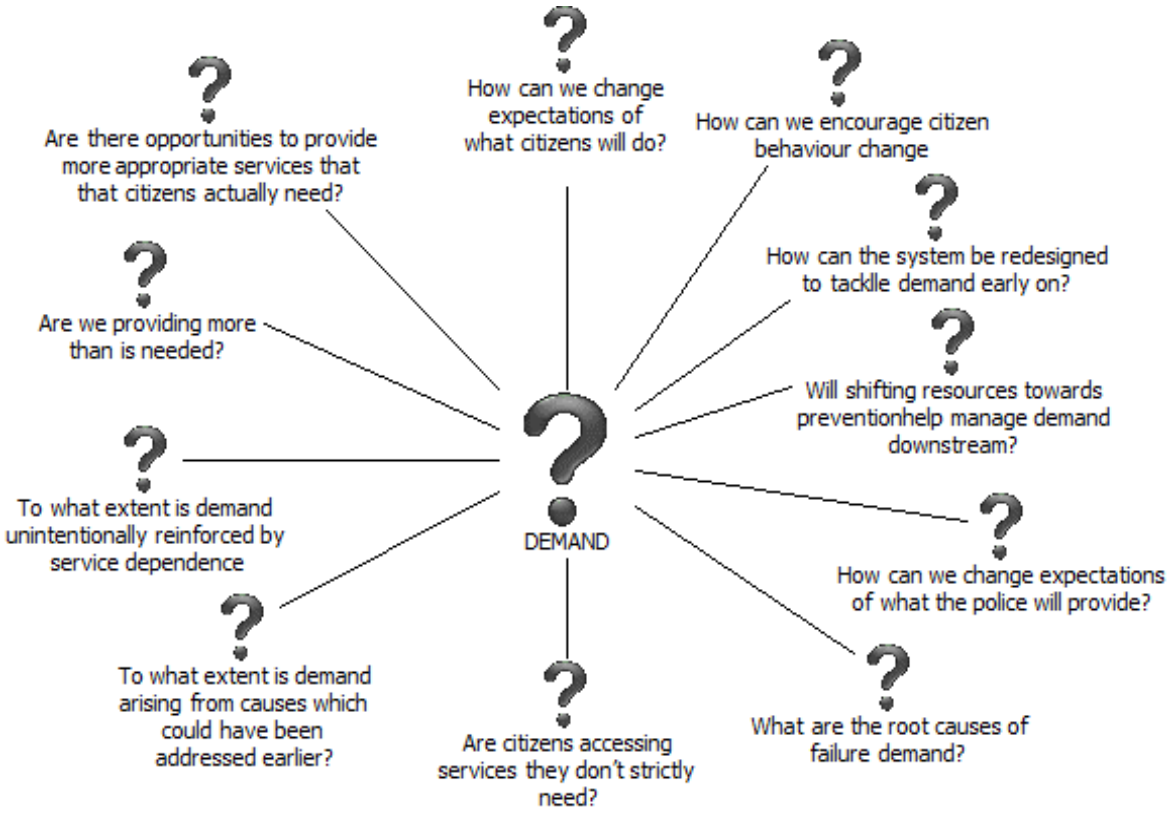


Figure 3.2: Key Questions in Demand Management: Adapted from Randle and Kippin (2014).



Walley and Adams (2019) found that forces identified that much of their demand was either unnecessary or not their responsibility, with many highlighting demands linked to non-police matters. Although forces had a concept of both avoidable and failure demand, they had limited capability to accurately measure it. Examples of failure demand found by Walley and Adams (2019) included victims not being updated and having to call back for information, and police failing to deal with incidents appropriately in the first instance. Avoidable demand was identified as delays in answering 101 calls resulting in the public calling 999, and incidents that should be dealt with by partner agencies.

3.3 Demand and Capacity Management

To improve the effectiveness and efficiency of police forces, understanding the capacity and demands placed upon the police service is imperative. However, demand

and capacity planning processes differ greatly between the public and private sector, with some public services being resource driven as opposed to demand driven (Walley, 2013). Police forces are in an unenviable position of having to meet their demand, some of which is unpredictable, with limited resources. They are also not able to increase their capacity without additional funding. They have limited amounts of power to control the levels of demand placed on them, therefore it is not surprising that they may be focused on resources as opposed to demand.

While forces are improving their ability to predict demand, the accuracy of their forecasts is unclear (HMICFRS, 2019c). Although there appears to be a lack of a consistent and agreed definition of what demand really means across forces (Walley and Adams, 2019), the Force Management Statements (FMS) introduced in 2018 to help forces improve their planning and create a comprehensive national picture of police demand across England and Wales, will, in theory, allow forces to evaluate both the nature and level of demand (Public Accounts Committee, 2018). Early observations from the 2021 FMS show that although forces have improved their assessment and management of demand, many are still dependent on historic and current demand with limited assessments of future expected demand (HMICFRS, 2021).

Several suggestions as to how to manage and reduce demand have been discussed. It has been argued there is a need for police forces in England and Wales to better understand their demand to allow them to become more effective and efficient. Reducing demand is an important part of police demand management and effective call handling is imperative to ensuring that police resources are utilised effectively. Although decision-making models are currently used by forces in England and Wales to help prioritise incidents, responses are still based on the call handler's perception of each incident's severity or urgency (Home Office, 2011). As CHs are often the first point of contact for members of the public calling the police, their ability to interpret calls accurately allows them to identify the level of risk and decide an appropriate response (HMIC, 2017b), allowing for effective decision-making. This chapter will now consider the role of the CH and Dispatcher, effective call handling, and decision-making models utilised by Force Control Room (FCR) staff before discussing decision-

making from a theoretical perspective to identify any additional factors that underpin decision-making within the FCR.

3.4 Call Handling and the Role of the Dispatcher

Communication between police CHs and the public has been widely studied within the field of linguistics (see Zimmerman, 1984, 1992; Whalen, Zimmerman and Whalen, 1988; Whalen and Zimmerman, 1987, 1990; Tracy, 1997; Curl and Drew, 2008). The emotional aspect of the CHs role has also been the focus of several studies (see Tracy and Tracy, 1998a, 1998b; Whalen and Zimmerman, 1998; Pierce and Lilly, 2012; Lumsden and Black, 2018). One of the key issues when exploring how police forces manage demand is the overlooked role that CHs play in managing police demand. To understand policing, it is important to understand the role of CHs and look at the decisions they make, as they are ultimately responsible for the policing the public receive (Waddington, 1993) through the nature of the response provided. In contrast to previous police decision-making studies which focused on police officers (Roycroft, 2019a and Fahsing, 2019) this thesis will focus on decision-making within the FCR, in particular the CH, although the important role of the Dispatcher will also be discussed.

3.4.1 The Role of Call Handlers

Largely staffed by civilians[12], the centralised Force Control Room (FCR) manages both emergency (999) and non-emergency (101) calls from the public and as such is an integral part of a police force (Lincolnshire Police, 2019). Although there are various roles[13] within the FCR, the demand management chain begins when the police are contacted for assistance (Home Office, 2005), therefore the role of CHs in managing demand is paramount. CHs are often the first point of contact between the public and the police, begin the first stage of the investigative process (HMIC, 2017b), and are required to recognise where evidence needs to be preserved (Black and Lumsden,

[12] The Home Office police workforce data provides information regarding the number of police officers and staff working across all police forces in England and Wales. The Control Room falls under the Central Communication Unit. A FOI request to HMICFRS identified that data is not available at a lower level. Figures, as of March 2019, show that there were 1,837 police officers and 11,177 staff working within the Central Communication Units. Lincolnshire Police FCR is run under the strategic partnership with G4S.

[13] Will differ across forces but can include call-handlers, controllers, supervisors, inspectors, intelligence support officers, mental health practitioners, PNC operators etc.

2019). Appropriate questions have to be asked to enable enough information to be gathered to allow CHs to assess the urgency and legitimacy of the call (Drew and Walker, 2010; Farmer et al. 1981) and identify issues of vulnerability and safeguarding (Black and Lumsden, 2019; Knox et al., 2021). The way in which CHs respond to calls for service will undoubtedly influence both the public's view of the police (Ekblom and Heal, 1985; HMIC, 2007; Stafford, 2016; Scott, 1981), and the satisfaction and confidence communities have in their local police force (HMIC, 2007; NPIA, 2010).

Calls for service are both a vital source of intelligence (Garner and Johnson, 2013) and a valuable source of information as they inform the police about local problems and issues as well as providing an invaluable primary source of analytical data (Kessler, 1993). Calls can identify repeat victims, vulnerable individuals (NPIA, 2011; Knox et al., 2021) and problem areas and are an efficient source of exchanges in information between the police and the public (Kessler, 1993). The police are information dependent, relying on the public as a primary source of information (Manning, 1992), and the way in which CHs handle information is crucial to understanding the police response to both criminal and noncriminal requests (Antunes and Scott, 1981).

CHs must assess all calls for service before police can respond and are therefore influential in much of the routine day to day business, determining most of the initial police response to calls (ibid). Furthermore, CHs have the unenviable task of having to effectively deal with incidents and ensure an appropriate response whilst being aware that their decisions can result in either a positive outcome (with a highly satisfied and reassured customer) or a poor response (failure to meet expectations and the consequent reduction in public support for policing) (HMIC, 2007). Good decision-making by CHs and Dispatchers can result in the efficient use of resources, however poor decision-making can have a negative effect on the forces' ability to deal with local issues (ibid).

CHs actions can also influence public opinion in the few cases where an inappropriate response leads to serious consequences. While the consequence of deploying unnecessary resources may have an economic impact, not deploying officers when

required could result in death or injury (Antunes and Scott, 1981). One such example is the grave error made by Police Scotland control room staff which resulted in the death of two civilians in 2015 (McLean, Norton and Ludwig, 2016). This led to a review and overhaul of call handling procedures (Police Scotland, 2019). However, such errors are rare as CHs are trained to err on the side of safety (Garner and Johnson, 2006) and are aware of the potential consequences of making a mistake (Waddington, 1993). Ekblom and Heal (1985) found that due to the fear and potential consequences of making mistakes CHs observed the 'just in case' principle.

The 'just in case' approach was highlighted in a police review by Sir Ronnie Flanagan (2008) who challenged the risk averse culture within policing, recommending the need to move away from being risk averse to risk conscious. The College of Policing (2013) Authorised Professional Practice guidelines contain 10 principles related to risk which are designed to encourage police forces to adopt 'a more positive approach to risk by openly supporting decision makers and building their confidence in taking risks'. However, staff within FCRs still maintain a risk averse approach to decision-making (Black and Lumsden, 2019). Effective contact management is essential to manage demand; nevertheless, CHs face several challenges when dealing with calls for service.

3.4.2 Effective Call Handling

Effective contact management must deliver the best use of resources and provide value for money as well as meeting the needs and expectations of the public (NPIA, 2010). However, there are several issues CHs have to confront when dealing with calls for service. Discretion must be used to interpret ambiguous calls (Waddington, 1993) and vague calls must be translated into actionable codes and meanings by utilising pieces of information received to classify the call as well as identify contextual understandings (Manning, 1980). CHs must deal with diverse calls such as requests for information, crisis, welfare, and hoax calls and therefore require a combination of technical and emotional skills (Lumsden and Black, 2018). Although there is a need for both CHs and Dispatchers to identify what police work entails when making resource decisions, they must also evaluate non-criminal incidents which consist of an element of risk (ibid). CHs set the agenda and act as gatekeepers to police resources (Antunes

and Scott, 1981; Scott, 1981; Garner and Johnson, 2006) by making difficult assessments on the validity, importance, and credibility of calls, based on the information obtained from the caller through the questions asked (Drew and Walker, 2010; Waddington, 1993).

CHs have to interrogate the caller to collect and verify information in order to appropriately assess the urgency of the incident (Larsen, 2013). However, interrogating at great lengths is not beneficial as the caller can only provide their interpretation of the incident which may be mistaken, inaccurate, false, or exaggerated (Waddington, 1993). As Manning (1988) argues, the caller merely reports their understanding of an incident which the CH must interpret and assess whether they trust the caller and if all or part of the description of events are credible before deciding on a course of action (ibid). CHs are also required to make good judgements when deciding the urgency of calls (Rand, 1983), however this can be problematic as it is a complex concept (Ekblom and Heal, 1985). The fact that a call has been received via 999 is not a guide to the incidents urgency as it may be trivial, non-urgent, or not a police matter (Rand, 1983). Reports of a burglary may be deemed urgent, but may have occurred several hours or days before the call, while incidents deemed as trivial may require a quicker response such as reports of current disturbances (Ekblom and Heal, 1985).

Receiving calls from the public can also be an emotional job, particularly in relation to emergency calls where CHs must quickly assess the risk before deciding on a response. Therefore, the ability to remain calm while managing both their own and the callers' emotions is vital (Pierce and Lilly, 2012; Tracy and Tracy, 1998a). Call handlers deal with callers who are angry, irritated or call for inappropriate reasons and can often become stressed when dealing with the caller's anguish when reporting incidents involving robberies, intruders, suicides, and domestic violence (Tracy and Tracy, 1998a). A study by Pierce and Lilly (2012) found that some calls frequently encountered by CHs can produce feelings of intense fear, helplessness, or horror, such as calls which involved harm to a child. Maintaining CHs wellbeing is essential, however, a 2019 front line policing review identified that CHs are not always given appropriate support following difficult calls and suggested that supervisors should be

available to talk to staff about traumatic incidents and provide them with some time away from their desks after upsetting calls (Betts and Farmer, 2019).

It is also imperative that police officers have confidence that CHs have generated an accurate picture of events, including any risks such as the presence of weapons or a previous history of violence, or they may attend the scene with little or no awareness of what to expect (Rubenstein, 1973; Waddington, 1993). HMICFRS (2018a) reported that one in five FCRs, were not recording key information resulting in officers attending incidents without the full facts, increasing the risk of danger. Call handling is undoubtedly a challenging role within the FCR with CHs responsible for ensuring incidents are appropriately graded, maintaining public satisfaction, managing police resources and demand, and ensuring the safety of police officers attending incidents, therefore effective call handling is paramount.

There have been frequent efforts in England and Wales to improve police call handling through the issue of national guidance (Leeney and Mueller-Johnson, 2012). Emphasising the importance of contact management, the HMIC (2001) 'Open All Hours' thematic inspection highlighted several variations in relation to training and standards in police call-handling across forces in England and Wales which resulted in a period of considerable reform (Stafford, 2016). To create consistency in call handling between forces and improve the relationship between the police and the public, the National Call-Handling Standards (NCHS) were introduced in 2005 (ACPO, 2005), with a guide on how to improve call handling and demand management published the same year (Home Office, 2005). Forming the basis of substantial progress around call handling, HMIC conducted a two-phase comprehensive thematic inspection of police contact and incident management emphasising the need for forces to recognise contact management as one of the most important police activities, alongside crime reduction and investigation (HMIC, 2005, 2007). Several guidelines and strategies followed (see NPIA and ACPO, 2010a; 2010b; ACPO and NPIA, 2012). Police call-handling policy is currently shaped by the National Contact Management Principles and Practice (ACPO and NPIA, 2012; Stafford, 2016).

In times of austerity, it is inefficient, inappropriate, and economically impractical to deploy a physical resource to attend every reported incident (Gravelle and Rogers, 2012). Therefore, prioritising incidents is the most crucial part of incident management. The process of prioritising the urgency of calls is subjective and although some forces will take a local approach, incorporating their own definitions (ACPO and NPIA, 2012), CHs should use the National Contact Management Grades (2012) which provide definitions of emergency and non-emergency contacts as well as a nationally agreed process in which callers are assessed for risk and prioritised to ensure fair access to services across England and Wales (ibid). Grading may vary between forces who may have their own definitions; however, an overview of contact grades is shown in Table 3.1.

Table 3.1: Overview of Contact Grades

		Example
Response	Immediate Response	Danger to life
		Use or immediate threat of use of violence
		Serious injury to a person
		Serious damage to property
	Priority - Requires resourcing but not an immediate response	A contact will be classified as a non-emergency if it does not meet the emergency criteria outlined above.
	Non-Urgent - Requires a resource but not immediate or priority	
	Scheduled Appointment- Resourced at a pre-arranged scheduled appointment.	
	Managed Contact - Dealt with over the phone. No need to resource	
	Non-Attendance - Dealt with over the phone. No need to resource	

Call prioritisation places considerable responsibility on CHs (Grassie et al. 1978). However, the ability to make professional judgments about the vulnerability of callers, make informed assessments about risks to life and property, threats to safety and identify which incidents are more critical than others is a vital part of their job (NPIA and ACPO, 2010a). The improper grading of incidents can have serious consequences for the public and responding officers. Over-grading incidents to allow for a quicker response can lead to avoidable risk to officer safety (ibid). Conversely, HMICFRS (2018b) previously highlighted that a small number of forces struggling to meet demand were falsely suppressing demand by downgrading the severity of calls to justify a slower emergency response which can lead to a risk to public safety.

Inappropriate grading can also affect the demand management chain with unnecessary or inappropriate deployments (Home Office, 2005), therefore it is

imperative that CHs risk assess and grade all incidents as accurately as possible. However, a 2019 study identified issues around the consistency of grading, highlighting different risk perception levels amongst individuals based within the same FCR (Walley and Adams, 2019). CHs levels of experience contributed to these discrepancies, with more experienced staff being less risk averse (ibid). CHs, when interpreting calls and deciding on the best course of action, therefore have a great deal of discretion in their role which led to Antunes and Scott (1981) describing the role of CHs as Street Level Bureaucrats (SLBs).

3.4.3 The Call Handler as a Street Level Bureaucrat (SLB)

Much of the SLB literature on policing focuses on the police officer, disregarding the significant role of the CH. SLBs are public employees who regularly interact with citizens and have significant independence in job decision-making which can potentially have an impact on the lives of their clients (Lipsky, 1969). CHs decisions, from sending an immediate response to arranging a call back, can have significant consequences for the citizens requesting assistance from the police (Antunes and Scott, 1981). SLBs work near the bottom of the organisational hierarchy, however their decisions can have extremely important consequences for the entire organisation. Although their decision-making is guided by legislation, powers, policies, and procedures, they have great discretion in how these decisions are made (Antunes and Scott, 1981; Scott 1981).

Although CHs work in a more strictly limited domain than many other SLBs, they appear to have great discretion in deciding on the appropriate response to calls for service and have significant influence on the efficiency of the force as well as its relationship with the public (Scott, 1981). Furthermore, although the FCR domain is more limited than other SLBs, CHs work in bureaucratic settings with constant interaction with citizens and have substantial discretion in deciding the appropriate response to calls for service (Garner and Johnson, 2013).

Difficulties faced by SLBs are inadequate resources, time pressures and difficulties in gathering relevant information which increases the pressure to make fast decisions

(Lipsky, 1969; 1971). Discretion can be restricted by lack of resources, in particular when demand is greater than supply with resource increases resulting in, either the quality of service reducing or the organisation having to introduce rationing of their services (Lipsky, 1980). The introduction of forces prioritising incidents and rationing services is one way in which SLBs minimise pressures caused by a lack of resources (Lipsky, 1980). CHs have to deal with the demands from the public and act as gatekeepers to police resources, while applying discretion which can be irrational or even prejudiced (Rowe, 2012). This concept is beneficial in explaining CHs behaviours (Antunes and Scott, 1981) with such discretion having the potential to lead to inequity in response grading and the distribution of police services which will be explored further in Chapters 5 through 9.

3.4.4 Role of the Dispatcher

CHs and Dispatchers work closely together, with Dispatchers directing and deploying police resources to incidents CHs have originally assessed and graded (Avon and Somerset Police, 2021). As previously discussed, although Dispatchers rarely speak with callers (Lum et al. 2020a) they are the main point of contact for police officers and are responsible for allocating appropriate police resources to incidents based on risk and the importance of the incident (College of Policing, 2021). Unlike CHs, dispatchers rarely interact with the public and although they determine which resources to send and when to send them, and in some cases change the grade of calls, Dispatchers have little discretion (Antunes and Scott, 1981) and are therefore, for the purpose of this thesis, not considered to be SLBs. (See p298 for a discussion on FCR staff rotating between the role of CHs and dispatchers).

They do, however, play an important role within the FCR and although they have less discretion to resolve calls, they do manage the police response to calls, as opposed to determining whether a response is required (Lum et al. 2020a). It is crucial they make timely and informed decisions regarding the allocation of resources (Dunnett, Leigh and Jackson, 2018). Dispatchers must weigh up the severity of the call and the available resources, in some cases placing incidents in a queue until suitable resources

are available or delaying a response to preserve vital resources for a potential emergency call (Chaiken and Larson, 1972; Lum et al. 2020a).

Dispatchers' decision-making can therefore improve efficiency by ensuring that appropriate resources are used (Dunnett, Leigh and Jackson, 2018). It has also been argued that the accuracy of information provided by Dispatchers can influence the police response and the outcome of the incident (Gillooly, 2020). However, although the Dispatcher's decision-making is important in deploying resources to incidents, they are guided by the grading decision provided by the CH which, as Scott (1981) argues, can affect the full response process. CHs therefore act as gatekeepers to police resources and are influential in managing demand. As improved decision-making within the FCR can result in a reduction in the need to deploy to incidents it is important to ascertain any additional factors which influence CHs decision-making. HMICFRS (2019c) identified that some FCR staff are still experiencing difficulties in providing an effective response and that risk assessments, such as THRIVE, should be conducted to help prioritise calls effectively. As deploying resources to all calls for service is not feasible the following section will discuss how CHs accurately grade incidents, make appropriate decisions, and determine a suitable response to calls for service.

3.5 Decision-Making Models

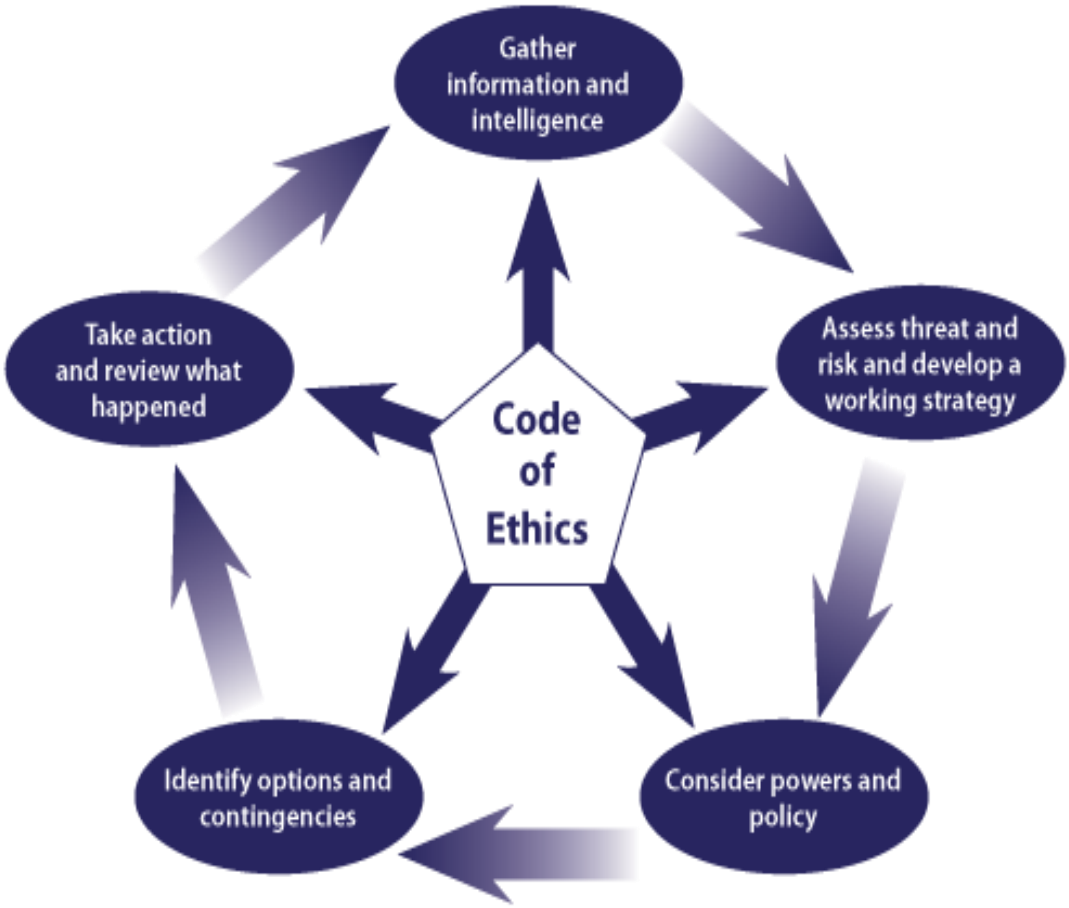
As discussed in Section 3.1, many FCRs in England and Wales utilise risk assessment tools such as THRIVE to inform the allocation of resources and assess risk in a consistent manner. Risk assessment tools are used by CHs to assess the incident and decide upon a suitable response to calls before grading the incident. It is then passed to a Dispatcher to deploy the most appropriate and timely resource (Black and Lumsden, 2019) based on the CHs interpretation of the call. Although some forces believe THRIVE is too subjective it has increased awareness of the requirement to attend incidents where there is a vulnerability issue (Walley and Adams, 2019).

Protecting vulnerable people is a priority for forces and CHs require different skill sets to conduct risk assessments and identify vulnerability indicators (Lumsden and Black,

2018). HMICFRS (2019c) note that FCR staff have a good understanding of vulnerability and their knowledge of hidden vulnerability, such as modern slavery, is improving. However, there is a requirement for several forces to improve their initial assessments with some struggling to provide an effective response which can result in vulnerable people not being identified, supported, or protected (ibid).

Risk assessment tools such as THRIVE are aligned to the National Decision Model (NDM) which is the primary decision-making model used in policing. The NDM puts the Code of Ethics at the core of police decision-making and has six key elements (including the code of ethics), shown in Figure 3.3.

Figure 3.3: The National Decision Model: College of Policing (2014a).



Although CHs often make swift decisions, each stage of the NDM elicits a myriad of questions and considerations that need to be reflected on at the same time as ensuring decisions meet both the public and the police service expectations (ibid) (see Appendix 2 for a list of questions and considerations). This section has discussed the role of the CH and Dispatcher, effective call handling, and decision-making models utilised by Force Control Room (FCR) staff and will now consider decision-making from a theoretical perspective to identify any additional factors that underpin decision-making within the FCR.

3.6 Theoretical Framework

The difficulty in understanding how decisions are made is aptly demonstrated when attempting to study decision-making in a policing domain (Roycroft, 2019b), where decisions are often made within a difficult organisational, cultural context and in high-pressure environments (Alison, 2011). CHs are notable decision makers who have the difficult, and often complex, task of gathering, evaluating, and making sense of information provided to them by members of the public calling to report an array of incidents and crimes. In addition, CHs must also assess a variety of issues, such as legal, moral, and procedural demands which may influence decision-making, whilst also having to be aware of public expectations, resource constraints (Roycroft, 2019b) and the possibility of media scrutiny (Alison, 2011). Dispatchers are reliant on the accuracy of the information provided to them by the CH, often dealing with multiple incidents waiting for dispatch with comparable gradings and having to make decisions on which to prioritise can have substantial implications for police resources (Simpson, 2020).

As human beings, we regularly make decisions that can impact our lives (Polic, 2009). However, decisions made by FCR staff can have a significant effect on the lives of others. Poor decision-making at any stage of the call process can have damaging consequences (Gravelle and Rogers, 2012) and impact on every link in the demand management chain (Home Office, 2005). Therefore, increasing our understanding of the decision-making processes can help prevent bad decisions (Polic, 2009) and reduce avoidable demand.

Decision-making, from a cognitive perspective, is 'the process of selecting a choice or course of action from a set of alternatives' (Azuma, Daily and Furmanski, 2006:1), and can be described as a multi-stage, complicated process with elements of risk and uncertainty (Milburn and Billings, 1976). The process of decision-making has been widely studied with several models established. However, one model is not superior to others nor does one represent an approach that should be used in every situation (Azuma, Daily and Furmanski, 2006). Decision-making within FCRs has been widely overlooked by academics and due to the scarcity of empirical and theoretical work we have a weak understanding of the unique nature of decision-making processes, and an absence of leading theoretical frameworks. The following section will discuss the strengths and weaknesses of existing decision-making theories, namely the Traditional Decision-Making Theory, the Naturalistic Decision-Making Approach, and the Dual Processing Approach before presenting the first iteration of a unique Call Handler Decision-Making Model (CHDMM) (see Figure 3.5) which draws upon previous research. Figure 7.1 presents a revised 'final' version of the model considering the findings from this thesis. The current section concludes with an overview of contextual and situational factors which can influence decision-making in the FCR domain.

3.6.1 Traditional Decision-Making Theory

Traditional decision-making theories were initially utilised to understand human decision-making and assume that decisions are made in a rational manner with all relevant available information shared in an ideal way (Lee and Cummins, 2004). Rational choice theorists believe that rather than making decisions based on intuition, decision-makers analyse the information provided before making a rational decision. Decision makers must firstly clarify what the problem is, analyse and evaluate the accuracy and the reliability of available information and facts before making a rational decision (Uzonwanne, 2016). Decision makers identify all the options, choose the best option from all alternatives whilst considering the consequences of each (Gigerenezer, 2001).

This approach appears to fit well with the National Decision Model used by FCR staff with both models requiring information to be gathered to fully understand the

problem with any gaps in information identified. Analysis is conducted, followed by a review of alternative actions identifying the most appropriate response, concluding with the execution of the final decision. However, the theory assumes that decision makers have access to sufficient information to make the best decision, whilst being mindful of all available options and their consequences (Okoli and Watt, 2018). CHs, however, are not always in receipt of all the necessary information, are limited by time constraints and the possible consequences of poor decision-making are unpredictable (College of Policing, 2013).

Previous research has identified that decision makers are not completely rational and are affected by biases and past experiences (Alison, et al. 2007). Although traditional models acknowledge the existence of biases in decision-making, they don't explore how social contexts can affect decision-making processes (Alison, et al. 2007). Decision-making is more complex than early models suggest (Eyre and Alison, 2007) and research has discovered that real-life dynamic situations evoke considerably different decision-making strategies compared to ones identified in traditional decision theories studies (Eyre, Crego and Alison, 2011). Traditional research methods are mainly laboratory based which neglects contextual factors within real-life decision-making environments, therefore their ability to research decision-making in complex, dynamic, naturalistic situations are limited (Eyre, Crego and Alison, 2011). Traditional decision-making theories models, for example, don't consider the fast pace and complexity of the FCR environment, emotions, or organisational policies (ibid). Although the concept that human beings are entirely rational has evolved, traditional decision-making theories have provided an understanding of decision-making processes.

3.6.2 Naturalistic Decision-Making

The emergence of Naturalistic decision-making frameworks in the 1980's identified weaknesses in rational approaches, with the concept of rationality deemed unrealistic in real life crisis situations (Okoli and Watt, 2018). Making rational decisions in settings where there are time pressures (Azuma, Daily and Furmanski, 2006) or when information is ambiguous can be challenging (Metzger and Spengler, 2019).

Naturalistic decision-making aims to understand how people make decisions in complex applied conditions, as opposed to in a laboratory (Klein and Hoffman 2008). Decisions often take place in organisational settings where decision makers must consider rules and standard operating procedures (Orasanu and Connolly, 1993).

The Recognition Primed Decision (RPD) model is an approach to Naturalistic decision-making which was initially created through observing fire commander's decision-making during emergency situations and has been followed by several empirical studies in a variety of dynamic and time pressured domains (Klein, 1993; Klein, Calderwood and Clinton-Cirocco, 2010; Klein, 2015). The model recognises that decision makers in dynamic settings will rarely have all the information they require especially in uncertain and evolving situations, often encountered by CHs. This can often result in decisions being made based on an incomplete picture of the situation. Klein and his colleagues identified that decision-making in natural settings relies heavily on intuition (Klein, Calderwood, and Clinton-Cirocco, 2010; Klein, 1993) which Klein (2004) defines as the way that we translate our experiences into judgements and decisions. Whilst traditional models of decision-making emphasise simultaneous evaluation of the options (Klein and Crandall, 1996), the RPD model suggests that experienced decision makers usually find a satisfactory option in the first instance. If the initial option is unacceptable further options are generated and assessed sequentially as opposed to concurrently (Klein and Crandall, 1996).

In relation to CHs' familiarity with recurring situations, the model differentiates between experienced and less experienced decision-makers. Schema-based decision models, similar to the RPD model, suggest that decision-makers will use their experience to identify situational cues and patterns allowing them to produce faster decisions, whereas those less experienced will rely on intuition less frequently, assessing all the options available. (Klein, 2004). Although intuitive decision-making can be unreliable and prone to cognitive biases (Tversky and Kahneman, 1974), it is also recognised as being essential to the decision-making process (Klein, 2004). Naturalistic decision-making, however, has focused on specialised domains (the military and fire commanders) often overlooking contextual issues linked to critical

decision-making such as media intrusion, organisational reputation, and policies, therefore it is unclear how well it can be generalised to the policing domain (Eyre, Crego and Alison, 2011). Furthermore, although RPD does not purport to be a universal decision-making model (Lipshitz, 1993) and claims to work well in situations where there are time pressures and ambiguous and incomplete information (Klein and Crandall, 1996), it is less likely to be used when decisions have to be justified, or where decision makers have not acquired expertise (Klein, 1998; 2004).

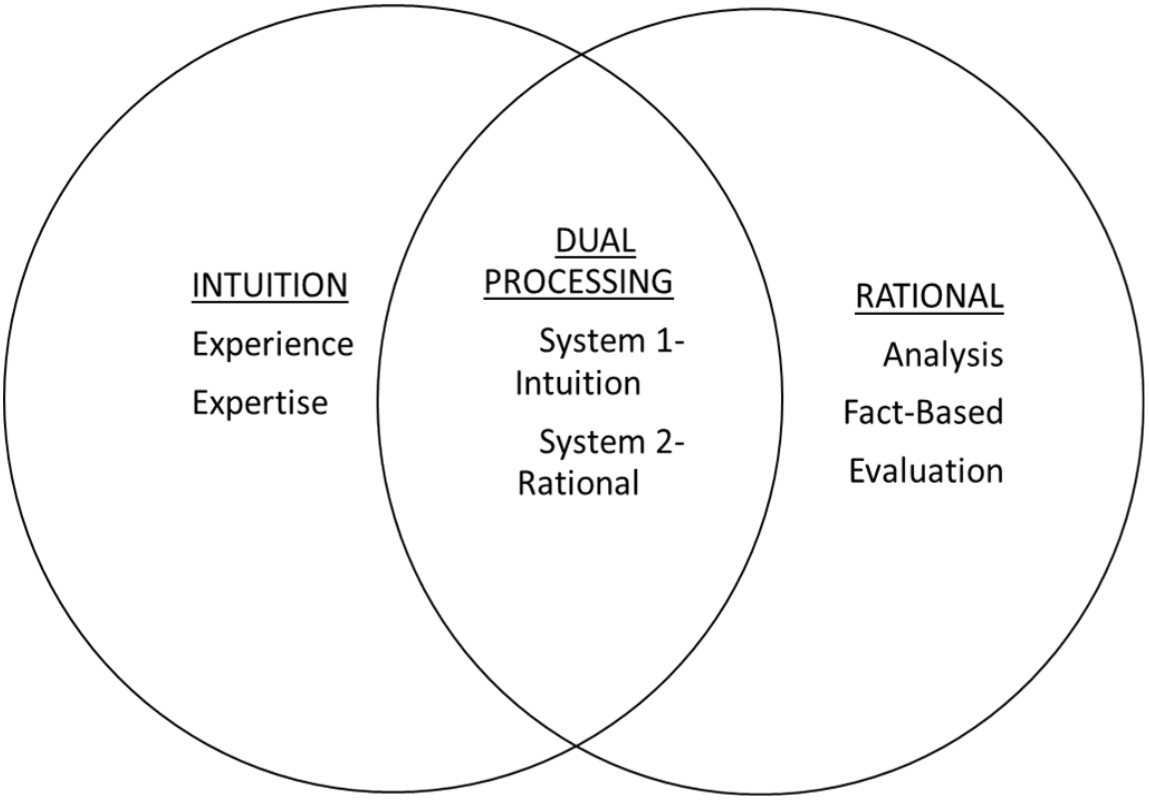
Traditional decision-making and Naturalistic decision-making are not necessarily opposing approaches. Intuition, according to Simon (1992), is not the opposite of rationality; expertise is a combination of intuition and analysis. Analytical reasoning is related to complex problem-solving involving information gathering, utilising relevant knowledge, examining the situation, and offering solutions (ibid). Intuitive reasoning is when experts produce appropriate observations or solutions quickly without assessing the situation thoroughly (ibid). Klein (2004) argued that although analysis has a role in supporting intuitive decisions, it cannot replace intuition.

3.6.3 Dual Process Theory

It is possible that CHs use both analysis and intuition as different processes when making decisions. According to Sadler-Smith and Shefy (2004) intuition and rational analysis are better regarded as two corresponding systems of understanding. Dual-process theories have been developing since the 1970s (see Wason and Evans, 1975; Evans, 1989). According to Kahneman (2011), we have two separate modes of cognitive processing: system 1 and system 2. System 1 is fast, intuitive and operates automatically with little or no effort and includes innate skills as well as learned associations with events, actions, and outcomes (ibid). System 2, in contrast, is slow, conscious, deliberate, analytical, and rational and looks for more information to make decisions. It makes choices by endorsing, rationalising, or improving ideas, feelings and judgements generated by system 1 (Kahneman, 2011; Evans, 2008). Although the two systems operate independently, they also interact with each other. According to this theory, decision-making can be intuitive and/or analytical and rational. Dual processing models are often used in decision-making literature to explain decision-making

processes (Brown and Daus, 2015) and have gained considerable empirical support (Evans, 2008). Figure 3.4 illustrates how dual processing connects Traditional Decision Theories and Naturalistic Decision Model approaches.

Figure 3.4: Dual Process Theory



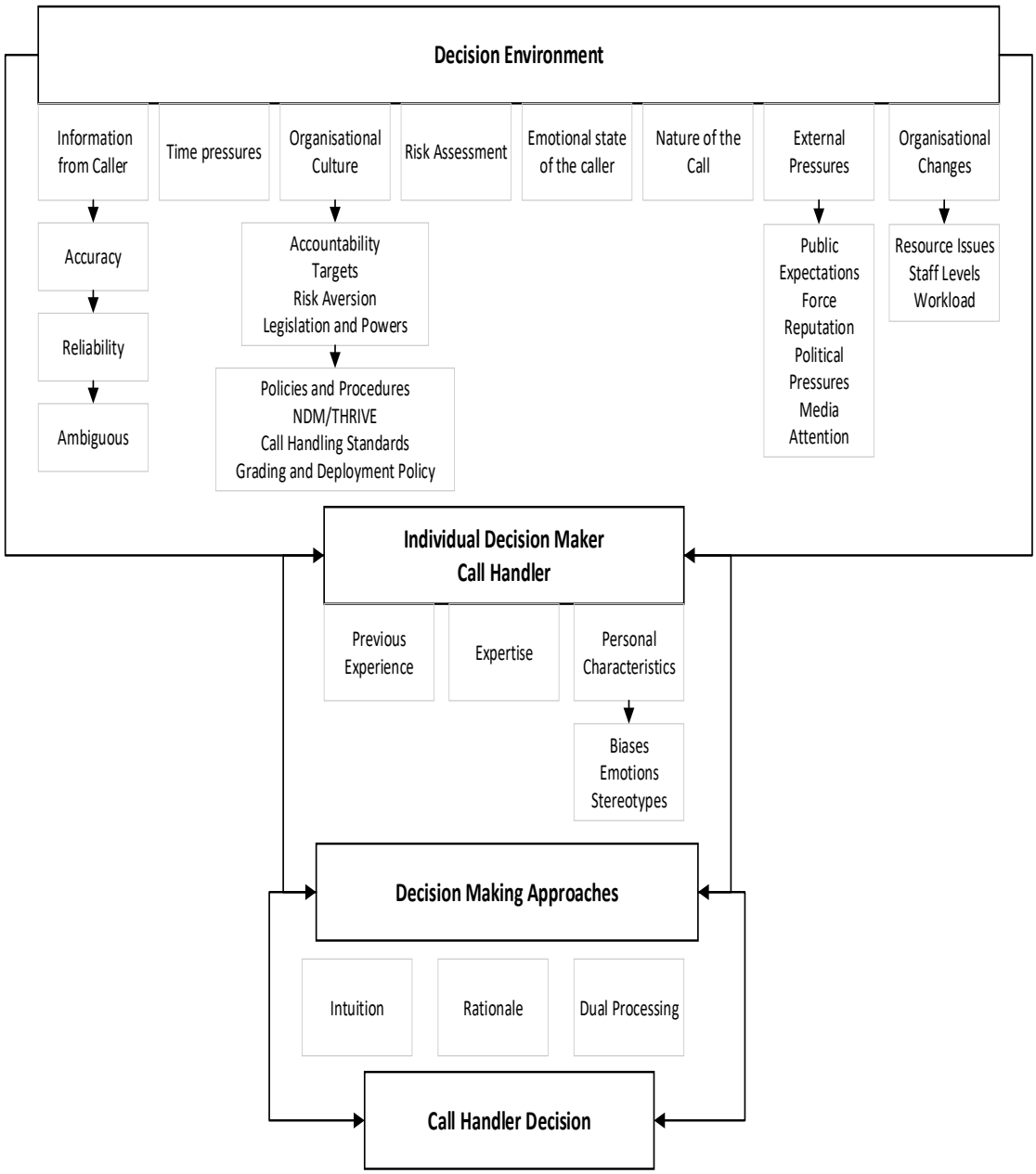
Eyre and Alison (2007) argue that Traditional Decision Theories and Naturalistic Decision Model approaches should not be treated as contradictory or mutually exclusive concepts as both recognise the imperfect nature of human rationality and seek to explain the process of decision-making. Both approaches can help provide an understanding of decision-making processes and characteristics of both can be utilised within the FCR domain. Focusing on cognitive processes alone, however, limits our understanding of decision-making within FCRs due to the influences of contextual and situational factors on decision-making within the policing domain.

3. 7 Proposed Call-Handler Decision-Making Model

An initial proposed decision-making model (see Figure 3.5) is proposed here and was influenced by the Mullins, Alison and Crego (2011) model of Senior Investigator Officer decision-making in murder inquiries, in particular the design and concept of the model (see Appendix 3). However, the context, with the exception of the headings, differs greatly with the preliminary model encompassing factors that influence decision-making within the FCR. Such factors were informed by FCR policies and procedures, the theoretical framework of the thesis and previous research (Waddington, 1993; Fahsing, 2019; MIND, 2019). However, previous approaches to understanding decision-making, although valuable, have not encompassed the distinctive nature of the FCR.

The thesis will develop the model which will be tested and evaluated through the survey and interview data to find out how applicable and transferable it is to the FCR domain. The model will then be revised, and a final decision-making model will be presented based on the unique data from the surveys and interviews utilising the decision-making processes of staff with different levels of experience within the natural FCR setting (see Figure 7.1). Additional contextual and situational factors that can influence CHs decision-making identified in previous studies such as the role of emotions, organisational culture, organisational changes, risk aversion and biases and stereotypical processes will now be explored.

Figure 3.5: Preliminary Call-Handler Decision-Making Model (CHDMM).



3.7.1 Emotions

Emotions are linked to system 1 and can play an important role in decision-making (Brown and Daus, 2015). Emotions can influence decision-making by impacting the process and content of thinking and can influence the availability of memories and associations as well as the kind of information people recall, select, or interpret (Forgas and George, 2001; Bower, 1983). 'We are able to control our emotions in stressful situations', is a competency set out in the College of Policing Competency and Values Framework (CVF). This framework sets out nationally recognised behaviours and values highlighting clear expectations of everyone working in policing (College of Policing, 2016b). However, CHs often have to deal with emotional calls from people who are angry, irritated, and hysterical, in particular in cases of domestic violence, robberies and suicides (Tracy and Tracy, 1998a). CHs also have to manage and conceal their own emotions triggered by such calls, such as sadness, anxiety, irritation and feeling powerless (ibid). Research by MIND (2019) identified that CHs often receive abusive and distressing calls which they were often unable to deal with. The research found that dealing with suicidal callers, or those with other mental health needs, was one of the most stressful and upsetting aspects of the role. Participants believed that the 'emotional turbulence' associated with the role was intensified due to a lack of time between calls to process their feelings and voiced their frustration and anger at the possibility of people in life threatening situations not getting through to the police due to abusive callers occupying the line (ibid).

The two types of emotions decision makers can experience are integral emotions, which are related to the effects of the decision itself, and incidental emotions, which are linked to factors unrelated to the decision at hand (Loewenstein and Lerner 2003). Research has identified that incidental emotions commonly carry over from one situation to the next, affecting subsequent judgements and decisions that are unrelated to that emotion (Lerner et al, 2015; Lerner and Tiedens, 2006); a process known as the carryover of incidental emotion (Loewenstein and Lerner 2003). Incidental anger, for example, generated in one situation can carry over to further situations even though they have nothing to do with the source of the anger (Quigley and Tedeschi 1996).

3.7.2 Organisational Factors and Changes

Research by MIND (2019) found that an organisational culture exists within the Police Service, whereby dealing with distressing incidents is seen as an essential part of the CHs role, with the assumption that staff should be able to deal with this with little support. Part of the organisational culture was for control room staff to 'just get on with it', believing that it was a sign of weakness to admit that you needed support (ibid). Organisational pressures can also influence decision-making, with FCR staff having to make difficult decisions regarding the distribution of available resources with demand, in some cases, outweighing supply (ibid). Dispatchers, with several equally urgent incidents, must make decisions about where to deploy officers when faced with limited resources (ibid). CHs in the study described the consistent high volume of calls, in some cases with only seconds between them, often feeling that they were rushing the caller to get to the next call (ibid). Organisational changes, such as time constraints and resourcing issues can affect a CHs ability to complete tasks appropriately (ibid) which can have an impact on decision-making.

3.7.3 Risk Aversion

Police decision makers can be described as professional risk takers (College of Policing, 2013). A fundamental professional requirement of all members of the police service is the requirement to make decisions in conditions of uncertainty. Risk taking is an essential part of police decision-making, however it has been argued the police service has become risk averse due to the tendency for the media and public to focus on the outcome of poor decision-making (ibid). CHs previous attempts to protect themselves from the consequences of poor decision-making by adhering to the 'just in case' principle (Ekblom and Heal, 1985) is no longer appropriate or feasible due to resource issues (Gravelle and Rogers, 2012) resulting in CHs having to risk assess and grade the severity of the calls. Although decision-making involves the potential for criticism, the risk to the reputation of a police force or an individual member is secondary to the primary responsibility to protect life (College of Policing, 2013).

Risk aversion was a key theme in the Flanagan report (2008:52) on the review of policing which called for a "national debate on risk aversion and culture change".

According to the College of Policing (2013) decisions should be judged on how they are made and implemented as opposed to the outcome, as effective decision-making can not guarantee that harm will not occur. Risk aversion still exists within policing although a study by Walley and Adams (2019) found clear differences in risk perceptions amongst CHs. This was partly due to the levels of experience at handling calls, with more experienced CHs generally being less risk averse (Walley and Adams, 2019).

3.7.4 Personal Characteristics

Pressures and cognitive demands within FCRs have the potential to result in CHs resorting to stereotypical processing, defined as "a standardised conception or image of a single or specific group of people or objects" (Almond et al. 2008:172). Stereotypes play a key role in the way that we process information as well as the information we retrieve and can influence our impressions and judgements (ibid). Waddington (1993) found that CHs relied on stereotypes when attempting to make sense of calls received. Several different features of calls were identified by Waddington (1993) where CHs used stereotypes, such as the content of the call and the type of incident. Contextual features, such as the time of day the call was received, or the emotional state of the caller also influenced CHs decision-making. The status, in particular the social class, of the caller was influential in the CHs judgment about the reliability and accuracy of the call, however Waddington (1993) found that CHs intuition and stereotypes were relatively accurate.

Summary

This chapter has assessed how effective police forces are at dealing with their reactive demand, evaluated demand management practices, and offered suggestions on how the police could reduce their demand. It has also discussed the role of CHs and Dispatchers within the FCR and evaluated effective call handling practices. It has been suggested that CHs are not only gatekeepers to police demand but are also SLBs with a large amount of discretion in deciding the appropriate response to calls for service which has the potential to lead to inequity in the distribution of police services.

The complexity and distinctiveness of decision-making within the FCR domain and the lack of leading theoretical frameworks has also been considered. Several decision-making approaches have been discussed due to their relevance to this thesis, with contextual and situational factors explored as an underlying theme. A preliminary Call-Handler Decision-Making Model (CHDMM) has been introduced and will be tested and evaluated through the survey and interview data which will result in the presentation of a final decision-making model. This will not only help provide a theoretical basis for understanding the decision-making processes within FCRs but will offer an insight into the levels of discretion afforded to CHs. The following chapter will discuss the research design of the study and the methods and data used to address the research questions.

Chapter 4 – Data and Methodology

This thesis adopts a mixed methods approach, drawing on the qualitative and quantitative methods as different approaches were required to answer each research question. This chapter provides an in-depth discussion of the research design, the data capture, and analytical tools used, as well as the rationale for the multi-methodological approach. It will also discuss gaining access to and recruitment of participants and will conclude with a description of the ethical considerations.

4.1 Data and Research Design

The study was conducted in two stages with the research questions pertinent to each detailed below:

Stage One:

- RQ1. What is the nature of police demand in relation to calls for service from the public?
- RQ2. How are forces currently managing their demand?
- RQ3. What is the current role/mandate of policing, and has this changed in recent years?
- RQ4. Which incident types are resource intensive?
- RQ5. Is there a link between socio-economic factors and where resources are deployed to?
- RQ6. Are resources equitably distributed across time, LSOAs and IMD2019 deciles?

Stage Two:

- RQ7. What is the role of the CH, and what level of discretion do CHs have?
- RQ8. How effective are current decision-making tools used by CHs/Dispatchers in the Force Control Room?
- RQ9. What are the main challenges faced by CHs/Dispatchers when making decisions?
- RQ10. What additional factors influence decision-making in FCRs?

When deciding on the appropriate methodology, several factors were considered including the nature of the available data and the research questions. The first stage of the study was reliant on police recorded incident data which was the most appropriate data to address RQ1-6 as this data provided a rich source of information in relation to police reactive demand. Police recorded incident data was supplemented with data from Freedom of Information (FOI) requests, open-source crime data (which includes all crime recorded within the F1 area and is available from Police.uk, 2021a), and Crime Survey for England and Wales (CSEW) data (ending December 2018).

To provide answers to RQ7-10, the second stage of the study involved the collection of qualitative data in the form of a survey and semi-structured interviews in order to produce a comprehensive assessment of the effectiveness of decision-making tools used within FCRs, the challenges faced by staff within the FCR, and any additional factors that may influence decision-making. This data was supplemented with the call data to answer RQ7. The preferred option of observing FCR staff was not possible due to COVID restrictions, and surveys and interviews were deemed the most appropriate alternative.

Mixed method research uses both quantitative and qualitative methods, and as much of the research within the social sciences does not fit into one or the other methods with both methods often used together in the same research (Hammersley, 1996). Furthermore, using mixed methods may provide a better understanding of the topic or research questions (Creswell, 2014; Bryman, 2012), and can be used to answer different research questions (Bryman, 2012), something this thesis aims to do. A mixed methods approach was therefore employed to draw on the strengths and reduce the weaknesses of each method (Hammersley, 1996; Bryman, 2012). Phase 1 is primarily positivist, using data to answer the research questions and Phase 2 is interpretative, adding insights and meaning to the data (Alharahsheh and Pius, 2020) therefore mixed methods seems appropriate for this study.

Both methods supported each other and increased the validity of the findings (Hammersley, 1996) with the call data helping inform the survey questions, which in turn informed the interview schedule. In-depth discussions with staff identified factors

which influence decision-making within the FCR. This also provided a unique insight into the working practices, thoughts, views, and attitudes of staff. Both methods produced different information that complemented each other, producing important insights (ibid). Analysis of the resource and interview data also identified that CHs act as gatekeepers to police resources, ultimately managing their demand which raised questions about the level of CHs discretion and whether this had the potential to lead to inequity in grading. This resulted in further analysis of the resource data to assess any inequitable distribution of police services by CHs providing different responses to similar incidents over time or space.

4.2 The Quantitative Data

The quantitative analysis draws on four sources of data shown in Table 4.1 and this section provides a summary of each data source in turn.

Table 4.1: Data Sources used for quantitative analysis:

Data	Purpose	Data Used	Additional Information	Research Questions
Police call data	Used to conduct an in-depth analysis of F1 reactive demand and to ascertain how that demand was managed.	999/101 call data and resource data for 2015 to 2018 resulting in 794,705 unique incidents.	2017/2018 resource data was also utilised (n= 165,398 unique incidents and 440,849 resources)	1,2,3,4,5,6,7
FOI requests	Helped to identify trends or patterns in reporting practices across forces in England and Wales.	Monthly breakdown of the number of 999 and 101 calls between 1/1/2015 to 31/12/2018.	Twenty-nine forces provided all the requested data for the full reporting period. A further six forces provided complete 999 data only, with either partial or no 101 data.	2
Crime Survey for England and Wales (CSEW)	Utilised to compare the available police call records and the national picture of trends in crimes and ASB.	Compared trends using CSEW data ending December 2018.		1
Open-source crime data	Was used in conjunction with the Indices of Multiple Deprivation (IMD) to analyse resource allocation, the distribution of crimes across the force area and deprivation.	Open-source crime data (for F1 only) for years 2017-2018 was used with all ASB incidents removed as these are not classified as crimes.	Geospatial analysis was conducted on the Crime data which was linked with the IMD2019 data.	1,5,6
Indices of Multiple Deprivation (IMD2019)	Used to analyse resource allocation, the distribution of crimes across the force area and deprivation.	Also used to measure the spatial equity of the response grading utilising call data at the LSOA level (using IMD2019 deciles) to ascertain if individuals calling to report the same incident type have an equal chance of getting the same response. regardless of their geographical location within the F1 area.		4,5,6,7

4.2.1 Police Call Data

Data from calls for service to one police force in England (referred to as F1) was obtained to determine the level of reactive demand generated from calls and to see how that demand was managed. The [redacted] F1 inspection found that the force needed to make better use of their data to understand the nature of their demand. Data was provided by F1 and extracted from their Command and Control system with the search criteria of all calls for service between 01/01/2015 and 31/12/2018 (hereafter referred to as the reporting period). A total of 1,222,948 records were provided. This data was then cleansed, with duplicate entries removed, resulting in 794,705 unique incidents. The incidents were then broken down by year, month, day, and the hour calls were received, before being further broken down by opening and closing categories and sub-categories utilised by F1. It should be noted that F1 changed recording systems at the end of [redacted] There are, however, limited differences between the yearly data with any differences documented in the data limitation section. Due to the relatively well-documented increase in incidents involving people with mental health problems (College of Policing, 2015), incidents with a Mental Health (MH) qualifier were also requested to ascertain the demand placed on the force in relation to MH. There were 34,273 unique incidents with a MH qualifier recorded during the reporting period.

The data collection period of 01/01/2015 to 31/12/2018 was requested to allow for trends to be identified and to provide an assessment of any changes in demand (see Appendix 4 for call-data issues).

The following data were provided:

- Incident ID
- Incident Grade
- Opening Code
- Date Created
- Time Created
- Postcode

- Resource Type
- Closing Code
- Mental Health Qualifier

Much of the data above is self-explanatory, however the following section will provide a brief explanation of incident grades and opening and closing codes.

4.2.1.1 Incident Response Grades

FCR staff utilise both NDM and THRIVE as risk assessment tools (see Chapter 3) to inform the allocation of resources and assess risk in a consistent manner. CHs will assess the incident and decide upon a suitable response to calls before grading the incident. F1 has six response grades which categorise the urgency of response, shown in Table 4.2.

Table 4.2: Response Grades

Grade	Description
Immediate	Immediate response
Priority	Requires resourcing but not an immediate response
Non-Urgent	Requires a resource but not an immediate or priority response
Scheduled Appointment	Resourced at a pre-arranged scheduled appointment
Non-Attendance/Managed Contact	Dealt with over the phone no need to resource

The force does not use any predetermined scripts, with CHs having the autonomy to identify appropriate questions. Guidance on how to deal with issues such as noisy neighbours or lost and found animals is provided and, where appropriate, callers are signposted to other organisations.

Resources will be deployed to incidents receiving a grading of Immediate, Priority, Non-Urgent or Scheduled Appointment, with the incident grade reflecting the urgency of action required. Although F1 does not advocate target times per se as a force, they do follow the standard response for Immediate and Priority category incidents of within 15 and 60 minutes, respectively. There is no set time for the remaining grades, however they believe that a reasonable time for non-urgent incidents is within four hours and generally aim for appointments as soon as possible (and within 72 hours) at the outset (personal correspondence).

4.2.1.2 Opening and Closing Codes and National Standard of Incident Recording

Opening codes are allocated during the initial assessment of an incident with the closing codes added when the incident has been concluded. Due to the emergence of new information regarding the incident, there can be a significant differences between codes (NPIA, 2011). According to Bayley (1990) you cannot gain an accurate picture of incidents based on the caller's description, as the characterisation of a situation by a member of the public may vary substantially from that of the police. As previously discussed, there is often a difference in what the public report an incident as and how it is subsequently classified by the police. For example, a comparison of public and police characterisation of the same incidents by Reiss (1971) found that 58% were thought to be crimes by the public, as opposed to 17% by responding officers. As closing codes provide a more accurate reflection of events and a better understanding of which incident types make up demand they were mostly used when analysing the call data. However, analysis conducted on how CHs graded calls utilised the opening codes as CH grades the incident based on their initial interpretation of the call.

Incorporating a National Incident Category List (NICL), the National Standard for Incident Recording (NSIR) was introduced to ensure consistency in the way forces in England and Wales record their incidents (NPIA, 2011). There are four NICL categories: Administration; Anti-Social Behaviour (ASB); Public Safety and Welfare (PSW); and Transport. Each category has several sub-categories, each with a nationally agreed definition (ibid). If an incident is classified and subsequently recorded as a crime, forces will adhere to the National Crime Recording Standard (NCRS) and the Home Office

Offence Classification Index (see Home Office, 2020b) as opposed to the NSIR. The crime categories used by F1 are documented in Table 4.3. Closing codes for incidents subsequently recorded as a crime have been categorised as 'crime' (see Appendix 5 for examples of the types of incidents that are included in the NICL categories).

Table 4.3: F1 opening and closing codes (including crime categories)

Categories used by F1 (from the National Incident Category List) including Crime categories			
Administration	Complaint Against Police	**Transport**	RTC- Damage Only
	Lost/Found Property/Found Person		Highway Disruption
	Police-Generated Resource Activity		Road Related Offence
	Contact Record		Rail/Air/Marine Incident
	Pre-Planned Event		RTC-Death/Injury
Anti-Social Behaviour	Personal	**Crime**	Bomb Threat
	Nuisance		Burglary
	Environmental		Criminal Damage
Public Safety and Welfare	Abandoned Call to Emergency Services		Drugs
	Absconder/AWOL/Wanted Persons/Police and Court Orders/Bail		Firearms
	Alarm		Fraud
	Animals/Wildlife		Kidnapping
	Civil Disputes		Other Crime
	Concern for Safety/Collapse/Illness/Injury		Robbery
	Domestic Incident		Sexual Offences
	Firearms		Theft - Other
	Hoax Calls		Theft inv. Motor Vehicle
	Immigration		Theft of Motor Vehicle
	Industrial Incident/Accident		Theft from Motor Vehicle

	Licensing		Violence
	Missing Person	**Other**	Crime-Related Incident
	Missing: No Apparent Risk		
	Natural Disaster		
	Protest/Demonstration		
	Sudden Death		
	Suspicious Circumstances/Insecure Premises or Vehicles		
	Suspicious Package or Object		

It should be noted that the above codes do not provide an in-depth description of incident types. The data provided for ASB, for example, does not note the specific type of ASB incidents e.g., street drinking, littering, rowdy/nuisance behaviour. Similarly, 'violence' covers a wide range of offences from minor assault to murder (ONS, 2019b) however this level of detail was not initially provided. Due to the constraints on F1 caused by COVID a further breakdown was not requested.

4.2.2 Freedom of Information (FOI)

F1 identified an increase in 999 calls coupled with a decrease in 101 calls during the reporting period, which they believe is linked to the reduced capacity of other emergency services (personal correspondence). To gain an understanding of the national picture and identify any trends in sources of calls for service across police forces, FOI requests were made to the remaining 42 forces in England and Wales requesting a monthly breakdown of all 999 and 101 calls between 1/1/2015 to 31/12/2018. A total of 39 forces replied to the request, however only 29 forces could provide all the requested data for the full reporting period. A further six forces provided complete 999 data only, with either partial or no 101 data. The findings are discussed in Chapter 5.

4.2.3 Crime Survey for England and Wales (CSEW)

The CSEW is a vital source of information regarding trends in crime and provides information about the extent and nature of crime in England and Wales (Office for National Statistics, 2019a). HMIC (2014) raised concerns about the failure of police

forces in England and Wales to record all reported crimes, estimating that over 800,000 reported crimes went unrecorded every year. This led to large scale crime integrity inspections across England and Wales which identified that while crime recording has improved since 2014, further progress is required. The CSEW, a large-scale population survey, captures data on crimes experienced by members of the public that are not necessarily reported to the police (Public Administration Select Committee, 2014; Tilley and Tseloni 2016). Both police recorded crime and the CSEW are critical sources for crime statistics (Tilley and Tseloni, 2016). CSEW data were utilised to identify any national trends, in particular trends in crime types and incidents classified as ASB.

4.2.4 Open-Source Crime Data

Crime data available at Police.uk (2021a) includes all crime recorded within the F1 area and was used to examine the deployment of resources in relation to recorded crimes across the force area. Unfortunately, due to COVID restrictions F1 could only provide their crime data electronically and therefore were unable to provide postcode details for data protection reasons. The open-source crime data was used as it provided crimes recorded at a LSOA level and coordinates which allowed the data to be imported into ArcMap for geospatial analysis (see Section 4.3.4). Although there are limitations with the data (see Section 4.2.4.1), there is little spatial error in the data when using the LSOA unit of geography (Tompson, et.al 2014) allowing for a more accurate geospatial analysis of crimes (see Section 4.3.4.3 on IMD data).

4.2.4.1 Police.uk Crime Data Limitations

Although the openly available data available from Police.uk (2021a) provides rich data to allow in-depth analysis there are some caveats, detailed below:

- Inconsistent geocoding policies across police forces can result in inaccurate or inconsistent location data, in particular where the exact location of a crime is unknown (for example where the victim is unsure of where the crime occurred). Estimates of geocoding accuracy vary from 60% to 97% across different forces (Police.uk, 2021b).

- The location of non-static crimes, such as crimes committed on moving transport and reported by the British Transport Police (BTP), will be recorded as the end destination (Police.uk, 2021b).
- Residential and non-residential burglary are grouped together; therefore it is not feasible to identify the actual type of premises targeted.
- The data will be incomplete, due to both the under-reporting of crimes to the police and the under-recording of crimes by the police (Quinn, Cooke and Monaghan, 2019).
- Violence and Sexual Offences are grouped together, therefore an accurate assessment of specific types of such offences is unobtainable.
- The CSEW estimate that 2.3 million adults experienced domestic abuse (ONS, 2020c). However, it is unclear how this is categorised in the data (Quinn, Cooke and Monaghan, 2019).

4.3 Methods Employed

This chapter has discussed the data used in this study to answer the RQs detailed above. The following section will now discuss the methods employed.

4.3.1 Call Data and Equity Analysis – Time and Space

Temporal and geospatial analysis was conducted on the spatial and time data using the 'Crime' category opening codes of F1 call data to assess any inconsistencies in response grading based on the time of day and geographic location of the incidents reported. Opening codes were utilised as the response grading is based on the initial interpretation of the call. In relation to both sets of analyses, the crime offence group was documented for calls reporting crimes, and although the sub-group was not provided it was deemed feasible to include the most commonly reported crime types (with more than 5000 incidents over the reporting period) in the analysis as the categories provided were distinctive enough to determine levels of variation between response grading. These comprised: Violence; Burglary; Criminal Damage; Drugs; Sexual Offences and Theft inv Motor Vehicle. 'Theft-other' was excluded as it was not possible to determine what type of theft was reported with large variations in response grading

likely. The concept of inequity in the distribution of resources over time and space is explored in Chapter 6.

4.3.2 Equity of Response Grading Over Time

Temporal analysis was conducted on F1 incident data to identify any inconsistencies in the response grading of specific incident types based on the time of day reported. All incidents graded as 'Police Generated' (see Appendix 6) (n=36,115) were removed as the grading was unknown (Total incidents = 758,590).

4.3.3 Equity of response grading over space

All incident data with a documented valid postcode which occurred within the F1 police boundary were imported into ArcMap and linked with IMD2019 data to allow analysis at a LSOA level. All incidents graded as 'Police Generated' (see Appendix 6) (n=36,115) were removed as the grading was unknown (Total incidents =616, 542). There are [redacted] LSOAs within the F1 geographic area which are divided into 10 deciles according to their deprivation rank, ranging from 1 (most deprived 10% of LSOAs nationally) to 10 (least deprived 10% of LSOAs nationally (see Section 4.3.4.3)). Analysis was conducted on the response grading and deciles across the force area.

4.3.4 Resources and Geospatial Analysis - ArcMap

Resource data were combined with IMD data (see below) to provide a better understanding of the geographical and social distribution of the resources used by F1. ArcMap, which allows users to display and analyse datasets, was used to identify spatial patterns within the resource data (ESRI, 2016). ArcMap is the primary application used in ArcGIS to perform a wide range of Geographical Information System (GIS) tasks, such as working with maps, automating geodatabase datasets, and performing analysis. It characterises geographic information as a collection of layers and other elements (ESRI, 2016). The input data (incidents) were cleansed to identify valid postcodes which were then geocoded in the form of x and y coordinates (longitude and latitude) using doogal.co.uk (2021) to create datapoints on the map. A base map of the United Kingdom was selected from ArcGis, and a geodatabase was created to store the assortment of

geographic datasets in a common file system folder. The British National Grid coordinate system was selected to display the data.

Due to data quality issues, data from 2017 and 2018 were utilised to analyse the resource data (see Appendix 4). A total of 300,527 incidents required a deployment (Immediate/Non-Urgent/Priority/Scheduled Appointment), with resource information included for 217,886 incidents, of which 165,411 had a postcode documented. The input data (resources) was cleansed to identify valid postcodes which were then geocoded in the form of x and y coordinates using doogal.co.uk (2021) to create datapoints on the map. Only 13 postcodes were invalid, therefore 165,398 incidents and 440,849 resources were imported into ArcMap for analysis. However, 170 incidents (n= 448 resources) were outside of the F1 LSOAs and therefore excluded from the analysis resulting in 440,401 resources and 165,228 incidents. The coordinates were then added to ArcMap as a temporary event layer before being saved as a feature class to allow analysis of the data. All coordinates create a datapoint on the map, however some can have multiple coordinates (see ESRI, 2020a for guidance on all aspects of ArcMap). The resource data was linked with the IMD data within ArcMap before being exported to Microsoft Excel for analysis. Three shapefiles were imported into ArcMap, to allow for a comprehensive analysis of the F1 geographic area only and are discussed below.

4.3.4.1 Boundaries

The police boundary 'Police Force areas (December 2016) Full Extent Boundaries in England and Wales' was filtered to F1 boundary only and then exported from the Office for National Statistics (online) Open Geography Portal.

4.3.4.2 Lower-level Super Output Areas (LSOAs)

LSOAs are small areas with a population size of around 1,500 residents or 650 households (Ministry of Housing Communities and Local Government, 2019). There are 32,844 LSOAs in England and [redacted] within the F1 geographic area. The LSOA boundary '(Lower Layer Super Output Areas (December 2011) Boundaries_Full_Clipped BFC-EW-V3)' was downloaded from the Office for National Statistics (online) Open Geography Portal. F1 LSOA IDs were identified primarily by downloading an Excel spreadsheet and

filtering on the appropriate codes which were then used in the attribute table in ArcMap as a query to select the unique codes. This was exported and saved as a layer file.

4.3.4.3 The Indices of Multiple Deprivation (IMD) 2019

The Indices of Deprivation (IoD) are used to create the IMD (2019) which is the official measure of relative deprivation in England. The IMD is a measure of multiple deprivation experienced by people living within each LSOA and provides an overall relative measure of deprivation by combining the information from all seven domains (Ministry of Housing Communities and Local Government, 2020). LSOAs are divided into 10 deciles according to their deprivation rank, ranging from 1 (most deprived 10% of LSOAs nationally) to 10 (least deprived 10% of LSOAs nationally) (ibid). The IMD file was downloaded from the Ministry of Housing Communities and Local Government (2020).

The three shapefiles above (Boundaries, LSOAs, and IMD2019,) which contain digital vector boundaries, were imported into ArcMap to create spatial boundaries. The Select Features tool in ArcMap allows you to select features using attributes from a layer. Using the 'select by attribute' function, only LSOA codes within the F1 geographic area were selected for the LSOA, IMD and Rural-Urban Classification shapefiles to create feature classes.

4.3.5 Open-Source Crime data

To further assess F1 demands, open-source crime data provided by Police.uk (2021a) was utilised, as this includes all crime recorded within the F1 area. Although there are limitations to the data (see Section 4.2.4.1) there is little spatial error in the data when using the LSOA unit of geography (Tompson et., al 2014). This was used to examine the distribution of recorded crime across IMD2019 deciles within the force area. This data (2017-2018) was imported into ArcMap using the spatial tool and joined with the IMD data to allow for analysis. All ASB incidents were removed from the file before importing into ArcMap as these are not classified as crimes. A total of 116,847 crimes were reported from police.uk, however 1,102 crimes were identified as occurring outside of the F1 geographic area and were removed from the analysis, resulting in a total of 115,745 crimes.

4.3.6 Optimized Hot Spot Analysis

Optimized Hot Spot Analysis, within ArcMap, calculates the Getis-Ord Gi* statistic (G-i-star) for each feature within a dataset looking at the feature within the context of neighbouring features (ESRI, 2018a). It identifies statistically significant spatial clusters of high values (hot spots) and low values (cold spots) by combining incident data and identifying a suitable scale of analysis (ESRI, 2019). Interrogating the data, it determines settings that will produce optimal hot spot analysis results. Hot spot analysis was conducted on the resource data to produce hot spots of resource intensive areas based on a number of criteria.

Figure 4.1 Calculations for Gi*: (ESRI, 2018a).

The Getis-Ord local statistic is given as:

$$G_i^* = \frac{\sum_{j=1}^{n} w_{i,j}x_j - \bar{X}\sum_{j=1}^{n} w_{i,j}}{S\sqrt{\frac{\left[n\sum_{j=1}^{n} w_{i,j}^2 - \left(\sum_{j=1}^{n} w_{i,j}\right)^2\right]}{n-1}}} \quad (1)$$

where x_j is the attribute value for feature j, $w_{i,j}$ is the spatial weight between feature i and j, n is equal to the total number of features and:

$$\bar{X} = \frac{\sum_{j=1}^{n} x_j}{n} \quad (2)$$

$$S = \sqrt{\frac{\sum_{j=1}^{n} x_j^2}{n} - \left(\bar{X}\right)^2} \quad (3)$$

The G_i^* statistic is a z-score so no further calculations are required.

The z score is the GI* statistic for each feature, and for statistically significant positive z-scores, the larger the z-score, the more concentrated the clustering of high values (producing a hot spot). For statistically significant negative z-scores, the smaller the z-score, the more concentrated the clustering of low values (producing a cold spot) (ESRI, 2018a).

4.3.6.1 Average Nearest Neighbor

To identify if the data points for each resource used were clustered, random, or dispersed, the average nearest neighbor tool was used to measure the distance between points (x and y coordinates) using Euclidean distance. This calculation identifies the average distance from each feature to its neighbouring feature, producing the Observed Mean Distance (how far, on average, each point is from the next), Expected Mean Distance, Nearest Neighbor Index, z score and the p-value (ESRI, 2018b). The null hypothesis, for the Average Nearest Neighbor statistic, states that features are randomly distributed. The z-score and p-value results are measures of statistical significance which tell you whether or not to reject the null hypothesis. (ESRI 2018b). If the index (average neighbor ratio) is less than 1 then the pattern exhibits clustering (ESRI, 2018b).

Figure 4.2: Calculations for Average Nearest Neighbor (ESRI, 2018b):

The Average Nearest Neighbor ratio is given as:

$$ANN = \frac{\bar{D}_O}{\bar{D}_E} \quad (1)$$

where $\bar{D}_O$ is the observed mean distance between each feature and its nearest neighbor:

$$\bar{D}_O = \frac{\sum_{i=1}^{n} d_i}{n} \quad (2)$$

and $\bar{D}_E$ is the expected mean distance for the features given in a random pattern:

$$\bar{D}_E = \frac{0.5}{\sqrt{n/A}} \quad (3)$$

In the above equations, d_i equals the distance between feature i and it's nearest neighboring feature, n corresponds to the total number of features, and A is the area of a minimum enclosing rectangle around all features, or it's a user-specified Area value.

The average nearest neighbor z-score for the statistic is calculated as:

$$z = \frac{\bar{D}_O - \bar{D}_E}{SE} \quad (4)$$

where:

$$SE = \frac{0.26136}{\sqrt{n^2/A}} \quad (5)$$

4.3.6.2 The Hot Spot analysis process:

- Test for spatial clustering – The Average Nearest Neighbor Tool identifies whether the resources used were clustered, random, or dispersed.
- Integrate Tool – Points that fell within 30ft of each other were snapped together to correspond to the same location and designated a common coordinate value.

- Collect Events Tool – The Hot Spot Analysis (Getis-Ord Gi*) requires weighted points as opposed to individual incidents. This tool creates weights and adds an ICount, (the sum of all incidents for each unique location).
- Optimized Hot Spot Analysis – This creates a map of statistically significant hot and cold spots using the Getis-Ord Gi* statistic (ESRI, 2020a).

4.4 The Qualitative Data

As previously stated, this thesis uses a mixed method approach in order to answer the different research questions. The preferred method of data collection was originally to collect information through unstructured observations and semi-structured face-to-face interviews. However, due to COVID restrictions, gaining access to both the FCR and its staff was not possible. The use of online surveys and remote semi-structured interviews were the most practical alternatives. The purpose of the surveys and interviews was to add value to the thesis that was not possible from the quantitative data alone. Although the quantitative data provided a rich source of information used to address RQ1-6 and to an extent RQ7, the qualitative data was required to identify the attitudes, thoughts, and opinions (Creswell, 2014) of the FCR staff. The surveys and interviews identified and collected pertinent information from a generally untapped source to explore and understand the opinions of FCR staff and identify any key contextual and situational factors which may influence the quality of decision-making, something that was not feasible from the quantitative data.

Due to the unique characteristics of the selected population, purposive sampling (a non-probability form of sampling which ensures that participants sampled are relevant to the research questions) was employed (Bryman, 2012) with the criteria being that respondents worked in a FCR. CHs, senior CHs, team leaders, and police officers were invited to take part in the survey, to assess any variation in responses. The questions for the survey were heavily influenced by the theoretical framework of the thesis: Traditional Decision-Making Theory; Naturalistic Decision-Making Theory; Dual Processing Theory; and the proposed preliminary Call-Handler Decision-making Model (see Figure 3.5). Furthermore, the design of the survey was influenced by analysis of F1

call data and previous studies by Waddington (1993) and Fahsing (2019). The following sections provide a summary of each data collection method in turn.

4.4.1 Online Surveys

In recent years there has been an increase in the use of online surveys, with web surveys offering greater enhancement of colour, formatting, and survey styles (Bryman, 2012). Online surveys can be rapidly distributed to a wide audience, reduce interviewer bias, and allow respondents to complete the survey at their convenience (ibid). Furthermore, web surveys produce faster responses and have better data accuracy than postal questionnaires (ibid). However, it is also acknowledged that unclear instructions and privacy issues are some of the disadvantages of web surveys (Evans and Mather, 2018). Both concerns were addressed by piloting the survey with an experienced CH and selecting a secure online survey tool (both discussed below). Research findings on the relationship between the length of a survey and response rates are mixed. A meta-analysis of response rates for online surveys found no significant relationship between response rates and survey length (Cook, Heath, and Thompson, 2000). In contrast, a review of over 25,000 online surveys found that longer surveys produced lower completion rates (Liu and Wronski, 2018).

Having considered factors such as time constraints and work demands within the FCR, it was decided that the survey should not be excessively lengthy (estimated 15 minutes). The survey was revised several times to ensure all pertinent questions, covering relevant factors, were included, whilst ensuring the length of the survey was not excessive.

The survey was distributed to several police forces (via emails to contacts) and posted on the College of Policing Knowledge Hub. The survey link was also shared with police staff via a private police social media group. Although it is unfeasible to determine a response rate for online surveys (Bryman, 2012), of the 607 survey views, there was a total of 118 completed responses (19.4% response rate) (see Chapter 7 for an analysis of the findings). One possible factor affecting response rates is how interesting or relevant the topic is to the intended audience with Bryman (2012) asserting that

respondents may be willing to complete longer surveys if the topic is of interest to them. The survey was distributed to staff working within FCRs, and it was anticipated that the topic would be of interest, allowing them to provide their personal views and thoughts on their role within policing. However, it is also acknowledged that staff had to find time to complete the survey during working hours (unless they sent the survey link to their personal email address). The estimated length of completion time (15 minutes) may have influenced the completion rate, with the majority (86.1%, n=422) of incomplete survey responses not progressing past page 1 (information sheet and informed consent where the estimated completion time was detailed). Of the respondents who progressed past page 1, but did not complete the survey, 41% (n=28) abandoned the survey after completing Section 1.

The size of the respondent group was limited; therefore, it is difficult to determine how representative the sample is to the target population. Staff levels across FCRs in England and Wales will vary, and an accurate assessment of the total number of staff across all forces is unavailable. However, respondents to the survey worked in eight forces across the UK, and included CHs (60.2%), Supervisors (20.4%), Dispatchers (9.3%), Dual roles[14] (5.5%), and Other[15] (4.6%) which encompass all decision makers within the FCR.

4.4.1.1 Survey Tool

Due to the sensitivity of the data being collected, JISC Online Surveys was chosen as this had been approved by NTU from a data protection perspective. All survey responses were collected over encrypted SSL (TLS) connections which ensured that sensitive information was transmitted securely (JISC, 2021). JISC also offers a range of question types and formats as well as survey access control and email distribution. The analysis functionality allows the data to be displayed in formats such as tables, bar charts and pie charts with the ability to filter to specific questions, exclude responses and export response data to Excel, allowing for easier analysis (ibid). A progress

[14] Both CHs and Dispatcher

[15] Includes: Police Officer, Senior Manager and Investigators

indicator, which identifies how far each respondent progressed through the survey (Bryman, 2012), was provided by JISC. Respondents were provided with the option to disregard questions they did not want to answer.

4.4.1.2 Survey Design

The preliminary page of the survey (see Appendix 7) included information about the study and a statement of consent. The survey included both closed and open questions as well as several vignettes. It is acknowledged that open questions can be time consuming to complete, may result in the respondent either leaving the questions blank or limiting their response, and could contribute to a low response rate (Bryman, 2012). However, open questions allow respondents to answer questions in their own words, help to identify their level of knowledge, and can discover problems and issues previously unknown to the researcher (ibid). Due to the importance of gaining a greater insight into respondents' thoughts on current decision-making models and identifying any additional factors that underpin decision-making, it was decided to include several open-ended questions.

The survey consisted of three sections:

Section One: This section asked respondents to provide demographic information such as age range, gender, police force, years of experience within a FCR, and their job role. Several open questions were presented in this section, such as the respondents police force and their job role (as job titles vary between forces). They were also presented with an open question to provide their own account of the main challenges they faced with the FCR.

Section Two: This section asked respondents for their opinions on several statements including factors that influenced their decision-making. The factors included were identified by the researcher when establishing the proposed preliminary Call Handler Decision-Making Model (see Figure 3.5). The use of Likert scales is common when conducting research into people's attitudes on a specific topic, where respondents are asked how much they agree or disagree with provided statements (Bryman, 2012). The

Likert scale, used in three of the sets of questions within this section, had a seven-point scale from strongly disagree to strongly agree with a middle position of neither agree nor disagree. This was to gauge respondents' opinions on factors that could influence their decision-making, their thoughts on THRIVE as a risk assessment tool, and their views on a variety of current issues facing policing. The Likert scale provides a common set of responses, allows comparisons between answers, can help clarify the meaning of questions for respondents and has the added benefit of being pre-coded allowing for easier analysis (ibid). However, there is the potential for interesting opinions and ideas not covered by the predetermined Likert scale questions being lost, something that has been rectified by including an open-ended option at the end of the survey to allow respondents to add any additional comments (ibid).

Section Three: The final section included several vignettes regarding fictional calls for service. Respondents were asked for their interpretation of the 'call' based on several categories which are discussed in the following section.

4.4.1.3 Vignettes and limitations

The use of vignettes has become popular in social science research (Sampson and Johannessen, 2020). Scenarios are presented to respondents who are then asked how they would respond if they encountered the situations described (Bryman, 2012). The vignettes used in this study were designed to identify respondents' attitudes and opinions regarding scenarios of calls for service from the public which were influenced by both the Waddington (1993) study and the analysis of F1 call data.

Inspired by the Waddington (1993) study which utilised recorded calls received by the public to ascertain how call-handlers decided on an appropriate response to calls, respondents in this study were presented with four scenarios of fictional calls alongside several standardised responses. Respondents were invited to read the scenarios and were asked to describe:

- The call
- The caller

- How the call made them feel
- The likely outcome
- How they would grade the call

As with the Waddington (1993) study, this was not intended to be a replication of the control room, as respondents were not able to gain access to information normally available to them. For example, although they were provided with the time and day of the call, they were not aware of available resources. The respondents could only interpret the call based on the information provided and therefore could not assess any emotions or urgency from the caller. They were also unable to probe the caller to elicit additional information, which would be the case in a FCR environment. Although limitations exist, due to COVID restrictions, this was deemed to be the most suitable alternative to observations within the FCR as it elicited views and opinions as well as allowing comparisons across respondents.

Like Waddington (1993), the aim was to provide respondents with common examples of calls from the public to explore how they interpreted the calls. A list of standardised options was presented to respondents for each sub question asked in each vignette which had the benefit of being pre-coded allowing for easier analysis. However, some sub-questions had the option to add free text. Scenarios used in vignettes must be believable and credible situations (Bryman, 2012), therefore the design of the scenarios was influenced by both the Waddington (1993) study and the analysis of F1 call data, using current incident categories.

Four vignettes were carefully chosen based on a range of incidents commonly reported to the police and obtained from the analysis of F1 call data. The scenarios were deliberately designed to be either ambiguous, stereotypical, or emotional to gauge if such factors would influence respondents' decision-making. PSW accounted for almost half (46.8%) of F1 incidents during the reporting period, which includes 'Suspicious Incident', 'Concern for Safety', 'Missing Person', and 'Domestic Incident'. As previously discussed, the increased responsibilities placed on the police to deal with social issues has raised concerns that they are filling gaps that should be filled by other services.

Therefore, three of the vignettes were based on PSW incidents, with one incorporating the possibility of ASB and another containing a social welfare issue police may be expected to respond to. These three vignettes are discussed below:

- **A missing teenager from a residential care home** – This scenario was phrased to elicit thoughts on what the role of the police should be and whether other organisations should take more responsibility when dealing with social issues.
- **A concerned female reporting suspicious noises in her garden** – This scenario involved an emotional, well-spoken woman from an affluent area to identify if the emotions of the caller would influence decision-making and to identify if stereotypes (based on the status of the caller) were used when making judgements regarding the reliability and validity of calls. The possibility of ASB was presented in the scenario, as was a level of ambiguity.
- **A possible domestic incident** – This scenario was deliberately ambiguous, from a repeat caller, reporting both assault and theft. This scenario was also designed to assess whether stereotypes were used when making judgements on the reliability and validity of the caller.

As discussed in Chapter 5, demand arising from incidents involving MH problems is increasing, therefore a fourth scenario was included detailing a call from a distressed female concerned for the safety of her suicidal partner. This was phrased to elicit thoughts on whether the police are best placed to deal with MH incidents as well as to identify if the emotional state of the caller influenced decision-making.

4.4.1.4 Testing the Survey

To ensure that all questions are clear and easy to understand, and to address any issues with the questions and/or instructions for respondents before the survey was distributed (Bryman, 2012) the survey was sent to a current, experienced member of staff within a FCR in England, who provided constructive feedback on the clarity of the questions. Several issues were identified, such as the terminology used and the complexity of several of the questions which resulted in amendments being made to

the survey. This test study also verified the expected time to complete the survey, as underestimating this can result in low completion rates (Bryman, 2012). The feedback established that the 15-minute completion time was appropriate.

4.4.1.5 Preparing the Survey Data

All survey data were imported into Excel, with the Likert scale and vignettes data, cleansed and coded before being imported into SPSS for analysis. The vignette questions allowed respondents to choose more than one answer, producing multiple responses. A multiple dichotomy set was therefore created with each variable given a value of 0 (response not selected or 1 (response selected). The multiple response set was then defined with 1 being the value of the dichotomies with frequency tables created for each set. (IBM, 2016).

The same process was followed with data from the open-ended question 'What are the main challenges you face in your role within the force control room, when having to make decisions?" However, as the answers to the open-ended question asking respondents to add any additional comments was lengthier and more in-depth, the data were imported into NVIVO 12 qualitative software, where they were coded, and thematic analysis conducted.

4.4.2 Interviews

Conducting interviews can help produce more in-depth data on the views of FCR staff, allowing interviewees to expand their opinions and discuss what they regard as important factors (Denscombe, 2010) that influence their decision-making. Interviewees are also given the opportunity to discuss their thoughts at length (ibid). Semi-structured interviews were chosen as they allowed the researcher to study, in depth, the views of FCR staff. Although a list of questions or themes are prepared, semi-structured interviews offer flexibility, allowing the interviewee to freely express their views rather than answer predetermined questions set by the researcher (ibid). The interview questions were influenced by both the themes identified from the survey responses and the theoretical framework of the thesis. A list of topics was carefully chosen and used as a guide; however, the interviews were flexible and guided

by the interviewee's commentaries with prompts used if required. The analysis and data collection occurred concurrently with emerging themes identified (see Appendix 8 for the interview schedule).

Participants were recruited via the main survey; respondents were asked if they would be willing to participate further in the study, offering them an opportunity to discuss their views and thoughts in an interview. An email (see Appendix 9) containing a participant information sheet (see Appendix 10) was sent to all survey respondents who were willing to be interviewed. They were asked for their availability and whether they would prefer the interview to be conducted via Skype, MS Teams, or telephone. After respondents agreed to an interview, the information sheet (see Appendix 10) and a consent form (see Appendix 11) was sent which they were asked to sign and return. All respondents (n=11) who indicated they were willing to be interviewed were contacted, resulting in a total of seven interviews, including CHs, Dispatchers, and Senior Management, allowing for a diverse set of views. It is acknowledged that the larger the sample size, the more representative it is likely to be (Bryman, 2012) however, due to time constraints and issues gaining access to staff due to COVID restrictions, the researcher tried to acquire as many interviews gleaned from the survey responses as possible (ibid). Further emails were therefore sent to the other four respondents who had agreed to be interviewed, advising that if they did not respond no further contact would be made, however this did not result in additional interviews.

As the role of the interviewee's varied, not all questions were appropriate. All interviews were conducted over the telephone and lasted between 20 and 60 minutes. Although non-verbal signs are missed when conducting interviews virtually, information can be gathered from the participants voice with such interviews also having the added benefit of being cost effective (Saarijarvi and Brett 2021). All interviews were recorded, transcribed verbatim, annotated, and analysed using thematic analysis, discussed below.

4.4.2.1 Thematic Analysis

The combined techniques of deductive and inductive thematic analysis were employed. The research initially applied a deductive approach, where the theoretical framework of the thesis influenced the process of gathering the data (Bryman, 2012). A list of hypothesised factors which may influence decision-making within the FCR were informed by both previous research and the theoretical framework. Analysing the data using a deductive approach allowed the hypothesis to be confirmed or rejected, resulting in a revision of the theory (ibid). Although the deductive analysis allowed themes linked to the theory to be identified, the open-ended survey questions and interview data resulted in additional themes to inductively develop, helping to develop the theory (ibid).

Thematic Analysis, a form of content analysis (Franzosi, 2004), is a process that identifies and analyses patterns or themes within the data (Braun and Clarke, 2006). It is an accessible and theoretical approach to analysing qualitative data, providing a rich and detailed account of the data (ibid), and is a robust tool for qualitative analysis (Attride-Stirling, 2001). Although similar, content analysis tends to focus on the frequencies of categories producing numerical descriptions, whereas thematic analysis focuses on the qualitative aspects of the data allowing for a more interpretative analysis (Joffe and Yardley, 2004). Although analysis can include frequencies of the themes identified, this is secondary to interpreting the meaning and context of the data (ibid).

To be considered reliable, the methods used to analyse qualitative data must be applied rigorously to produce meaningful results (Attride-Stirling, 2001; Nowell, et al. 2017). Researchers therefore must be clear about the methods and processes used (Braun and Clarke, 2006). Although thematic analysis is widely used, it is poorly defined (Braun and Clarke, 2006) with no clear consensus on how to conduct it (Attride-Stirling, 2001). The analysis, therefore, adhered to the six phase method defined by Braun and Clarke, (2006) (Table 4.4) with a detailed description of the methods used provided below.

Table 4.4: Phases of Thematic Analysis (Braun and Clarke, 2006:.87).

Phase	Description of the Process
Familiarising yourself with the data	Transcribing data (if necessary) and re-reading the data, noting down initial ideas.
Generating initial codes	Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.
Searching for themes	Collating codes into potential themes, gathering all data relevant to each potential theme.
Reviewing the themes	Checking if the themes work in relation to the coded extracts (level 1) and the entire data set (level 2) generating a thematic 'map' of the analysis.
Defining and naming themes	Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells, generating clear definitions and names for each theme.
Producing the report	The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a scholarly report of the analysis.

Transcribing the interviews was the first stage of the thematic analysis. oTranscribe, a private web app[16], was used which offers shortcuts to pause, play and rewind recordings, interactive timestamps, and an audio speed adjuster. Interviews were transcribed on the app before being transferred into Microsoft Word, then imported into NVivo 12 qualitative software where thematic analysis was conducted. The transcripts were read several times with preliminary thoughts and themes documented. Although this is a time-consuming process, this stage informs the early stages of the analysis.

The next stage was creating initial codes. Coding involves identifying patterns in the data and organising the data into a set of categories (Joffe and Yardley, 2004). It is important that identified themes are linked to the research question (Braun and Clarke, 2006). After reading all transcripts carefully, selected text that was either

[16] The recording remains on the browser's local storage, as opposed to a remote server.

relevant to the research questions or considered notable, were annotated allowing themes to be identified. Both deductive and inductive approaches were used to identify themes in the data. To facilitate thematic coding, nodes (which store a collection of references about specific themes) were created throughout and were reviewed continuously and amended if required (Bryman, 2012). Themes were identified from the transcriptions, with recurrent themes allowing the researcher to identify common issues shared by more than one interviewee (Denscombe, 2010). Some of the emerging themes and subsequent sub-themes discovered through this coding were consistent with themes previously established throughout the research, for example emotions, risk aversion, and experience. Cases (containers that hold information in relation to a person or unit of analysis (QSR International, 2021) were also created for each transcript to allow comparisons between attributes such as years of experience, age, or role. Memos were also a useful part of coding, allowing ideas and insights to be recorded throughout the process (QSR International, 2018). This was particularly useful to document any contradictions or similarities between interviewees responses.

A thematic map was created, displaying the initial 25 themes, followed by a review of the codes to identify main themes (Braun and Clarke, 2006). At this stage the themes had been defined and named, and a detailed analysis was conducted on each theme and sub-theme (Braun and Clarke, 2006) (see Chapters 7 and 8). A thematic map displaying the final eight overarching and 23 linked sub-themes was then created (see Appendix 12).

4.5 Ethical Approval

The study received a favourable ethical decision from Nottingham Trent University School of Business, Law and Social Sciences Research Ethics Committee (BLSS REC). It was designed with reference to the British Society of Criminology's code of ethics. As the study involved two stages of research, two ethics applications were submitted: one relating to the analysis of police calls for service data and another for the surveys and interviews. A favourable ethical decision was given for the first stage in October 2019 (see Appendix 13) followed by the second stage in November 2020 (see Appendix 14).

4.6 Ethical Considerations

Potential ethical considerations have altered from the early police studies in the 1960s and 1970s (see Chapter 2), with a focus on improved police-researcher relationships (Skinns, Wooff and Sprawson, 2015). Researchers are now more likely to conduct research with, rather than on police forces with a view to influencing police decision and policy making (ibid). This research involved building relationships with several members of staff and officers within F1, with regular updates provided through the full research process to ensure that F1 were fully involved throughout (ibid). According to Skinns, Wooff and Sprawson (2015) this is a far more ethical approach than previous approaches, with police forces gaining an in-depth understanding of issues that may affect them.

Potential ethical issues were considered throughout all stages of the thesis, from identifying research aims during the initial research plan to considerations in gaining access to participants and call data. The researcher's supervisory team had existing working relationships with contacts in several UK police forces who had confidence in the NTU research process. This, coupled with the researchers experience and knowledge of policing, allowed the researcher to forge effective relationships with senior members of staff within these forces. Researchers may face a greater number and variety of ethical considerations when conducting research involving the police compared to some other social science disciplines (Skinns, Wooff and Sprawson, 2015). This is particularly pertinent due to the sensitive nature of police call data. It is therefore essential to observe the guidance of research ethics committees and ethical codes of conduct to protect all parties involved (ibid). The main ethical issues considered are summarised below.

4.6.1 Informed Consent

Informed consent is described by Bryman (2012) as being a vital rule in social research ethics, which involves providing potential research participants with adequate information to allow them to make an informed decision about whether they wish to take part in the study.

- Call Data

As Rowe (2007) indicates, gaining access to police data is more of a process than an initial agreement. The process entailed several meetings and regular in-depth discussions with senior officers and staff explaining the purpose of the study and answering any concerns raised. An information letter was provided to forces detailing the purpose of the study, the research aims and objectives, and proposed data management. Regular updates were provided, and force vetting on both the researcher and the Director of Studies was successfully obtained. Ultimately, a data processing contract was agreed between both parties, allowing for the data to be utilised in the study with certain caveats such as ensuring the anonymity of both the callers and police force, discussed in Section 4.4.2.

- Surveys

Acting as gatekeepers, consent was given by senior officers within F1 to distribute the survey to staff within their FCR, and an additional data processing contract was agreed and signed by the researcher. However, the survey link was also distributed to contacts within other forces, the College of Policing Knowledge Hub, and a private social media page of another police force, with the stated criteria that respondents had to work in a FCR. All surveys were conducted on a voluntary basis, with a participant information sheet (see Appendix 15) accompanying the survey link. An introduction and statement of consent was included in the opening page of the survey, which participants had to agree to before proceeding. Respondents were also asked to provide a unique identifier (a random word and number) which they could quote in an email to the researcher in the event they wanted to withdraw their consent (within two weeks of completion of the survey). An accompanying email (see Appendix 16) specified that their employer would be unable to see who had or had not participated due to the importance of participants freely agreeing to participate rather than feeling obliged to (Skinns, Wooff and Sprawson, 2015).

- Interviews

Survey respondents willing to be interviewed were provided with a participant information sheet (see Appendix 10) and consent form (see Appendix 11). Interviewees were aware the interviews would be recorded and that they were free to withdraw their data from the study within two weeks of the interview if they wished to, with no explanation required. All interviews were conducted on a voluntary basis, with interviewees asked to sign a consent form prior to the interview.

4.6.2 Anonymity

Police forces involved in this study were advised that their identities would remain anonymous (at their request). Assuring anonymity and confidentiality is critical to help encourage participants to participate in research, allowing them to provide honest information without fear of consequences (Skinns, Wooff and Sprawson, 2015). This was particularly pertinent in this study, with interviewees assured that senior members of staff in their force would not be aware that they took part in the study, unless divulged by them, increasing the validity of their responses (Phillips and Sobol, 2012). The survey and interview respondents were advised they would not be named in any publication. However, they were made aware that selected (anonymised) quotations may be used in the thesis and other academic work. Every effort was made to ensure the anonymity of both forces and participants with pseudonyms used when transcribing the interviews. Furthermore, recorded interviews, participant sheets with personal details, and transcripts were kept in separate folders. All survey responses were anonymised, with respondents asked to provide a unique identifier. However, those who agreed to take part in the interviews were advised that the researcher would then be able to identify their responses if they provided their email address at the end of the survey. Respondents were also given the option to contact the researcher directly, allowing their survey responses to remain anonymous.

4.6.3 Confidentiality

Offering respondents confidentiality while producing detailed accounts of personal views can be challenging (Kaiser, 2009). Although quotes from both the survey and

interviews were anonymised, respondents were advised that full confidentiality could not be guaranteed. Although personal identifiers, such as names, can be removed an element of contextual identifiers in interviewees stories may remain (ibid). The researcher therefore carefully considered whether particular quotes or examples of specific incidents discussed that may identify the interviewee or their force should be included in the analysis (ibid).

Summary

This chapter has presented the methodological approach this thesis has adopted considering the qualitative and quantitative data sources used in order to answer different research questions. It has provided an in-depth discussion of the research design, the collection methods, the data and analytical tools used, as well as the rationale for the multi-methodological approach. It has also acknowledged the ethical considerations involved in conducting such as study. The methodology has allowed for a rich set of data to be collected. The following chapter will explore police demand using police call data, including assessing MH related demand. It will also consider the CHs discretion and explore the notion of equity in response grading.

Chapter 5 - Analysis of Call Data

5.1 Introduction

Challenges around capacity and capability resulting from austerity measures (NPCC, 2017a) led to the requirement for forces to gain a better understanding of their demand. In order to manage, and if possible, reduce demand and increase effectiveness and efficiency of resource management, it is important that forces have an accurate understanding of the source and variability of their demand (ibid). The demands on police continue to rise and are complex and wide-ranging, with forces having to deal with more calls involving vulnerable people, including MH related calls (HMICFRS, 2020a). A report by HMICFRS (2019c) concluded that some forces were struggling to respond to increasing demand. Appropriate demand management is required to ensure that forces have the capacity to respond to calls for service, however concerns have been raised by HMICFRS (2019c) regarding the ability of control room staff to manage the pressures of demands. When forces are unable to manage their demand, it makes it much more difficult for them to respond to calls, solve crimes and protect vulnerable people (ibid).

Handling calls for service is a central part of police work (Ekblom and Heal, 1985; Ashby, 2020a) and although reactive demand is only one aspect of police demand (see Chapter 3), in order to understand policing, an understanding of calls for service is vital (Ashby, 2020a). Police spend a lot of time dealing with calls for service, including many non-crime related incidents (Neusteter et al. 2019) such as anti-social behaviour, concerns for safety, and incidents involving MH issues. Such calls are often responded to with the deployment of officers which consumes police resources (ibid). Utilising evidence to inform police decision-making is not a new concept within policing with Goldstein (1979) advocating an approach to policing which involved the analysis of data to identify specific problems to gain a greater understanding of the issues they faced. Analysing incident data can help provide research evidence by identifying when calls are being received, the source of the call, what type of incidents are being reported and how these are currently managed, helping to understand the reactive demand placed on policing. Using calls for service data which is routinely collected could improve the effectiveness

of resource management (Maxfield, 1982). Furthermore, analysis of calls for service data also provides a vast and largely unused opportunity for researchers and practitioners to inform policy and practice, such as enhancing capabilities to capture frequent nuisance callers to reduce calls (Neusteter et al. 2019).

Using F1 call data, this chapter will address the following research questions:

- RQ1. What is the nature of police demand in relation to calls for service from the public?
- RQ2. How are forces currently managing demand?
- RQ3. What is the current role/mandate of policing and has this changed in recent years?
- RQ7. What is the role of the CH, and what level of discretion do CHs have?

To answer RQ1, RQ2, RQ3, and RQ7 (RQ4, RQ5 and RQ6 will be addressed in Chapter 6) this chapter will provide an analysis of:

- Incident volumes and any changes in reactive demand over the reporting period
- Variations in the source of calls i.e., 999/101/online reporting
- The hour, day, and month calls are received
- Closing codes
- Opening codes and response grades
- Variations in opening and closing codes
- Incidents involving a mental health qualifier
- The grading of calls

Opening and closing codes can vary greatly due to the acquisition of new information. Closing codes provide a more accurate reflection of events and a better understanding of which incident types make up demand. Unless otherwise stated, all analysis has therefore been conducted using the closing code (see Chapter 4 for a discussion of opening and closing codes).

Analysis was conducted to identify what the current role of policing is (RQ3) and whether this has changed in recent years, the nature of police demand (RQ1) and how forces are dealing with their demand (RQ2). Primarily, analysis was conducted on the volume of incidents occurring within the force area over the four year period with a brief overview of incidents logged daily with a 30 day trend line for each year. Analysis was then conducted on the types of incidents occurring within the force area to identify any trends or patterns. Crime demand is then assessed using CSEW data and police recorded data to offer a comparison between F1 and the national picture of trends in crimes and ASB. The source of calls for service is also considered to determine any changes in reporting patterns/the way incidents are reported. This is followed by further temporal analysis; with the day, month, and time the incident was reported used to identify any trends and variations. Understanding that specific types of calls may have certain patterns can be beneficial for forces to determine where and when to assign suitable and limited resources (Neusteter et al. 2019). To assess how F1 currently manage their demand, the grading of calls for service was also examined to establish any variations in how incidents were dealt with by CHs (RQ7). An overview of MH incidents, which increased by 28% between 2014 and 2018 across 26 forces (The Police Foundation, 2022) is then provided to identify trends and patterns among calls received involving incidents with a MH qualifier. The chapter concludes by assessing whether CHs discretion has the potential to lead to an inequitable distribution of police services by providing different responses to similar incidents over time or space. Policing demand has different temporal and spatial patterns with analysis identifying what is occurring, when incidents are occurring, and the volume of incidents, to help forces plan for the correct resourcing level within their response teams. IMD2019 was used as a novel approach to establish any inequity of grading and resources across space using the overall IMD deciles. It can identify whether response grading for specific incidents varied across deciles. IMD2019 was considered to be an appropriate tool to use as a metric which can be easily replicated across forces to determine if the findings are consistent among other FCRs.

5.2 Incident Volumes

A total of 794,705 unique incidents were recorded by F1 during the reporting period which required a police presence or the use of police resources with only slight variation in the total number of incidents recorded each year over the period (214,321 in 2015, 199,879 in 2016, 189,377 in 2017 and 191,128 in 2018). There was a slight reduction in incidents classified as 'ASB' in 2018 coupled with an increase in incidents classified as 'Crimed', discussed in Sections 5.4 and 5.5. F1 began, in the latter part of [redacted] to make efforts to improve their crime reporting procedures which may have contributed to this increase (See Appendix 4 for discussion on how this may influence the findings).

Figure 5.1: Incidents logged per day 2015-2018 with a 30-day trend line for each year

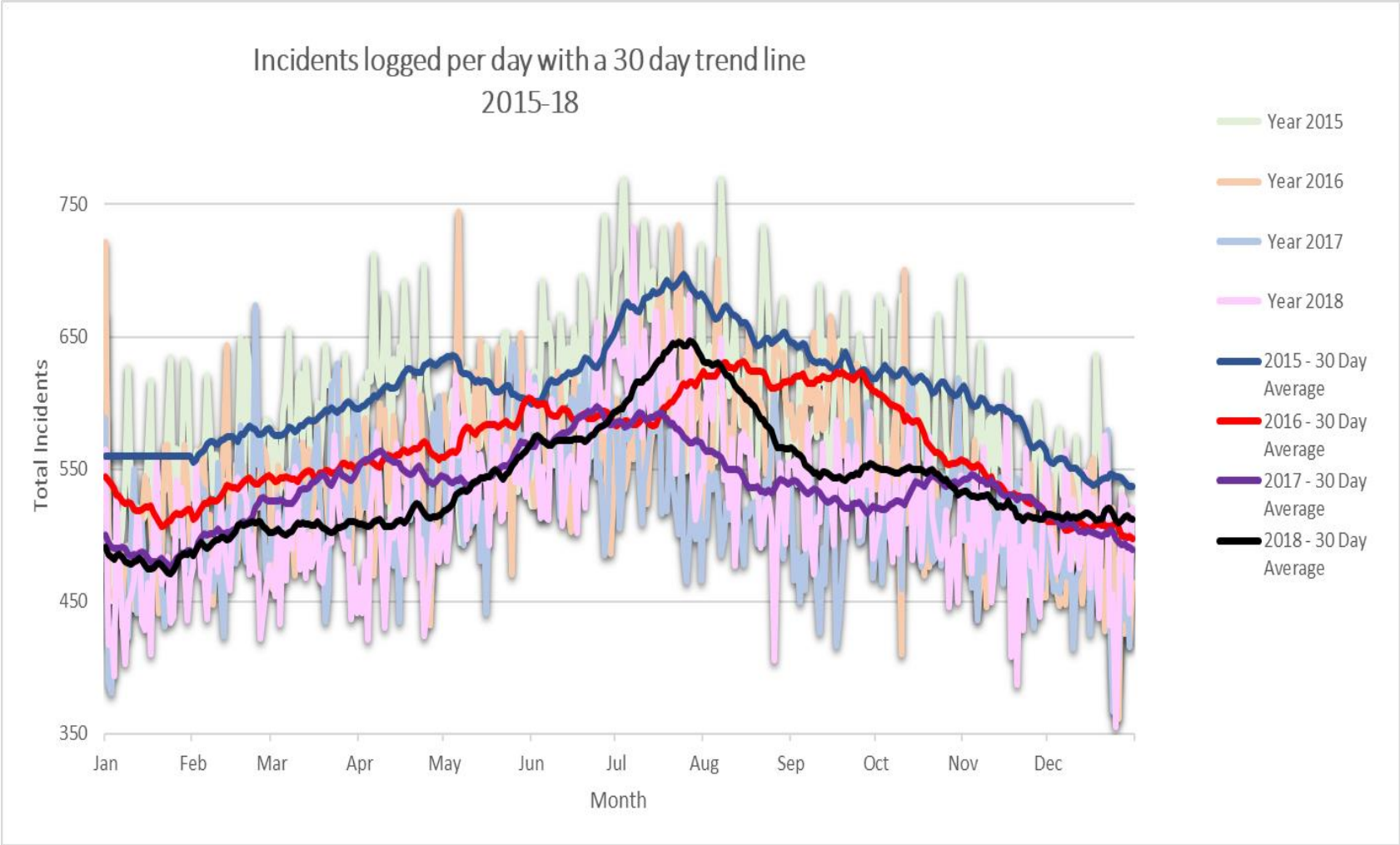
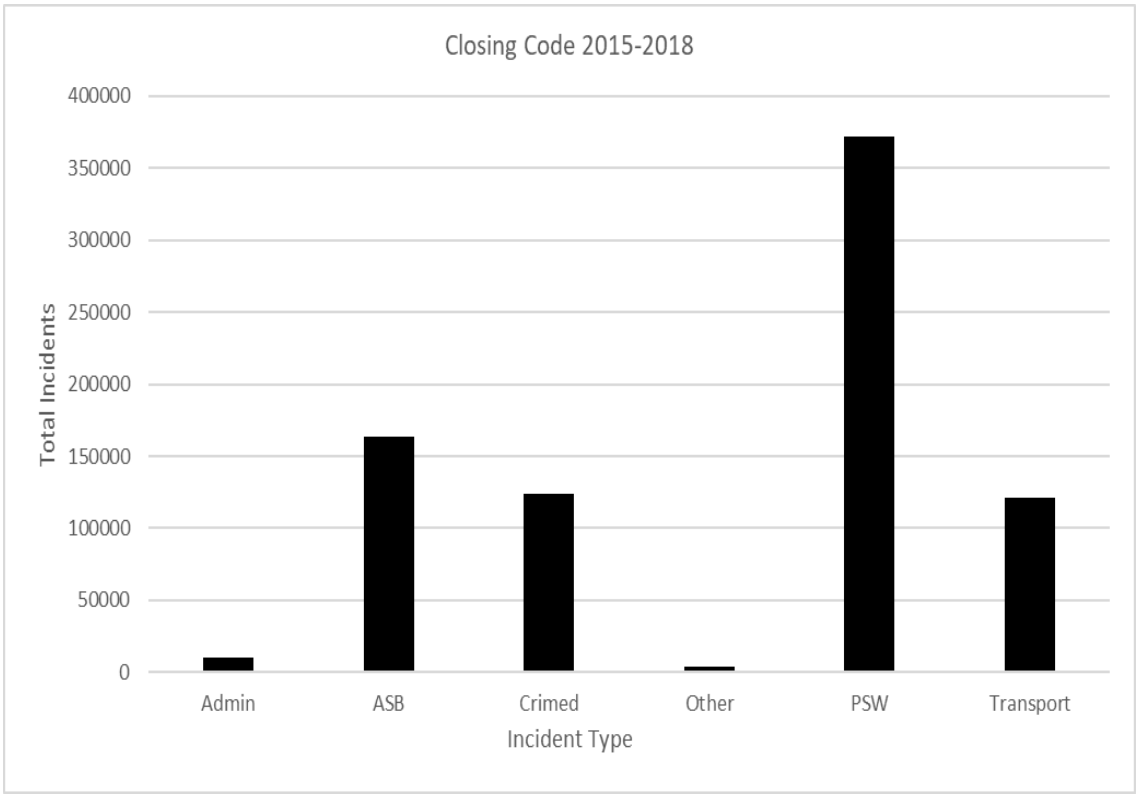


Figure 5.1 shows the number of incidents logged each day of the year from 2015 to 2018 with a trend line based on a 30-day rolling average. Making year on year comparisons, whilst ignoring yearly trends, will often produce deceptive results (Ashby, 2020b). Analysing incidents using monthly counts does not consider the fact that not all months are the same length or have the same number of weekdays (ibid). For this reason, the 30-day trend lines were added to allow for comparison of 30 days of incidents with the same 30 days in previous years, highlighting any long-term trends. There are signs of some seasonal trends with the summer months (end of May through to August) yielding a high level of above average calls in 2017 and 2018. The FOI data indicates that F1's seasonal demand is similar to that of other forces in England and Wales.

5.3 Incident Types

To identify any changes in demand, trends or patterns and the kinds of incidents which contribute to F1 demand, analysis in the following sections was conducted on the types of incidents recorded by F1 during the reporting period.

Figure 5.2: F1 Closing Code Categories 2015-2018



Similar to the College of Policing (2015) findings, 'PSW' accounts for a significant volume of incidents (46.8% of all incidents over the 4-year period) which was consistent across all years. 'Suspicious Incident' ranked the highest, accounting for just under a third (29.5%) of all incidents categorised as PSW, followed by 'Concern for Safety' (21.4%). 'ASB' accounted for 20.6% of all incidents over the 4-year period, with 'ASB-Personal' (targeting an individual or group) and 'ASB-Nuisance' (causing trouble or annoyance to a community) equating to 50.4% and 47.2% respectively (The remainder was ASB-Environmental accounting for 2.4%). Consistent with previous studies (Reiss, 1971; Webster, 1970; Wilson, 1970; Bercal, 1970; Scott, 1981) and The College of Policing (2015) report, incidents classified as a crime accounted for 15.6% of all incidents over the reporting period. There was a slight increase in the percentage of incidents classified as a crime between 2017 and 2018, rising from 15.8% to 16.8%, however F1 implemented a crime recording improvement plan in the latter part of [redacted] which may partly explain the change. There has been little change in demand in relation to incidents classified as 'Admin' which have remained consistent across years. However, demand for incidents classified as 'Transport' and 'ASB' reduced by 13% and 15% respectively between 2015 and 2018.

5.4 Crime Demand

The following section assesses F1 crime demand to identify the types of incidents included in each category and ascertain any trends or changes. Due to the number of crime categories, the 'Crimed' incidents were grouped into six categories (see Table 5.1). HMIC (2014) raised concerns about the failure of police forces in England and Wales to record all reported crimes, estimating that over 800,000 reported crimes went unrecorded every year across all forces in England and Wales. HMICFRS (2017) acknowledged that forces (including F1) were making improvements to their recording practices, therefore it is unclear whether any increases in crime demand is due to increases in crime or improvements to recording practices (Office for National Statistics, 2019a). However, you would expect this to be consistent across forces.

Table 5.1: F1 Closing Category – Total Number of Crimes Reported Between 2015-2018 by Crime Type

Closing Sub-Category (Crime)	**Year**				
	2015 n (% within year)	2016 n (% within year)	2017 n (% within year)	2018 n (% within year)	Total n (%)
Violence	10,292(32.6)	10,242 (33.6)	10,382 (34.7)	13,502 (42.1)	44,418 (35.8)
Theft/Robbery	8,451 (26.8)	7,682 (25.2)	7,886 (26.3)	6,823 (21.3)	30,843 (24.8)
Burglary	4,379 (13.9)	4,531 (14.9)	4,454 (14.9)	4,261 (13.3)	17,625 (14.2)
Criminal Damage	3,912 (12.4)	3,586 (11.8)	3,329 (11.1)	3,118 (9.7)	13,945 (11.2)
Other Crime	3,061 (9.7)	2,827 (9.3)	2,239 (7.5)	2,624 (8.2)	10,751 (8.7)
Sexual Offence	1,487 (4.7)	1,620 (5.3)	1,663 (5.6)	1,774 (5.5)	6,544 (5.3)

Percentages may not total 100% due to rounding.

There was a sharp increase in F1 demand linked to 'Violence', with incidents increasing by 30% between 2017 and 2018. However, there is uncertainty whether this was a genuine change in demand or whether the increase could be attributed to a change in recording practices. The CSEW reported no change in violent crime during this period (Office for National Statistics, 2019a), however the nature of violent offences included in F1's 'Violence' category is unknown as a lower-level breakdown of incidents was not provided. Demand relating to 'Theft/Robbery' reduced by 13.5% during the same period, in contrast to police recorded robbery offences, which rose by 11% in 2018 (Office for National Statistics, 2019a). Incidents of 'Burglary' reduced and 'Sexual

Offence' incidents steadily increased over the reporting period which is broadly comparable to other forces (ibid).

Analysis of F1 data shows an increase in complex crimes, such as violent and sexual offences however, almost 84% of F1 reactive demand comprises non-criminal incidents, utilising much of their resources which is comparable with other forces in England and Wales (College of Policing, 2015). As discussed in Chapter 2, there is current debate around non-crime demand which is perceived to include service failure by other public services raising questions about whether police should be dealing with such incidents. However, several studies have identified that some non-crime incidents have the potential to escalate into a crime if police don't attend (see Chapter 2). The following section discusses F1 non-crime demand to identify the types of incidents included in each category and to ascertain any trends or changes in demand.

5.5 Non-Crime Demand

This section will provide an analysis of F1 non-crime demand which is comprised of five categories: Admin, ASB, PSW, Transport and Other (see Appendix 5 for a list of incident types and sub-types).

5.5.1 Administration

'Complaints Against Police' accounted for almost half (48.2%) of all incidents classified as 'Admin' over the four-year period, however this only equates to 0.6% of all calls for service. Police forces have a duty to record complaints made by members of the public about either an individual or the force itself with only the most serious of cases being referred to the Independent Office for Police Conduct (IOPC), who oversee the police complaints system (Independent Office of Police Conduct, nd). Although no resources are deployed as such, the process can be timely and resource intensive. The majority (47.2%) of remaining Admin calls were recorded as "Lost & Found Property/Found Person"[17]

[17] This category should not be used to record missing persons who are found within the time the original incident is live (see NPIA, 2011).

5.5.2 ASB

ASB incidents incorporate a wide range of actions that can cause harassment, alarm, or distress to others including neighbour disputes, vandalism, littering, and drunken behaviour. Incidents classified as ASB accounted for 20.5% of all incidents over the 4-year period. There was a steady decrease in the percentage of 'ASB Personal' incidents, reducing by 32.4% over the reporting period, coupled with an 8.6% increase in incidents classified as 'ASB Nuisance' over the same period. 'ASB Environmental' only accounts for a small number of all ASB incidents, however, anecdotally, although these incidents may be reported to the police they are normally dealt with by partner agencies, such as local councils and therefore do not result in an incident log being created. F1 ASB reports reduced by 8.6% between 2017 and 2018, which was consistent with police recorded crime which reduced by 18% during the same period (Office for National Statistics, 2019a). The Office for National Statistics (2019a) believe that such reductions should be treated with caution as some incidents previously recorded as ASB may now be recorded as a crime (because of the emphasis on improving crime recording).

5.5.3 PSW

Modern policing encompasses a wide range of duties, with the role of police officers more than 'tough, no nonsense crime fighters' – a description given by Theresa May (2011). Police officers also ensure the safety of the public, including locating missing persons, tackling domestic abuse, and dealing with incidents involving people with MH issues. Just under half (46.8%) of all incidents were classified as 'PSW' during the reporting period with 'Suspicious Incident' and 'Concern for Safety' most commonly reported. Similar to early studies (see Chapter 2) these findings highlight the social role of policing which account for a considerable amount of police calls. Although incidents involving 'Missing Person' only accounted for 5.9% of PSW incidents they have an impact on police demand, with forces using around three million hours each year dealing with missing persons (The Police Foundation, 2022).

5.5.4 Transport

The police are integral to ensuring the road network functions efficiently and that people who use it can do so safely (HMICFRS, 2020d). Officers will attend reports of road traffic

collisions and disruptions on the road, as well as investigating reports of suspected drink driving and dangerous driving. Over the reporting period, 15.2% of incidents were classified as 'Transport', with 'Highway Disruption' (which includes roadblocks, breakdowns, and abnormal loads) ranking the highest (37.7%), followed by 'Road-Related Offence' (35.5%) and 'RTC-Damage Only' (20.8%). The police, as the lead agency for collision investigations, also have a responsibility to investigate and establish the circumstances of actions that lead to road deaths and life changing injuries (College of Policing, 2020d). Police officers have the power to stop vehicles, direct traffic, and close roads after a collision with the assistance of Police Community Support Officers and Highways England Traffic Officers (ibid). Only 6% of all incidents classified as 'Transport' were categorised as 'RTC-Death/Injury'.

This analysis has identified the types of incidents reported during the 4-year period (RQ1 and RQ3) as well as any shifts in demand. PSW incidents takes up a considerable amount of police time (46.8%), followed by ASB (20.6%). Consistent with previous research, only a small proportion of police demand is crime-related (15.6%). The COVID-19 pandemic has further highlighted the shift in demand from traditional crime towards forces having to deal with incidents connected to people with complex social needs (Aitkenhead et al. 2022). Examining call volumes and incident types can explain the overall level of reactive demand and the kind of incidents which contribute to demand; however, it is also important to understand the source of reports of incidents received to allow forces to manage their demand.

5.6 Source of Incident Reporting

The 101 number was designed to reduce the number of emergency calls and was seen as a useful way to reduce police deployments (Bain et al. 2016) (see Chapter 3). However, HMICFRS (2019b) suggest that the public are losing confidence in 101 and, rather than waiting for a 101 call to be answered, are opting to call 999 instead resulting in a shift in reporting from 101 to 999 (discussed below). CHs must evaluate the element of risk involved in non-criminal incidents (Lumsden and Black, 2018) and make good judgements when deciding the urgency of calls (Rand, 1983). The fact that a call has been received via 999 is not a guide to the incidents urgency as it may be

trivial, non-urgent, or not a police matter (Rand, 1983). It is important for forces to monitor the source of their incident reports as calling 999 for a non-emergency has the potential to result in delays responding to genuine emergencies (Wiltshire Police, 2020; West Yorkshire Police, 2020). Conversely, calling 101 in an emergency can result in a longer wait to speak to an operator where, in some cases, the call is not answered (HMICFRS, 2020a). Forces have also introduced the 'single online home' to reduce unnecessary contact between the public and the police as well as improving efficiency (NPCC, 2016) (see Chapter 3). There are early signs that the volume of incidents being reported on the 'single online home' is growing (HMICFRS, 2020a) and reducing demand on the 101 number. The following section analyses the source of F1 incident reports and utilises information from FOI requests to forces in England and Wales to identify any trends or patterns in reporting practices.

The majority of F1 incidents (91.1%) were reported through either the emergency number (999 (40.7%)) or the non-emergency number (101 (50.4%)). In relation to the total volume of calls for service, F1 witnessed a 31.8% increase in 999 calls coupled with a 29.3% decrease in 101 calls over the reporting period. The shift from 101 to 999 may stem from changes in reporting specific incidents. Analysis of all source data shows a reduction (as a percentage of all calls) in 'ASB', 'PSW' 'Crimed' and 'Transport' incidents to 101, coupled with an increase in reports to 999. Further research into call data would be beneficial to identify any link between the number of 101 calls that go unanswered and any increase in 999 calls to suggest that the public are calling 999 rather than waiting for a 101 call to be answered (HMICFRS, 2020a).

5.6.1 Source of Police Reported Incidents across England and Wales 2015-2018

FOI data shows a growth (25%) in 999 calls across all forces[18] during the reporting period, coupled with a decrease (12%) in 101 calls. However, the trends do differ considerably between forces with some witnessing much higher increases in 999 calls than others. Cleveland and Bedfordshire's 999 calls increased by 38.2% and 37% respectively, compared to Merseyside and Humberside who only saw a 10% and 12% increase,

[18] In forces who provided both 999 and 101 data including F1.

respectively. Furthermore, a minority of forces including Warwickshire, Humberside and Devon and Cornwall witnessed an increase in both 999 and 101 calls over the reporting period. The overall volume of 999 calls (between 2015 and 2018) also varied greatly from the Metropolitan Police (over 8.1 million) and West Midlands Police (over 2.6 million) recording the largest volumes, in contrast to Warwickshire Constabulary (162,883) and Dyfed-Powys Police (164,225) who recorded the least.

For forces to have a greater understanding of the source of their demand, they must identify any relevant factors that may be influencing the shift from 101 to 999. A recent Comparing Police and Crime Commissioners (CoPaCC) report (2020) noted that nationally almost 25% of 101 calls between 2016/17 and 2018/19 were not answered within target times (which vary between forces) which may have resulted in the caller deciding to call 999 instead. Forces do not appear to ask 999 callers whether they initially called 101 or whether previous experiences of 101 resulted in them calling 999 (HMICFRS, 2020c). The Victims Commissioner for England and Wales (2019) reported that long waits and call charges to the 101 number were causing some members of the public to call 999 instead. As of April 2020, calls to the 101 number are now free of charge. Further analysis on 2020/2021 data would be required to ascertain if this has impacted the 999/101 ratio.

It is also reasonable to assume that, in many cases, the callers understanding of the incident they report (Manning, 1988) will have an influence on whether they call 999 or 101 to report events. However, as Waddington (1993) highlighted, the caller's interpretation of the incident may be mistaken, inaccurate, or exaggerated. Nationally, between 2016 and 2019, over 20% of emergency incidents were created as a result of a 101 call (CoPaCC, 2020). While 101 should be used when an emergency response is not required, 14% of calls (n=57,399) to F1's non-emergency number received an 'Immediate' response. Just over half of F1 999 calls during the reporting period (52.9%, n= 171166) were graded as 'Immediate' however, 17.5% of all 999 calls were dealt with over the phone with no need to deploy any resources (a large proportion (46%) of these calls were classified as 'Abandoned Call to Emergency Services'). The public are not always aware of how serious an incident is, with Reiss (1971) arguing that citizens often

mistake incidents as criminal matters which are defined as non-criminal matters by the police. This was evident with only 45% of 999 reports of a crime resulting in a crime report being created.

It would be beneficial for forces to have a strong insight of the variances in the urgency of calls reported to both the emergency and non-emergency numbers. A recommendation would be for forces to consult with Wiltshire Constabulary who have run campaigns to help increase the public's understanding of when to call the emergency and non-emergency number (Wiltshire Police, 2020) to examine any impact the campaigns had in shifting demand from 101/999 calls. There are early signs that the volume of incidents being reported on the 'single online home' is growing steadily (HMICFRS, 2020a) and reducing demand on the 101 number. A further recommendation would be to better promote the online chat function of the single online home portal.
So far, this chapter has discussed the types of incidents reported and any shifts in demand as well as changes in the source of reporting. The following section will provide temporal analyses of the call data to look at police demand and any patterns based on time.

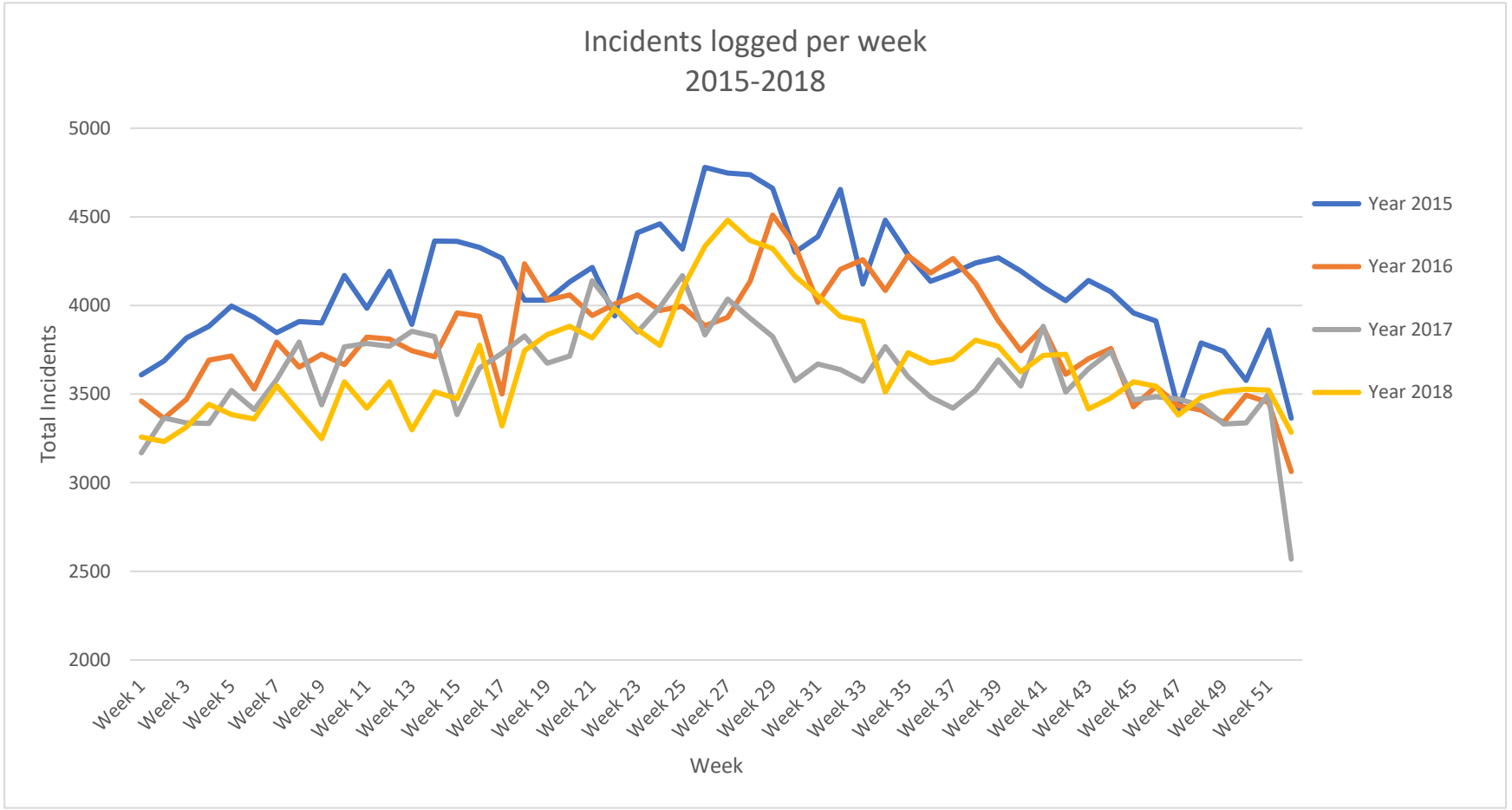
5.7 Incidents: Temporal Analysis

Providing analysis on short-term daily and monthly forecasts of incidents and identifying patterns for specific incidents can be useful for forces to identify predicted demand and allow for the appropriate deployment of resources (Johnson, Bowers and Pease, 2012; Neusteter et al. 2019). Without such analysis predicting the frequency of incidents relies on intelligence and assumptions (ibid). Analysis of police data can identify patterns and inconsistencies allowing inferences to be drawn from the findings which can inform the tactical deployment of resources (College of Policing, 2019b). The date and time incidents occur are not always known (Haberman, Sorg and Ratcliffe, 2017), however the following sections provide a temporal analysis of F1 data looking at the day, month, and hour that incidents were reported to help identify any patterns or trends and inform decisions on demand management practices.

5.7.1 Incidents – Seasonal Variations

Pattern analysis is a commonly used analytical technique utilised by police analysts which identifies emerging or current trends (College of Policing, 2020e). This technique has been used in the following sections to identify the types of incidents that have occurred in the F1 force area over the reporting period. To identify any noticeable seasonal trends, peaks, or variations, temporal analysis was conducted on F1 weekly incident data, as using monthly counts does not consider the fact that not all months are the same length or have the same number of weekdays and are a poor unit of analysis (Ashby, 2020b).

Figure 5.3: F1 Incidents logged per week – 2015-2018



Although it is difficult for forces to predict the timing or nature of all their demand (i.e unplanned events) from calls for service (Home Office, 2005), patterns and trends can be identified (Kessler, 1993) which can help to inform future demand practices, however studies into trends and patterns in calls for service have been largely overlooked (Ashby, 2020b). Some studies looking at seasonal and temporal variations in criminal behaviour have taken a routine activity approach, arguing that changes to routine activities can influence crime rates (see Cohen and Felson, 1979), whilst others have looked at the effects weather has on crime (see Cohn, 1990). Nevertheless, much of the work in this field, including original research by Quetelet (1842), has identified that some crimes have a seasonal element to them which varies by crime type (Andresen and Malleson, 2013). The following section will provide a temporal analysis conducted on F1 weekly incident data to identify if any seasonal or temporal patterns exist for specific incident/crime types.

Although there were little seasonal variances overall, incidents tended to peak in the summer months, (May through to August) with a steady decrease through autumn and winter months (September through to February) before starting to rise again in March. FOI data requested by the researcher show that such seasonal trends are comparable with other forces across England and Wales. This was similar for both F1 999 and 101 calls, though 999 calls tended to rise in December, with spikes in 'Violence'; 'Suspicious Incidents'; 'ASB: Nuisance'; 'Concern for Safety/Collapse/Illness/Injury'; 'Domestic Incidents' and 'Road-Traffic Offence' incidents. In relation to all calls, 'PSW' incidents tended to spike in the summer months (May to August) with 'ASB' related incidents declining from November to February. However, a further breakdown of 'ASB' types e.g., street drinking, rowdy/nuisance behaviour etc., would be beneficial to ascertain any seasonal variations in specific 'ASB' incidents.

Incidents closed as 'Crimed' tended to peak in July and August with an increase in 'Drugs', 'Violence' 'Other Theft' and 'Criminal Damage' incidents. 'Burglary' was more likely to occur in the winter months, starting to increase in October and peaking in January before starting to fall again. In contrast incidents closed as 'Violence' increased

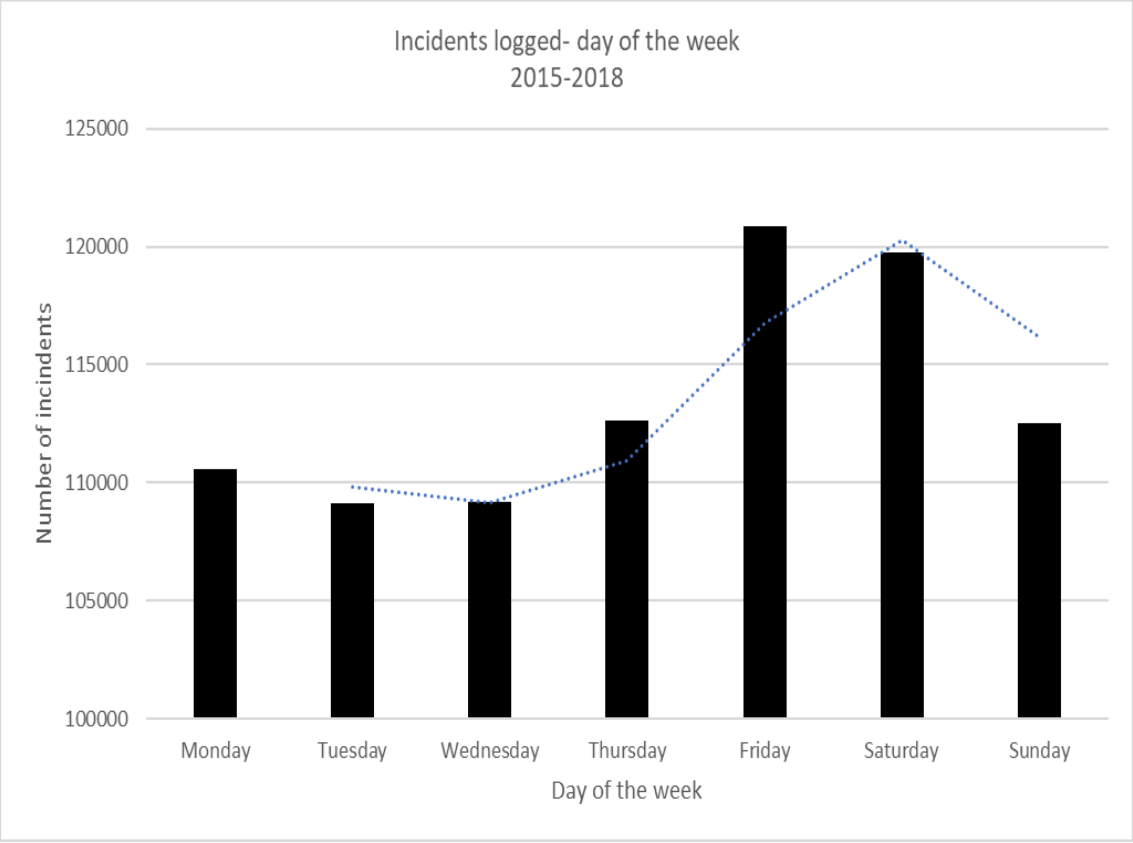
in the summer months, peaking in July, with slight increases in October and December. It would be helpful to have a further breakdown of the variety of incidents classified as 'Violence' e.g., murder, minor assault etc., to ascertain if any seasonal variations exist for types of violence. However, these findings are consistent with the original work by Quetelet (1842) who found that crimes against property were more likely in winter months, peaking in December and January and crimes against the person higher in summer months, peaking in June. Quetelet (1842) argued that the increase in summer months was due to increased outdoor interaction. However, in contrast, F1 data indicates that 'Robberies' were more likely in the winter months with peaks in October, January and February. This is consistent with research by Landau and Fridman (1993) who surmised that longer hours of darkness in the winter months may be a factor for increased incidences of robberies.

Incident data can provide a more accurate picture of domestic incidents as not all domestic incidents are recorded as a crime or reported in crime surveys (Farrell and Pease, 1994). It is important to note that incidents closed as 'Domestic Incidents' are those which don't amount to a notifiable crime (which are closed with an appropriate crime code) (NSIR, 2011). Seasonal variations were evident in F1 'Domestic Incidents' which, although there was a slight increase in December, were more likely to occur during the summer months. Similar findings were reported by Farrell and Pease (1994). Seasonal variations have been identified for certain types of F1 incidents and provide an insight into which incidents are more likely to occur throughout the year which can help with demand and resource management and targeted police activity in certain months. Although understanding seasonal variations can be beneficial to forces by helping identify patterns in their demand it is useful to utilise lower levels of temporal data (Ashby, 2019) as some of the greatest variations happen over short timescales such as hours and days (Ashby, 2019; Felson and Poulsen, 2003). The following section presents findings from temporal analysis of the days on which incidents are reported to determine if any trends and peaks are evident.

5.7.2 Incidents – Day of the Week

Temporal analysis was conducted on the day incidents were reported (see Figure 5.4). As previously stated, police cannot accurately predict the timing or nature of demands from calls for service (Home Office, 2005), however identifying trends or peaks in days when specific incidents are more likely to occur can be useful to help forecast future demand and inform demand and resource management.

Figure 5.4: F1 Incidents logged per day of the week 2015-2018



Several variations were evident on the day of the week incidents were reported over the four-year period with Friday and Saturday receiving more reports (15.2% and 15.1% of total incidents respectively, compared to an average of 13.9% on other days). Calls to 101 peaked on a Friday (15.3% of 101 calls) reducing at the weekend (averaging 13.4%). However, 999 calls were slightly higher on a Saturday and Sunday (16.8% and 15.8% of 999 calls compared to 13.5% on an average weekday). These temporal patterns in calls

can help inform resource planning within the FCR and identify the volume of response officers required for each shift.

Overall, there was an increase in 'PSW', 'Crimed' and 'ASB' incidents on a Friday and Saturday, with 'Transport' peaking on a Friday. There are consistent reports of ASB incidents across the week, however there was an increase in 'ASB: Personal' on Fridays, with peaks in 'ASB: Environmental' and 'ASB: Nuisance' on Saturdays. 'Sexual Offences' peaked on a Monday and Thursday, with a reduction in incidents over the weekend. 'Violence', 'Criminal Damage' and 'Domestic Incident' were more likely to be reported at the weekend. Saturday witnessed the highest reports of 'Robbery', although high volumes were also reported on Mondays. A study by Herrmann (2015) produced similar findings, noting that violent crimes in a New York County increased at weekends. However, in contrast, he found that 'Robberies' were more likely on weekdays, reducing at weekends.

The exact date a burglary was committed is not always known, as victims may discover the burglary in the morning or when they return from a holiday (Johnson, Bowers and Pease, 2012). However, reports of 'Burglary' were less likely at the weekend with increased reports on a Monday. Similar findings were reported by Andresen and Malleson (2015) who argued that residents are more likely to be at home at the weekend reducing opportunities for potential burglaries.

5.7.3 Incident Volumes – Day of the Week and Time of the Day

Conducting analysis on calls for service with micro-level data (for example hourly data) is valuable to forces as understanding the time incidents occur is more useful than only knowing the day or month (Ashby, 2019). Crime/incidents vary more by hour of the day than any other predictor (Felson and Poulsen, 2003). Taking a micro-level temporal approach, the following section examines, both the day and hours incidents were reported over the four-year period.

Figure 5.5: F1 Incidents Logged Hourly 2015-2018

Hour	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
00	3381	2949	3009	3166	3446	5870	6550
01	2483	2073	2089	2243	2552	4877	5543
02	1775	1540	1546	1734	1969	3858	4404
03	1321	1230	1158	1374	1581	3104	3469
04	1078	962	953	1095	1207	2175	2543
05	971	1055	905	1017	1167	1516	1588
06	1229	1313	1247	1335	1381	1354	1378
07	2096	2182	2064	2097	2177	1758	1568
08	3434	3372	3442	3433	3318	2610	2101
09	4663	4818	4734	4800	4697	3872	3094
10	5363	5210	5301	5461	5291	4556	4169
11	5710	5765	5768	5815	5838	5228	4962
12	6064	6076	5866	6055	6171	5489	5281
13	6257	6179	6193	6285	6506	5957	5624
14	6375	6313	6333	6414	6700	6256	5735
15	7144	7071	7095	7345	7413	6442	6282
16	7425	7188	7328	7481	7916	6412	6476
17	7482	7425	7563	7664	7832	6758	6469
18	7344	7273	7271	7492	7737	6619	6702
19	7294	7386	7263	7254	7593	6766	6568
20	6710	6825	6713	6835	7655	6932	6319
21	5832	5970	6034	6244	7388	7042	5869
22	5094	5074	5101	5448	6874	7203	5413
23	4044	3887	4219	4560	6469	7079	4440

As the spread of incidents (similar patterns of incidents per day and hour) across the four-year period was relatively consistent, all data were incorporated into the above heat map (Figure 5.5). The heat map highlights how the volume of incidents change throughout the hours in each day, from lowest (green) to highest (red). Crime/incidents vary, more than any other variable, by hour of day therefore temporal analysis is a useful way to determine when incidents/crimes are most likely to occur (Felson and Poulsen, 2003).

Although Friday and Saturday received the highest number of calls (n=120,878 (15.2%) and n=119,733 (15.1%)), analysis of the times of day calls were received highlights that peak reporting times are Monday to Friday between 1500hrs and 2100hrs, equating to just under half (45%) of calls received on those days and just under a third (32%) of all calls. Increases during this period are consistent across all incident types, however assessing sub-types identifies increases in calls reporting incidents involving 'Drugs', 'Robbery', 'Theft of a Motor Vehicle', 'Concern for Safety' and 'Missing Person' (see Chapter 3 for a discussion on service shift). The busiest time, across Monday to Friday, is 1700hrs, accounting for 6.8% of all calls received on those days. Calls start to increase from 1500hrs at the weekend, with a steady volume of calls on Saturdays until the early morning. Demand is greater at the weekend between midnight to 0600hrs. Incidents involving 'Violence', 'ASB', 'Suspicious Circumstances/Insecure Premises or Vehicles', and 'Concern for Safety'; account for almost half (49%) of all calls received during these hours. Incidents classified as 'Violence' were more likely to occur on a Saturday between 9pm and 2am, peaking between 12 am and 1am. However, slight increases also occurred between 3pm and 7pm on most days. Similar findings were reported by Herrmann (2015) who found that violent crimes were most likely to occur at weekends, peaking at midnight before starting to decline. Having an awareness of the temporal activity of specific types of incidents can help inform both demand and resource management decisions.

5.8 Grading: Opening Codes and Response Grades

To address RQ2 and RQ7, the following section looks at the grading used by F1 based on the initial call for service (see Table 4.2). CHs have some discretion in determining how

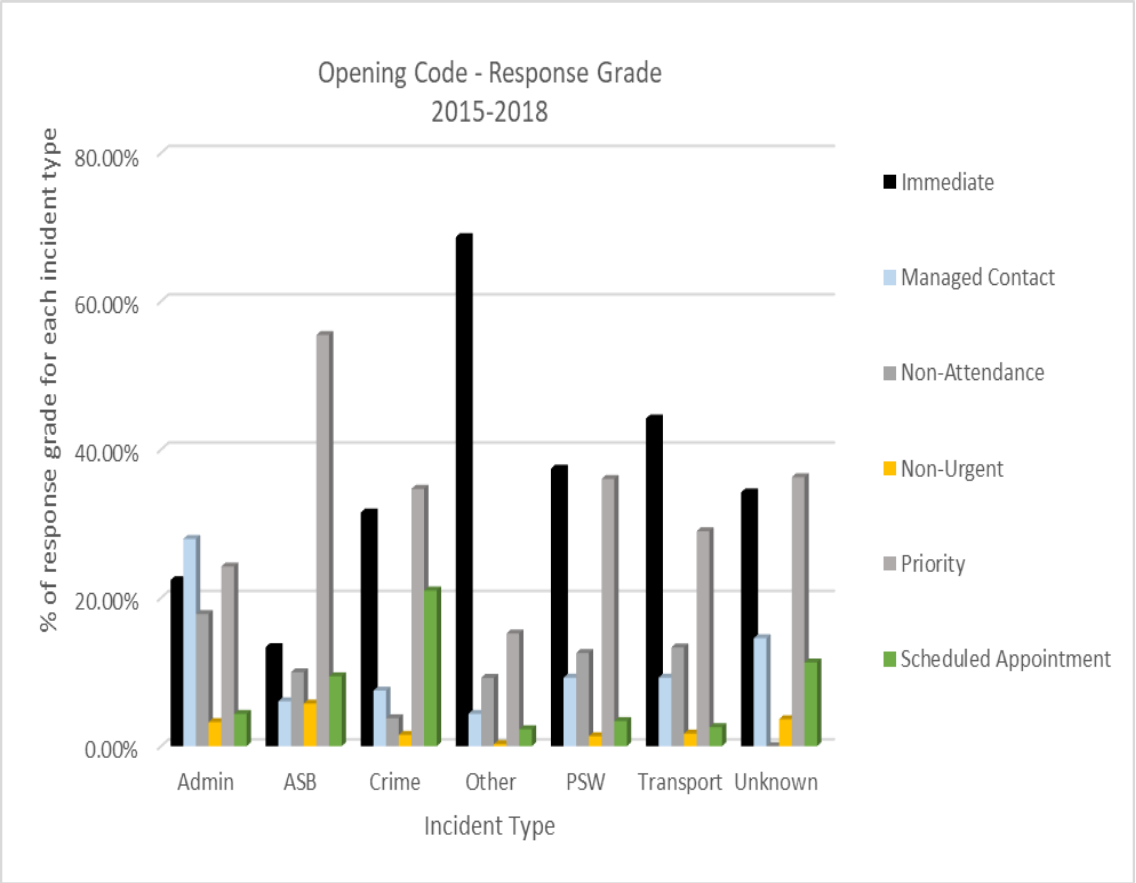
they grade and prioritise calls for service, which has the potential to lead to an inequitable distribution of police services (see Section 5.18). A CHs initial grading decision will be based on their interpretation of the call which will inform the opening code provided. As discussed, the caller's perception of an incident can vary greatly to how the police define it. Opening and closing codes can also vary greatly due to the acquisition of new information. However, as the grading is based on the initial call, analysis in the following section was conducted on the opening code to indicate how CHs decide on the urgency of response to calls for service. F1 utilised six response codes during the reporting period to categorise the urgency of the response required (see Table 4.2). 'Managed Contact' was introduced in [redacted] to replace 'Non-Attendance' and 'Non-Urgent' was introduced in [redacted] as an additional category. Prior to this 'Priority' and 'Scheduled Appointment' were used (see Appendix 5). A number of incidents (n = 36,115) were incorrectly graded as 'Police Generated'. In such cases the grading should have been changed to one of the forces six response codes and as such are assessed as operator errors (personal communication with F1). The response to such incidents is unknown hence they have been omitted from this particular analysis.

Similar to Lum et al. (2020b), the gatekeeper function was illustrated in the analysis of F1 call data where CHs resolved 19% of all calls, and around a quarter (25.3%) of MH related calls without the need to dispatch any resources. Incidents resulting in the deployment of resources accounted for 80.8% of all calls for service during the reporting period (n= 612,836). Of incidents requiring a deployment, the majority (86.4%) received an 'Immediate' or 'Priority' response (n = 529,353). The use of 'Managed Contact', introduced in [redacted] increased by 17.2% between 2017 and 2018 with a predicted reduction in the use of 'Non-Attendance'. 'Non-Urgent', introduced in [redacted] was increasingly used coupled with a reduction in 'Scheduled Appointment', which reduced by almost 50% between 2017 and 2018. The following section discusses response grades in relation to incident categories.

5.9 Opening Codes and Response Grades

The following section looks at the opening code of incidents alongside the grade decided by the CH (see Figure 5.6).

Figure 5.6: F1 - Opening Code with Response Grade



5.9.1 Opening Code and Response Grade - Crime

Almost 90% of calls originally classified as 'Crime' resulted in the deployment of resources with 65.2% graded as either 'Immediate' or 'Priority' over the reporting period. However, the percentage of 'Crime' incidents resulting in deployment consistently reduced from 92.3% in 2015 to 75.8% in 2018. There is some indication that a small percentage of calls reporting 'Crime' gradually shifted from deployment to being dealt with over the phone. Although the use of 'Immediate' grading for calls reporting crime increased over the reporting period, an increase in dealing with reports over the phone was also apparent with a shift from 'Scheduled Appointment' to 'Managed Contact' evident between 2017 and 2018. There is evidence of the force increasing the use of telephone resolutions to manage demand, in particular with calls reporting certain crimes, such as criminal damage, drugs, and fraud which shifted from 'Scheduled Appointment' to 'Managed Contact' and were increasingly managed without deployment in an attempt to resolve incidents rather than resource them. In relation to

RQ2, this suggests that the force is using telephone resolutions as a demand management practice, similar to findings in the study by Walley and Adams (2019).

5.9.2 Opening Code and Response Grade – Non-Crime

Consistent across all years, resources were deployed to over three-quarters (78.2%) of all incidents initially classified as 'PSW', with the vast majority (94%) of deployments graded 'Immediate' or 'Priority'. Initial reports of a 'Domestic Incident' resulted in deployment in 97.6% of calls, however between 2015 and 2018 there was a gradual shift from 'Immediate' (62.7% to 46.2%) to 'Priority' (26.2% to 43.1%) response. While there was limited change in the use of deployments across 'PSW' categories, there was a slight shift toward the use of telephone resolutions between 2017 and 2018 in 'Civil Dispute' incidents, with 'Managed Contact' increasing by 10% during this period.

Resources were deployed to 84% of all incidents initially classified as 'ASB' with most (81.9%) deployments graded 'Immediate' or 'Priority'. Opening codes were seldom broken down into sub-categories, making analysis of any trends in deployments to types of 'ASB' impossible. There was little change in 'Admin' and calls relating to 'Traffic'; 68% received a deployment during the reporting period (however as with ASB no sub-categories were provided in the opening code). The majority (86.4%) of incidents classified as 'Other' received a deployment, however these are calls for service requests from another forces or agencies involving crime-related incidents.

5.10 Incidents Involving a Mental Health Qualifier

The social role of policing is a common theme across previous studies and dealing with incidents involving people with MH problems is an accepted part of policing (HMICFRS, 2018b). The College of Policing (2015) previously estimated that between 2% and 20% of police incidents were linked to MH, with HMICFRS (2018a) providing a more recent estimate of 2.8%. It is estimated that 40% of work undertaken by the Metropolitan Police has a MH element to it (Metropolitan Police, 2018). Recent UK studies by Kane, Cattell, and Wire (2021) and Langton et al. (2021) identified that 7.8% and 10% of

incidents (respectively) were MH related. Demand from dealing with incidents involving MH problems increased by 28% between 2014 and 2018 across 26 police forces (The Police Foundation, 2022) and although police forces work closely with health and social care agencies, such incidents can be time consuming and take up a substantial number of resources (HMICFRS, 2019a). All forces now have a level of MH support in the control room (ibid), emphasising the scale of this area of demand (HMICFRS, 2018b). Such support includes MH professionals based within FCRs or access to 24/7 helplines to specialist MH nurses (ibid).

The following sections provide an analysis of F1 incident data which involved a MH qualifier. As previously stated, individual CHs decide whether to add the qualifier based on their interpretation of the call. There are concerns the actual extent of MH incidents is underestimated due to a lack of training and inconsistent recording practices (Langton et al. 2021). HMICFRS (2018a) believe calls to police involving MH concerns are under-recorded due to a lack of understanding of MH demand, with analysis indicating that actual demand in relation to MH is greater than the number of incidents suggest. Although the extent of resources used by police to attend MH incidents is unclear (Langton et al. 2021), the following sections provide an analysis of F1 incidents with a MH qualifier to assess the recognised demand placed on the force from incidents that involve people with MH problems.

5.11 MH Incident Volumes – Annually

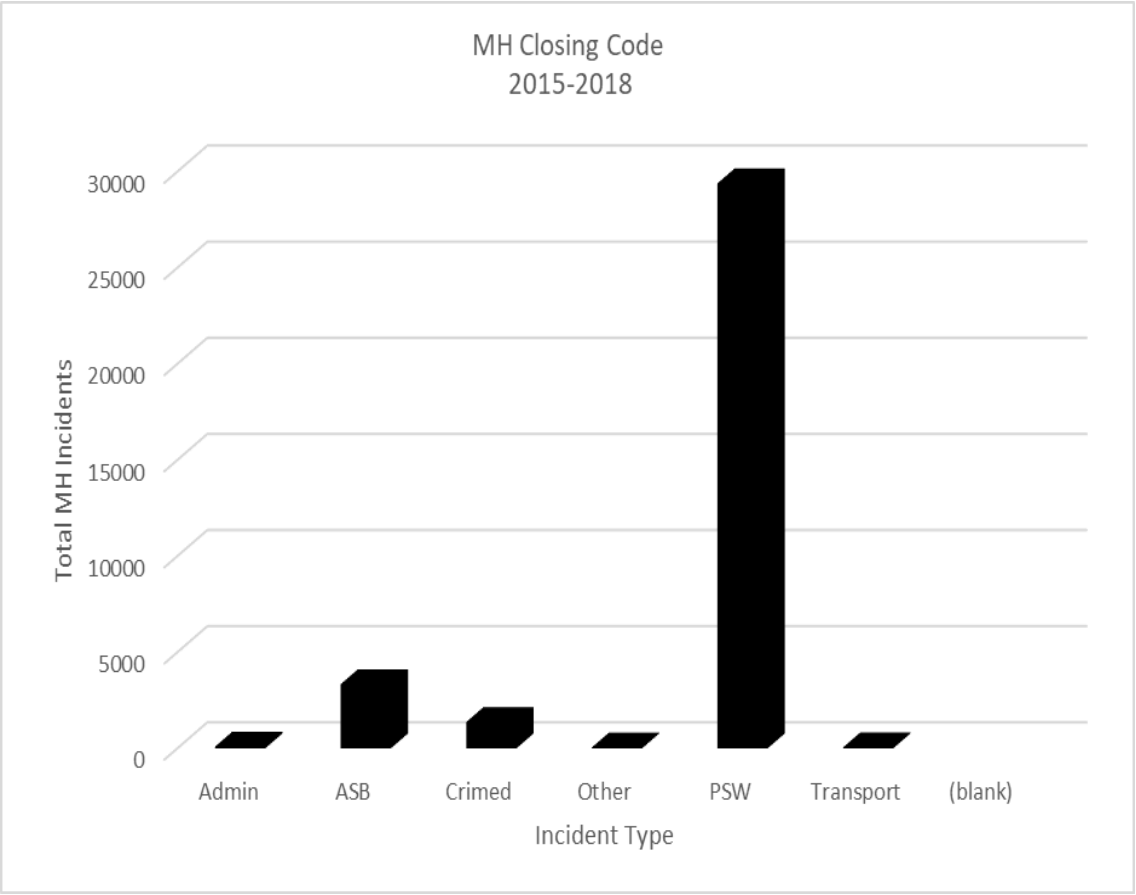
A total of 34,273 incidents with a MH qualifier were recorded over the reporting period, representing 4.3% of all calls. Although there were variations across years, the percentage of incidents with a MH qualifier remained relatively consistent across years (2015-4.3%, 2016-3.9%, 2017-4.6, 2018-4.3%).

5.12 MH Incidents – Incident Types

In order to identify the volume of incidents F1 receive with a MH qualifier and to identify any changes in demand, trends or patterns and the kinds of MH incidents which contribute to F1 demand, analysis in the following sections was conducted on the types

of incidents recorded by F1 during the reporting period broken down by categories and sub-categories of incident types.

Figure 5.7: F1 Closing Code Categories 2015-2018 – MH



'PSW' accounted for a significant volume of MH incidents, equating to 85.7% of all incidents over the four-year period which was consistent across all years. No MH incidents with a closing code of PSW were recorded as a crime. 'Concern for Safety' was attributed to most F1 incidents with a MH qualifier (n=18,453), accounting for more than half (53.8%) of all demand over the four-year period. This is likely to include calls to report a genuine and justifiable concern for a person's welfare or well-being as well as reports of people collapsing or suffering from injury and illness including mental illness (NSIR, 2011). 'Hoax Calls' accounted for 14.3% of all incidents, which includes calls made by people with MH problems reporting incidents that had not occurred (ibid). Such calls not only stop CHs from dealing with genuine emergencies but can have an impact on police demand by utilising unnecessary police resources which are deployed dependent on the nature of the call (Cheshire Constabulary, 2022).

5.13 MH Incidents – Crime Demand

The following section assesses the sub-categories of incident types involving a MH qualifier that contribute to F1 demand. Incidents classified as 'Crimed' were grouped into six categories (see Table 5.2) (see also Appendix 17).

Table 5.2: F1 Closing Category – Crime Sub-Categories – MH

	Year				
Closing Code Sub-Category-Crimed	**2015** n (% within year)	**2016** n (% within year)	**2017** n (% within year)	**2018** n (% within year)	**Total** n (%)
Violence	184 (56.8)	174 (60.4)	189 (62.8)	332 (73.0)	879 (64.3)
Sexual Offence	38 (11.7)	40 (13.9)	33 (11.0)	36 (7.9)	147 (10.7)
Criminal Damage	46 (14.2)	29 (10.1)	31 (10.3)	36 (7.9)	142 (10.4)
Other Crime	28 (8.6)	24 (8.3)	23 (7.6)	20 (4.4)	95 (6.9)
Theft/Robbery	22 (6.8)	15 (5.2%)	20 (6.6)	24 (5.3)	81 (5.9)
Burglary	[redacted] (1.9)	[redacted] (2.1)	[redacted] (1.7)	[redacted] (1.5)	[redacted] (1.8)

Less than 4% of all incidents involving a MH qualifier had a closing code of 'Crime'. Of the incidents resulting in a crime being recorded, violence ranked the highest (64.3%), followed by 'Sexual Offence' (10.7%) and 'Criminal Damage' (10.4%) over the four-year reporting period. Crimes involving 'Violence' increased between 2016 and 2018 with a reduction in incidents involving 'Drugs' and 'Theft of a Motor Vehicle'.

5.14 Non-Crime Demand

Calls with a MH qualifier accounted for 4.3% of all calls for service. The majority (85.7%) of incidents with a MH qualifier were classified as 'PSW'. 'Concern for Safety' (where there was genuine concern for a person's welfare or well-being), ranked the highest,

accounting for the majority (62.8%) of all incidents categorised as 'PSW'. These findings suggest that partnership working can help reduce such demand, with MH related calls for service providing rich data to help forces identify vulnerable callers (Home Office, 2015). Working with relevant health partners has the potential to not only decrease this element of police demand but also help ensure that callers receive the appropriate support, in particular if the person has not committed an offence and requires medical help or the support of health and social care services (Home Office, 2015). Over the four-year period incidents classified as ASB-Personal (targeting an individual or group) accounted for 74.8% of all ASB incidents with a MH qualifier. However, there was a steady decrease in the percentage of such incidents coupled with a percentage increase in incidents classified as 'ASB-Nuisance (causing trouble or annoyance to a community). Being aware of the level, and sort, of ASB being committed allows forces to provide the correct tools and resources to tackle and resolve local ASB issues and sharing the knowledge with local agencies can help forces and partners to target, manage and resolve ASB within local communities (HMIC, 2010) which can result in a reduction in future demand.

5.15 Source of Calls for MH Incidents

Similar to all calls, the majority (92.3%) of F1 incidents with a MH qualifier were reported through either the emergency number (999) or the non-emergency number (101). There was a 26% increase in 999 calls, coupled with a 28% decrease in 101 calls given a MH qualifier over the reporting period. As a percentage of all calls received per year, reports to 101 reduced from 54.9% to 44% whilst 999 calls increased from 35.2% to 49.5% from 2015 to 2018. There was a shift from 101 to 999 to report all incident categories over the reporting period.

Research on the temporal patterns of MH related calls for police service have been mainly overlooked (Vaughan et al. 2018a), therefore the following sections will provide a temporal analysis of F1 incidents involving a MH qualifier to identify any patterns or trends in calls for service.

5.16 Incident Volumes – Day and Seasonal Variations

There was little variation between the weekdays on which incidents were reported over the four-year period, with most incidents reported on a Monday or Friday (14.8% of incidents respectively). Over the four-year period, Saturday and Sunday saw the lowest volume of calls (on average 13.5% and 13.6% of total incidents, respectively). This is consistent with a previous study by Vaughan et al. (2018b:62) who found that MH related calls were a 'weekday phenomenon'. Overall, incidents tended to peak in the summer months with a steady decrease through the autumn months before starting to rise again in December, except for 2015 when incidents declined in December.

5.17 Incident Volumes – Hourly

Figure 5.8: F1 Incidents logged hourly 2015-2018 – MH

Hour	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
00	201	189	179	228	174	208	205
01	165	131	142	154	162	162	185
02	113	90	94	100	101	137	153
03	80	89	70	86	82	129	105
04	74	85	77	59	59	108	90
05	61	59	55	66	70	64	73
06	71	78	71	55	76	73	71
07	71	98	92	94	101	89	85
08	134	107	133	125	127	102	103
09	171	179	183	159	177	158	143
10	214	213	244	239	203	170	185
11	247	211	244	232	224	201	211
12	225	239	230	244	281	202	191
13	269	278	234	271	255	229	214
14	263	255	259	275	290	225	212
15	301	284	282	297	310	236	249
16	312	317	326	312	321	234	249
17	324	302	309	326	287	233	286
18	332	306	285	284	330	265	287
19	349	331	301	314	311	305	317
20	306	319	329	305	298	283	289
21	318	286	302	282	296	290	263
22	266	264	280	259	279	274	265
23	203	233	199	232	252	250	218

As the spread of incidents across the four-year period was relatively consistent (similar patterns of incidents per day and hour) all data were incorporated into the above heat map (Figure 5.8). The heat map highlights how the volume of incidents changes throughout the hours in each day, from the lowest (green) to the highest (red). Analysis of the times of day calls were received highlight that, like all calls, peak reporting times are Monday to Friday between 1500hrs and 2100hrs, equating to 31.5% of all calls. However, although the busiest time for all calls was 1700hrs Monday to Friday, the busiest time for calls with a MH qualifier was Monday to Friday at 1900hrs, which accounted for 4.8% of all calls. Monday and Friday see the highest number of calls (14.8% of all calls). Calls received on a Saturday and Sunday begin to increase at 1900hrs

compared to 1500hrs on Monday to Friday. Only 17.6% of all incidents were reported between midnight and 0700hrs.

These findings are consistent with analysis by HMICFRS (2018a) who found that the peak time for calls to police for support with MH related incidents was toward the end of the working day, between 1500hrs and 1800hrs across Monday to Friday. The findings are also consistent with several international studies (Vaughan et al. 2018a; Lee, 2006). It is hypothesised that this is due to other services (GPs and MH services) being inaccessible during these hours. Similar to Vaughan et al. (2018b), clear temporal patterns were evident with F1 MH related calls for service peaking during the week. Understanding such temporal patterns in MH incidents can help forces make effective resource decisions (Lee, 2006) such as their shift planning. Identifying repeat callers would allow forces to work with local agencies to help provide necessary support required which could reduce the demand from repeat callers. Furthermore, forces should consider the possibility of uncovering why callers contact the police out of hours to help provide a greater understanding of their reasons. This could inform future discussions with partners, with the potential to help prevent future calls with targeted interventions by health partners in return helping to reduce police demand (NPCC, 2022).

5.18 Grading – Opening Codes and Response Grades

To address RQ2 and RQ7, the following section looks at the grading used by F1 based on the initial call for service with a MH qualifier. A CHs initial grading decision will be based on their interpretation of the call which will inform the opening code provided. As discussed, the caller's perception of an incident can vary greatly to how the police define it. Opening and closing codes can also vary greatly due to the acquisition of new information, however as the grading is implemented based on the initial call, analysis was conducted on the opening code to consider how CHs decide on the urgency of response to calls for service.

Just under three-quarters (73.4%) of all calls for service with a MH qualifier resulted in the deployment of resources, slightly less than the 77.1% of all calls. Like the Langton et al. (2021) study, the majority of incidents (93.3%), requiring a deployment, received an 'Immediate' or 'Priority' response (n=23483) indicating that CHs considered the calls to

be serious. This was slightly higher than the (86.4%) of all incidents requiring a deployment. The majority (86.2%) of calls initially classified as 'Transport' received either an 'Immediate' or 'Priority' response, followed by 'PSW' (81.8%), 'Crime' (72.6%) and 'ASB' (64.4%). The percentage of calls classified as 'ASB' receiving an 'Immediate' or 'Priority' response steadily reduced from 80.6% in 2015 to 52.2% in 2018. This had little effect on demand as 'Managed Contact' replaced 'Non-Attendance' and 'Non-Urgent' replaced 'Priority'.

Almost 90% of MH related calls initially graded as 'Crime' received a deployment, with a gradual increase in the percentage of calls classified as 'Crime' receiving an 'Immediate' response over the reporting period. There is some indication that a small percentage of calls reporting 'Crime' gradually shifted from deployment to being dealt with over the phone. Shifts were mainly evident in calls classified as 'Violence'. It could be inferred that this shift was in direct response to managing demand by increasing the use of telephone resolutions to decrease deployments to such calls. The majority (83.4%) of incidents initially classified as 'PSW' received a deployment, with no evidence of F1 increasing the use of telephone resolutions to manage the demand from these types of incidents. Although only 4.3% of incidents (in 2017 and 2018, that required and recorded a deployment of resources) had a MH qualifier they accounted for 7.9% of resources used, indicating that MH incidents are resource intensive.

A recommendation would be for F1 to ensure that they have appropriate partnership arrangements such as MH services, social work, and the NHS to jointly review and manage demand linked to MH issues (NPCC, 2022). Multi-agency working is essential when dealing with complex MH cases (ibid) and increased partnership working is recommended to identify targeted advertising to signpost the public to suitable services to reduce police demand while ensuring that the public receive appropriate support. This may focus on particular times of the day such as evenings. CHs have some discretion in determining how they grade and prioritise calls for service. This disparity in how CHs interpret calls has the potential to lead to an inequitable distribution of resources impacting the use of police resources. Therefore, in order to

address RQ2 and RQ7 the following sections will assess the consistency in CH grading of calls for service over time and space.

5.19 – Equity in Response Grading

Equity in policing can be described as a form of fairness (Eck and Rosenbaum (1994) with inequality involving the consistency with which criteria are applied to calls for service (ibid). To ensure equity and fairness, the existence of rules need to be impartially and consistently applied to all individuals (Hay, 1995; Charman and Williams, 2021). Engel and Eck (2015) argue that forces must focus more on equity and fairness and that for police strategies to be considered 'evidence-based' evidence must also systematically include measures of equity. As discussed, the Peelian Principles established the notion of policing by consent (Home Office, 2012) and rely on public confidence. Police legitimacy is an important factor influencing public support and there is a potential threat to police legitimacy if the public believe that the police service is acting in an unfair or unjust manner (Sunshine and Tyler, 2003). CHs are given the legitimate authority to act as gatekeepers to police resources, however the individual nature and use of discretion can be problematic to the objectivity of the distribution of police resources (Charman and Williams, 2021).

CHs can be described as 'Street Level Bureaucrats' (see Chapter 3) and have some discretion in determining how they grade and prioritise calls for service. Discretion is a contentious concept within criminal justice due to the difficulty in defining it (Gelsthorpe and Padfield, 2012; Lucy, Gilbert and Birkhead, 1977), however in the FCR domain discretion refers to individuals using their own judgement of the situation (Gelsthorpe and Padfield, 2012) to decide whether to deploy resources and the urgency of the response. THRIVE (see Chapter 3) is a professional discretion framework used by CHs in conjunction with their experience, knowledge, and the Code of Ethics when determining the incident grading (Police and Crime Commissioner North Yorkshire, 2016). The NDM (see Chapter 3) is used to gather and accurately assess relevant information to allow CHs to apply the professional discretion framework (ibid). The Code of Ethics (see Chapter 3) is a decision-making framework intended to

encourage personal responsibility and professional judgement (College of Policing, 2014b).

Although discretion is applied when making decisions, it is also important for CHs to follow policies and procedures as well as utilise their skills and knowledge (College of Policing, 2014b). Discretion is an important part of decision-making however decisions can be influenced by previous experiences and be constrained by formal and legal guidelines, social and economic restraints, and organisational and situational factors (Gelsthorpe and Padfield, 2012). Limitations in resources enhances CHs levels of discretion (Goldstein, 1963), which provides CHs with the freedom and authority to determine the police response to calls for service (Gelsthorpe and Padfield, 2012; Scott, 1981) with the variety of grading options expanding CHs discretion, allowing them to determine the urgency of responses (Worden, 1993). The use of graded response, however, can lead to issues of inequity, with some types of incidents receiving a delayed or no deployment which could result in a reduced level of service (Worden, 1983).

Does CHs discretion have the potential to lead to an inequitable distribution of police services by providing different responses to similar incidents over time or space? There needs to be consistency over time and space with individuals reporting similar incidents receiving a similar response regardless of the time of day reported or the geographical area they reside (Lucy, Gilbert and Birkhead, 1977; Hay, 1995). Equity analysis can be conducted by comparing measures of resources and activities which may help inform police resource decision-making (Lucy, Gilbert and Birkhead, 1977). For the purpose of this thesis, both the grading of incidents and resources used will be used in order to make a judgement regarding whether there is equity in the grading of calls for service and the distribution of police services based on the criteria of consistency in the grading of similar incidents, with all individuals being treated equally over time and space (Hay, 1995).

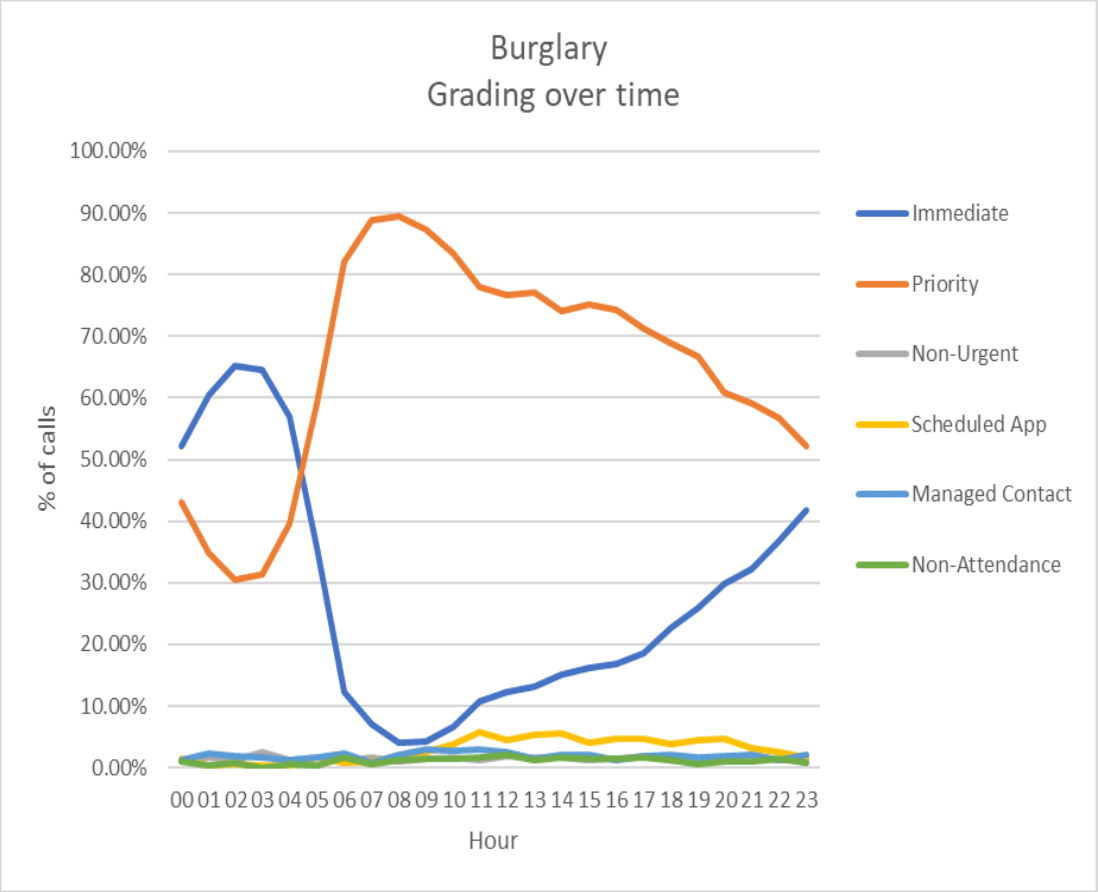
5.19.1 Call Handlers Discretion: Equity in Response Grading Over time

A general overview of deployment decisions utilising the opening codes of F1 call data implies that discrepancies exist in CHs response grading decisions. Only 62% of calls

reporting incidents involving drugs received a deployment compared to almost all (96.7%) calls reporting a burglary. There is the possibility that such decision-making may be influenced by force policies however this has been dismissed by F1 who argue that there are no such policies and that CHs risk assess all calls before deciding on a response grade (personal correspondence). Furthermore, CHs have some discretion when making grading decisions which can be influenced by a number of factors (see Chapters 7 and 8), including the information received from the caller, time pressures, policies, guidelines, and the nature of the call. CHs assess the degree of importance or immediacy of any potential threat and have to determine whether the offender is still at the scene, whether a crime is occurring or likely to occur or whether there is a genuine concern for safety (ACPO, 2005). Differences in deployment decisions by crime type are somewhat unsurprising, due to differing interpretations of calls and the nature and urgency of reported incidents.

However, how do we explain variations between CHs decisions regarding the grading of similar calls, or inconsistencies in grading across time or space? CHs have the power to send an immediate response or indeed to send none. All CHs abide by the same Code of Ethics, guidelines, policies, grading criteria, risk assessment and decision-making tools. It should therefore be expected that incidents that are similar in nature should receive a similar response grading (Hay, 1995). However, analysis of the response to calls for service reporting criminal activity shows a lack of consistency in risk assessments and response grading for similar incident types over time, revealing that response gradings were, at times, dependent on when incidents were reported. The inequity of the prioritisation of grading will now be discussed with incident data displayed as a percentage of the response grading by hour of the day the incident was reported.

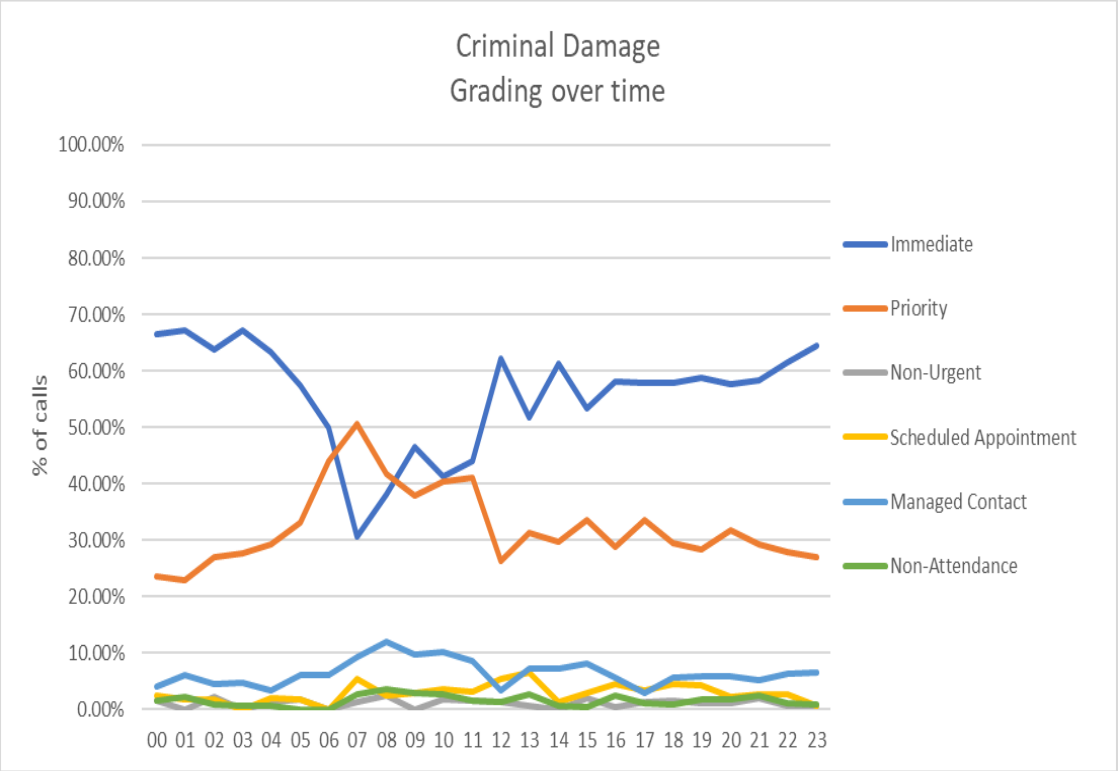
Figure 5.9: Burglary and Modal Grading Over Time



The most common (modal) incident grade for calls reporting burglary was a 'Priority' response between 5am and 11pm, shifting to 'Immediate' between midnight and 4am, highlighting noticeable differences in responses based on the time of day reported. All other response grades remain fairly consistent throughout the day. Patterns were slightly different dependent on the source of the call. Calls reporting burglary to 101 mainly received a 'Priority' response, however, calls to 999 were more likely to receive a 'Priority' response between 5am and 8pm when the response shifted to 'Immediate'. F1 call data reveals that reports of burglary are more likely to be received between 8am and 9am. Coupe and Blake (2006) found that night-time burglaries are more likely to involve owner-occupied houses as opposed to daytime burglaries where empty homes tend to be targeted. The fact that most night-time burglaries occur when the occupants are in the house (Winchester and Jackson, 1982) could explain the possibility that 'Immediate' response was given to calls received between midnight and 4am as the

intruder may have been disturbed at the scene. This would be similar to calls to 999 during these times. It would be expected that calls to 101 would not be considered an emergency by the caller explaining the 'Priority' response. CHs decision-making will be influenced by whether the burglary is in progress or whether it is being reported after the event (Home Office, 2005).

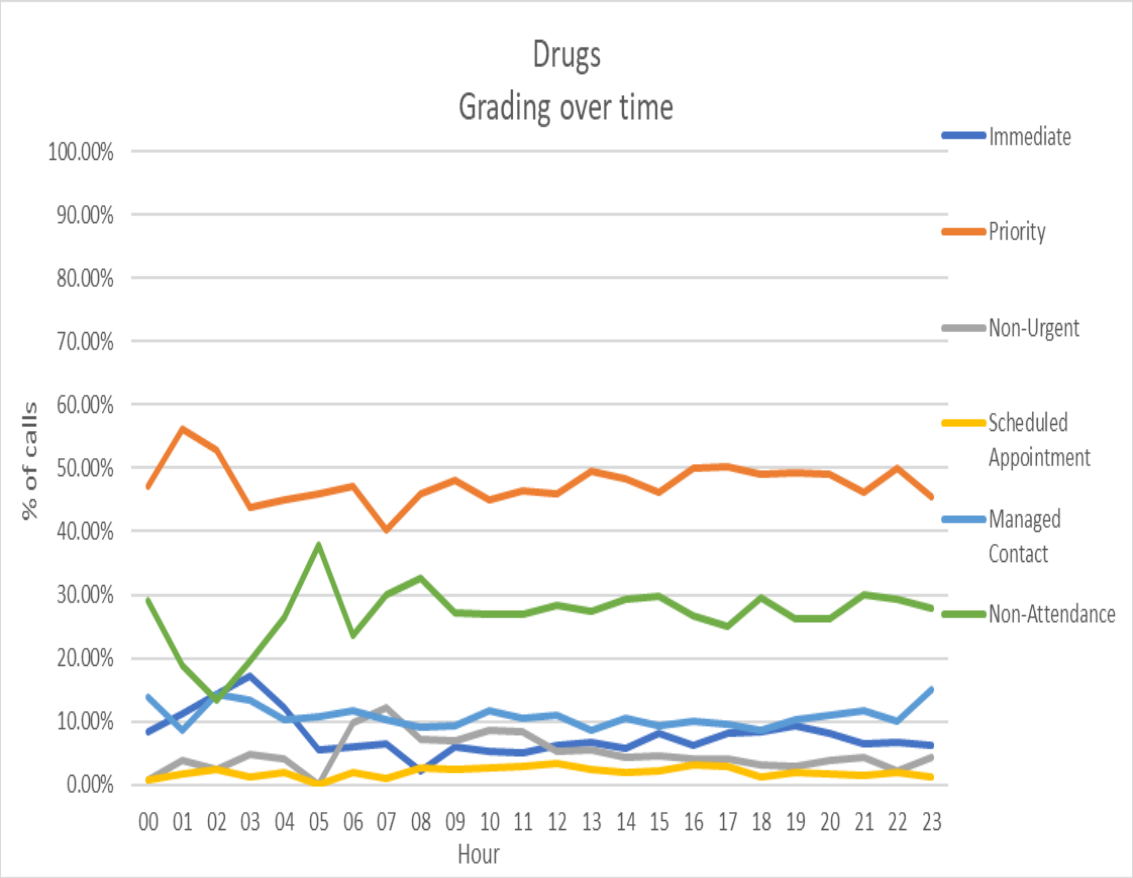
Figure 5.10: Criminal Damage and Modal Grading Over Time



There are clear differences in responses to Criminal Damage dependent on the time incidents are reported. The most common (modal) incident grade for calls reporting criminal damage between 5pm and 5am was an 'Immediate' response, shifting to 'Priority' between 6am and 4pm, however there are variations in other grades throughout the day highlighting CHs discretion. Calls reporting Criminal Damage to 101 mainly received a 'Priority' response (43%) with an 'Immediate' response (21%) more likely between midnight and 2am, however there was little consistency in incident grades across time with other grades accounting for 36% of all responses demonstrating the CHs discretion. In contrast, although calls to 999 largely received an 'Immediate' response (59%) a 'Priority' response (30%) was widely used. F1 call data shows that

criminal damage is more likely to be reported in the late evening and early morning, particularly at the weekend. 'Scheduled Appointment' increases between 8am and 5pm with variations across time for both 101 and 999 calls.

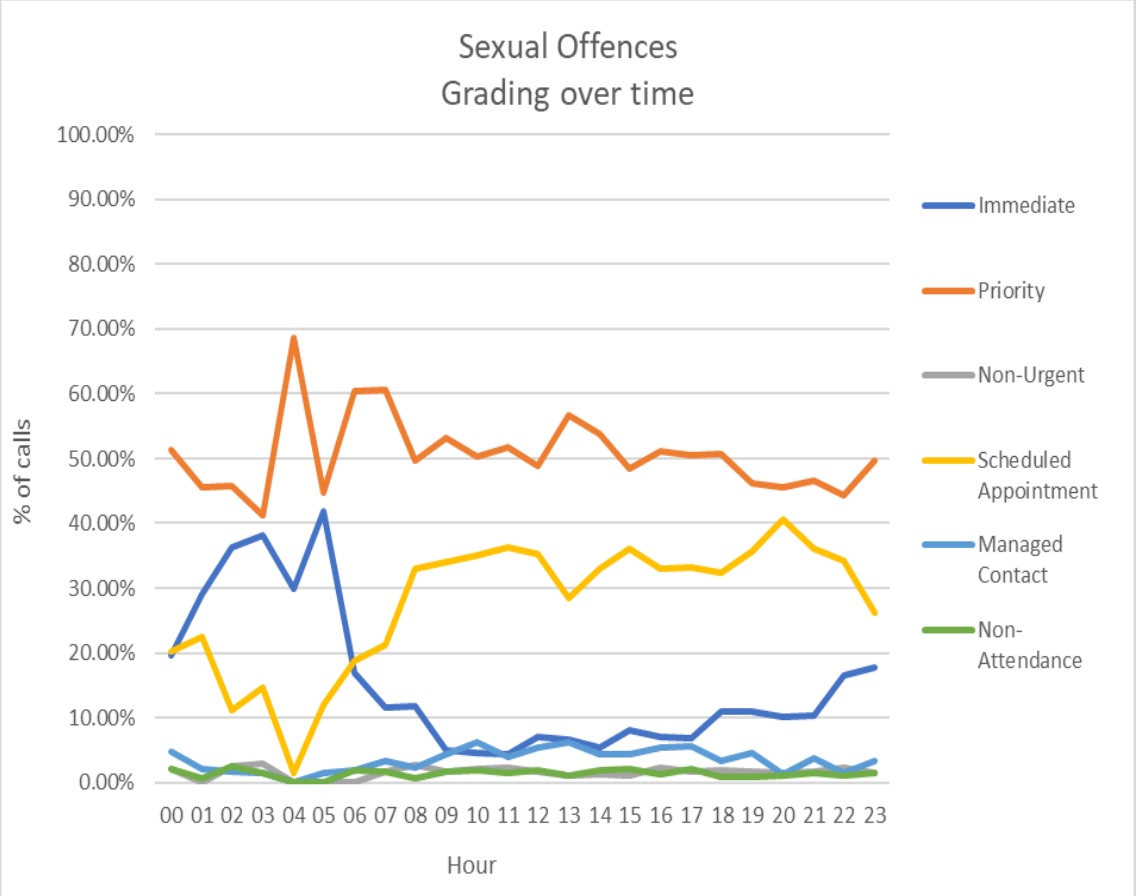
Figure 5.11 Drugs and Modal Grading Over Time



A 'Priority' response is the most common (modal) response grade for calls reporting incidents involving drugs and is consistent across time, however accounts for less than 50% with varied response grades spread across the day. Although 'Priority' and 'Non-Attendance' remains stable for much of the day, both grades fluctuate throughout the early hours of the morning implying the use of discretion during these hours. There were variations in other grades throughout the day with CHs grading the calls reporting drug related incidents as 'Non-Attendance' in over a quarter (28%) of all calls. This reveals differences in how CHs graded calls reporting drug related incidents across time. Similar discrepancies in grading are evident across calls received via 101 and 999, however

‘Non-Attendance’ was less likely to be used for calls reported via 999 where an increase in the use of ‘Immediate’ response was used throughout the day and night.

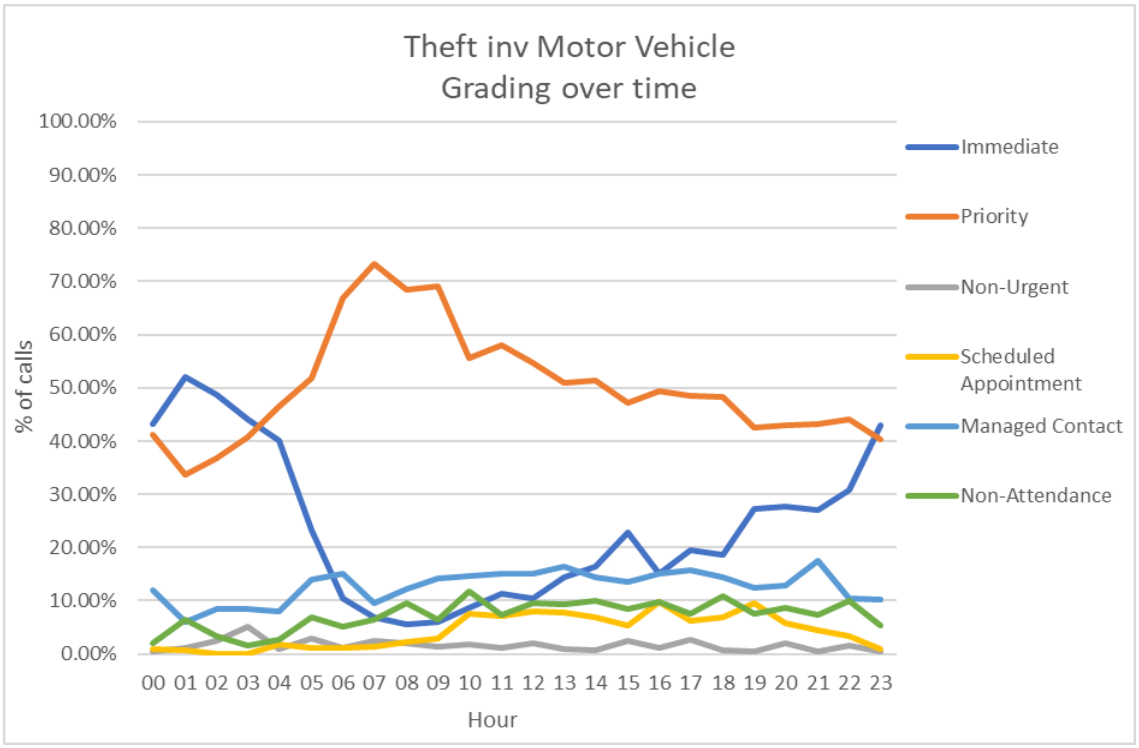
Figure 5.12: Sexual Offences and Modal Grading Over Time



The most common (modal) incident grade of ‘Priority’ for calls reporting incidents involving sexual offences is also consistent across time, however other grading does vary with almost 33% of calls receiving a ‘Scheduled Appointment’. As sexual offences can include rape, sexual assaults, and other sexual offences, it is feasible that reports could vary in their nature and severity resulting in differing responses. However, clear temporal patterns are evident with increases in the use of ‘Immediate’ coupled with decreases in the use of ‘Scheduled Appointment’ in the early hours of the morning. Similar patterns are evident for calls reporting sexual offences via 101 where 38% of calls received a ‘Scheduled Appointment’ and although 101 is designed for non-emergencies, half of calls received a ‘Priority’ response, highlighting differences in CHs grading of calls.

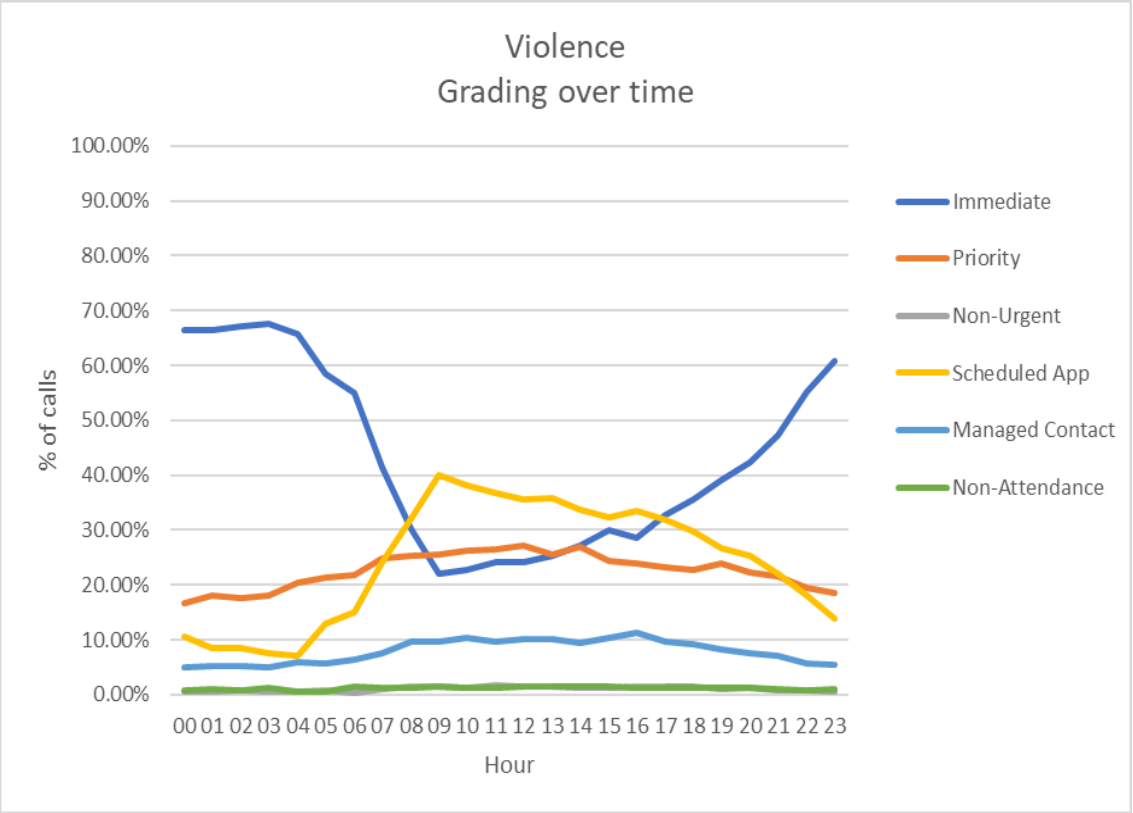
In contrast reports to 999 received either an 'Immediate' (43%) or 'Priority' (45%) response highlighting the urgency of the required response with limited variations across other response grades. Most reports of sexual offences (79%) were received via 101 with calls tending to peak in mid-afternoon (2pm-4pm). It is hypothesised that there may be a greater urgency in the calls received in the early hours of the morning, with the use of an 'Immediate' response increasing between 10pm and 7am.

Figure 5.13: Theft inv Motor Vehicle and Modal Grading Over Time



The most common (modal) incident grade for calls reporting theft involving a motor vehicle was a 'Priority' response between 4am and 10pm, with 'Immediate' most commonly used between 11pm and 3am. It could be assumed that reports receiving an 'Immediate' grade were in response to crimes in progress, however further research would be required to ascertain this. Slight variations are evident among other responses over time, which may either reflect the CHs discretion or differences in the severity or immediacy of the incident reported. Similar patterns are evident for reports to 101, however responses vary greatly for reports to 999, with 'Immediate' being the common (modal) grade used between 1pm and 5am with increased variations in the use of 'Managed Contact' and 'Priority' throughout the day and night.

Figure 5.14: Violence and Modal Grading Over Time



There are stark differences in the response grading of reports of incidents involving violence across time. Violence is one of the most serious types of incidents reported to the police, and although the crime sub-group is unknown, it is hypothesised that little variation should be evident in the grading of such incidents. However, whilst callers were more likely to receive an 'Immediate' response between 5pm and 7am, reports of violence between 8am and 4pm were more frequently offered a 'Scheduled Appointment'. There were variations is responses for incidents reported to 101 or 999. Although the most common (modal) incident grade for calls reporting violence to 999 was 'Immediate' (accounting for 70% of 999 calls) variations were evident among other responses over time, which may either reflect the CHs discretion or differences in the severity or immediacy of the incident reported. Response grades also varied greatly for calls reporting violence via 101. 'Scheduled Appointment' was the most common (modal) incident grade with the exception of between midnight and 5am where callers

were more likely to receive an 'Immediate' response, however there were variations across time among other response grades.

It is feasible that the nature and severity of violent incidents reported throughout the day differ from those reported in the evening and early hours of the morning. Temporal patterns of violent crime are linked to the night-time economy and the increase in alcohol consumption, with violent crimes rising throughout the evening (Office for National Statistics, 2015; Lee et al. 2020). Indeed, injuries suffered from alcohol-related violence are normally more serious compared with other violent incidents (Office for National Statistics, 2015). Violence without injury is more likely to occur through the day whereas violence with injury and violence with wounding are more likely to occur in the evening (Office for National Statistics, 2019b). However, as the content of the calls are unknown, further research would be required to determine the grading variations at different times of the day and night.

As discussed, small fluctuations in response grades are expected due to the varying context and perceived urgency of the calls. Consistent grading patterns are evident for calls reporting burglary; however, CHs discretion can also result in slight variations in grading decisions, which are noticeable in the grading of incidents involving Criminal Damage, Drugs, Sexual Offences, Violence, and to a lesser extent Theft involving a Motor Vehicle. Although patterns were identified in response grading over time, a sizeable number of calls received varied responses highlighting disparities in CHs decisions.

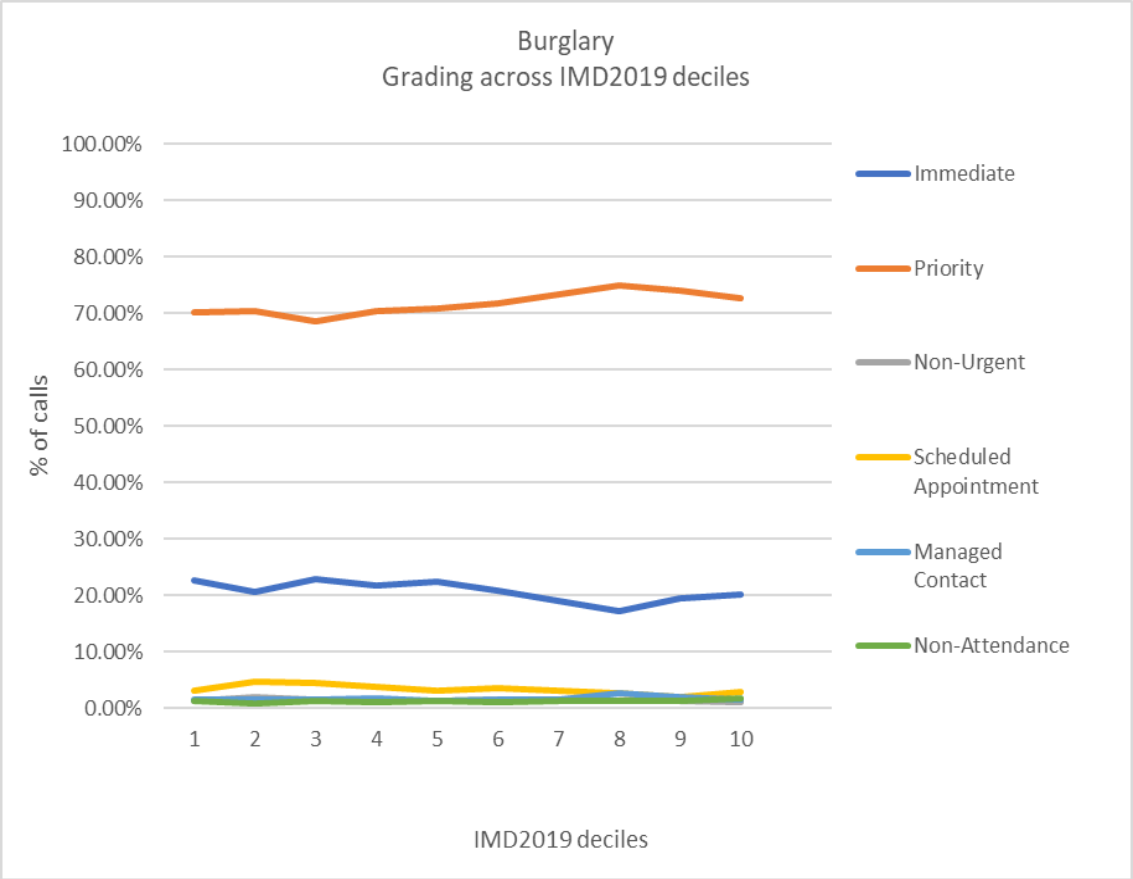
It is hypothesised that patterns across time may be partly related to the specific nature of the incident, the urgency of the call and individual discretionary decision-making by CHs, however there is the possibility that such decision-making may be influenced by force policy. Although there was little variation in grading patterns over the four-year period for Criminal Damage, Sexual Offences and Burglary, grading practices for reports of Violence changed significantly in 2018. Whilst an 'Immediate' response remained similar to previous years, the use of 'Scheduled Appointment' reduced considerably, combined with an increase in 'Managed Contact' and a slight increase in 'Priority' response during the day. F1 has stated that such patterns of grading variations are not

linked to any force policies and that THRIVE, and the CHs interpretation of the call, shapes the response grade (Personal communication with F1). Nevertheless, analysis of F1 call data has found inequity in the distribution of police services over time and that responses to particular calls are partially dependent on the time of day the call is received. The following section will analyse F1 call data at a LSOA level to identify if inequity of police services is also evident across space.

5.19.2 Call Handlers Discretion: Equity in Response Grading Over Space

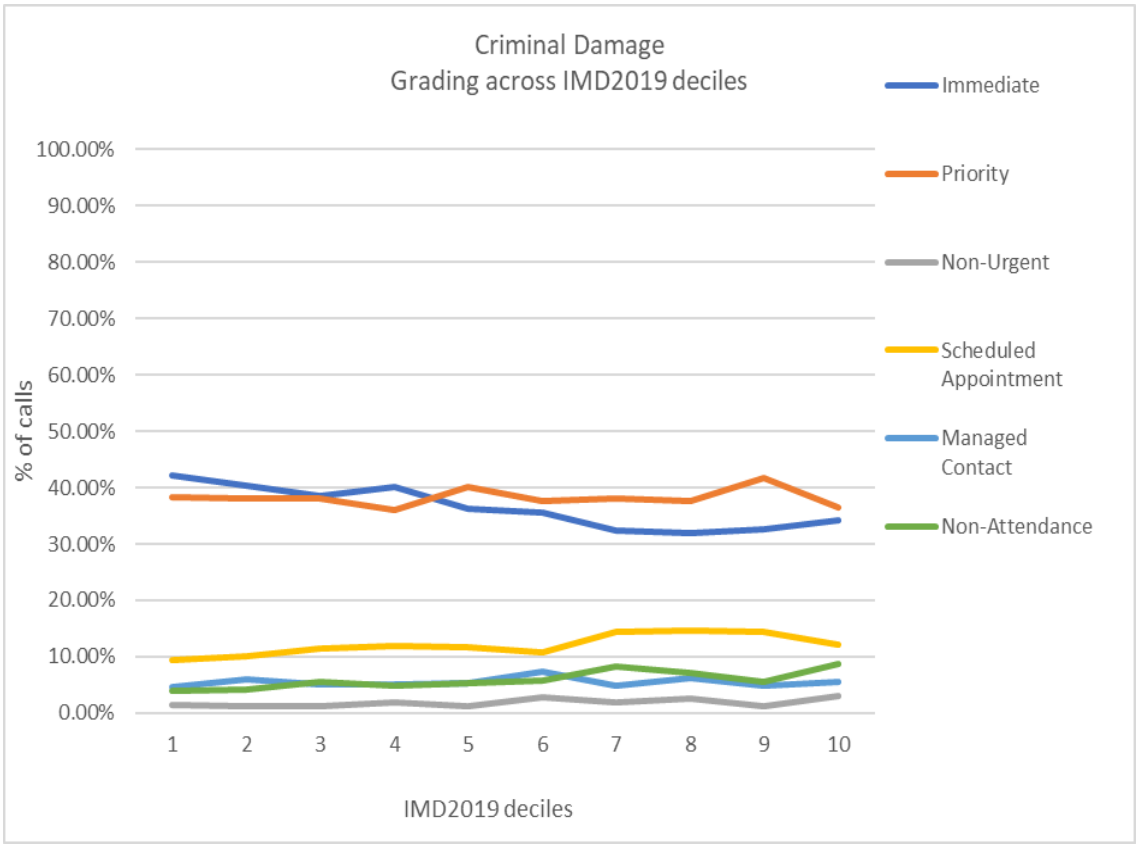
The concept of equity, according to Le Grand (1991), is related to the existence of choice, and equity can be attained if all members of society have the same choices regardless of where they reside (Hay, 1995). This section will measure the spatial equity of the response grading utilising call data at the LSOA level to ascertain if individuals calling to report the same incident type have an equal chance of getting the same response regardless of their geographical location within the F1 boundary. The data is displayed as a percentage of response gradings for each incident type across each decile. LSOAs are divided into 10 deciles according to their deprivation rank, ranging from 1 (most deprived 10% of LSOAs nationally) to 10 (least deprived 10% of LSOAs nationally). Ministry of Housing Communities and Local Government, 2020). IMD2019 was deemed an appropriate tool to use as a metric to establish any inequity of grading and resources across space using the overall IMD deciles (see p124).

Figure 5.15: Burglary and Grading Across Deciles



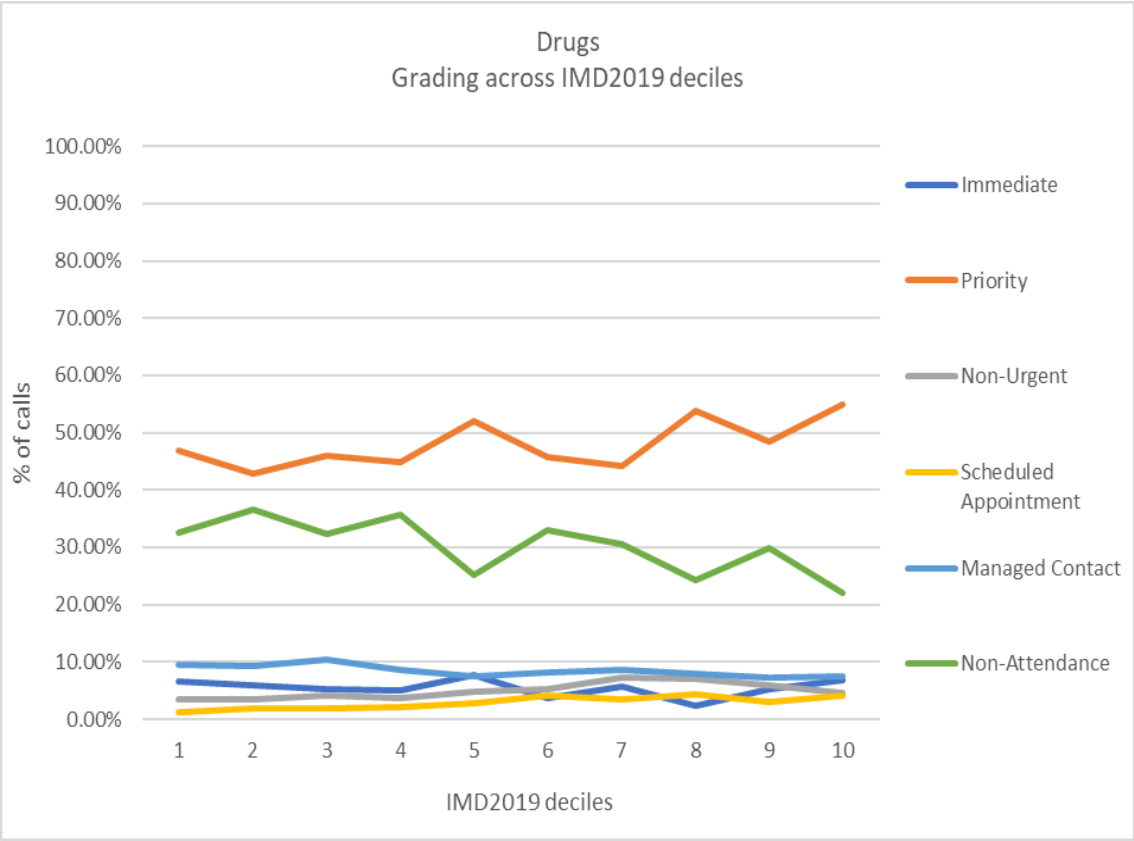
The most common (modal) incident grade for calls reporting a Burglary was a 'Priority' response across all deciles. Similar to over time, all other response grades remained fairly consistent across all areas with small fluctuations. This could be explained by either the CHs discretion or the urgency of the call.

Figure 5.16: Criminal Damage and Grading Across Deciles



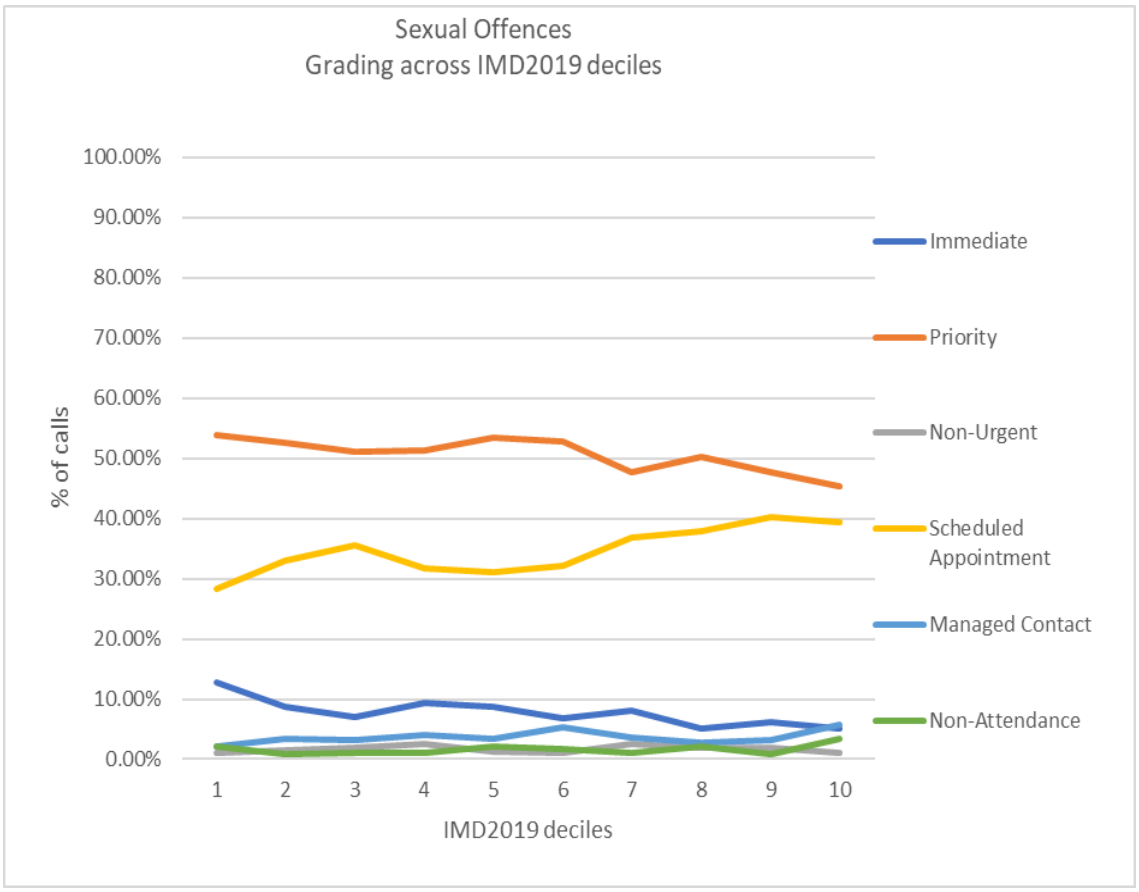
Response grading for reports of Criminal Damage varied across space with varying consistency, however the most common (modal) incident grade in deciles 1-4 was 'Immediate'. Residents in less deprived areas (deciles 5-10) however were more likely to receive a 'Priortity' response. Residents in deciles 7-10 were also more likely to get receive a 'Scheduled Appointment'. Furthermore, less deprived areas also had a greater chance of not receiving a deployment than residents in more deprived areas, with the chance of a 'Non-Attendance' in decile 10 (8.6%) double that of decile 1 (4%). Further reseach would be required to ascertain whether such decisions are based on force policies, local priorities or CHs discretion.

Figure 5.17: Drugs and Grading Across Deciles



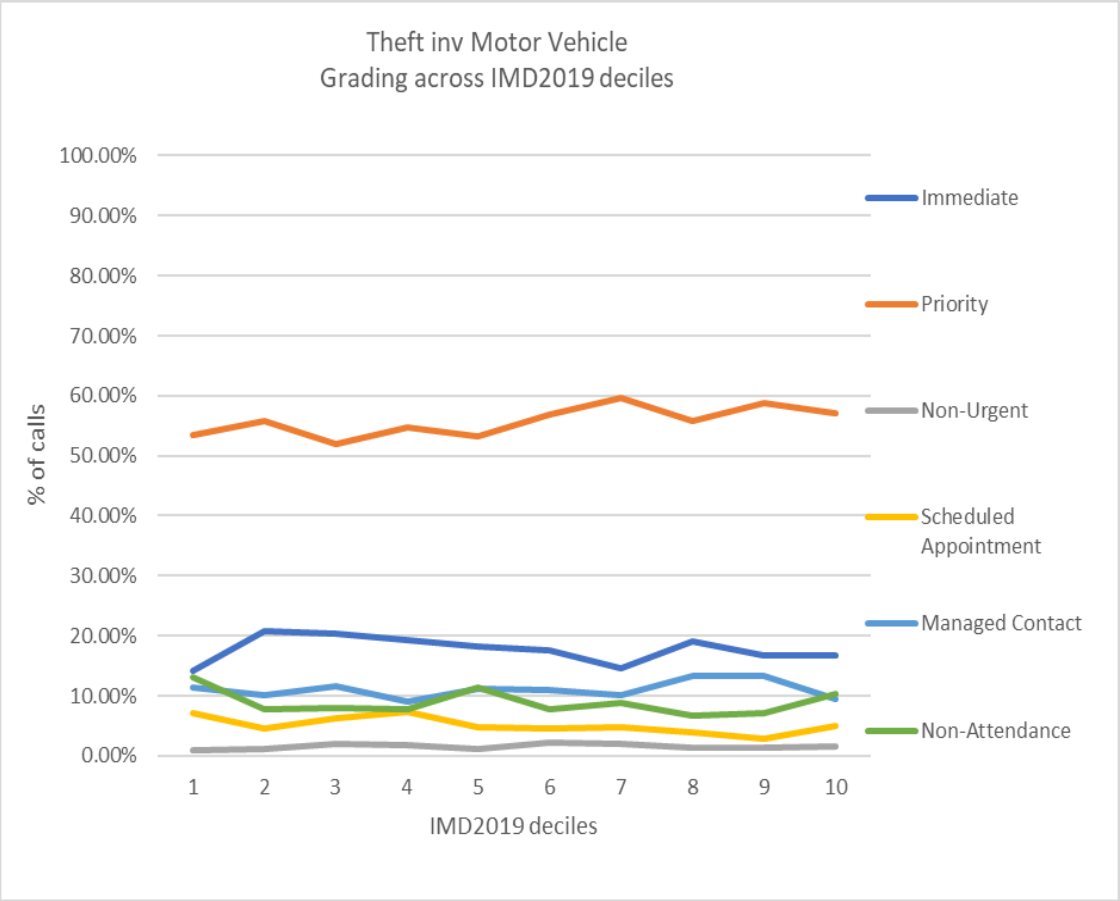
Slight fluctuations were evident across all graded responses for calls reporting incidents involving drugs however the most common (modal) incident grade was a 'Priority' (47%) response across all deciles followed by 'Non-Attendance' (32%). Both grades fluctuate across deciles implying that such discrepancies were either due to CHs discretion or based on the urgency of the calls received. However, the percentage of calls graded as 'Non-Attendance' was higher in more deprived areas (32% in decile 1 and 22% in decile 10).

Figure 5.18: Sexual Offences and Grading Across Deciles



Although variations in response grading were evident in the grading of Sexual Offences, a 'Priority' response was the most common (modal) incident grade utilised across all deciles. However, calls receiving a 'Scheduled Appointment' were higher in less deprived areas (deciles 7-10).

Figure 5.19: Theft inv Motor Vehicle and Grading Across Deciles



Although there were discrepancies in how calls reporting Theft involving Motor Vehicle were graded, 'Priority' was the most common (modal) response across all deciles. The small variations in graded responses across deciles were possibly due to the CHs discretion.

Figure 5.20: Violence and Grading Across Deciles

Responses to reports of Violence were more varied across IMD deciles. Residents in deciles 1-6 were more likely to receive an 'Immediate' response as opposed to residents in deciles 7-10 who were more likely to receive a 'Scheduled Appointment'. Areas with higher levels of deprivation are disproportionately impacted by violent crime (Lightowlers, Pina-Sánchez and McLaughlin, 2021) and adults residing in more deprived areas are more likely to be victims of violent crime (ONS, 2019b). However, this does not explain the disproportionate use (as a percentage of responses over deciles) of 'Immediate' responses to areas of deprivation. It is possible that more serious violent offences were committed in deciles 1-6, however there was little variation in the percentage of violent incidents (average of 30%) being recorded as a crime across all deciles.

Although discrepancies are evident in how calls were graded there appears to be a degree of consistency across deciles in the most common (modal) of responses reporting Burglary and Theft inv Motor Vehicle, with small variations in the prioritisation of calls across deciles suggesting a level of equitable response regardless of geographic location. The modest differences in gradings could be attributed to CHs discretion or differing levels of severity in the calls for service. However, analysis has identified clear variations in patterns in grading practices in relation to calls reporting Drugs, Violence, Sexual Offences and Criminal Damage across space. This may partly be related to the urgency of the call and individual discretionary decision-making by CHs, however further research would be required to ascertain the reasons behind the discrepancies in responses based on the geographic area of the incidents.

Like previous studies (Scott, 1981; Waddington, 1993; Walley and Adams, 2019) this research has identified issues around the consistency of grading calls for service, with such disparities potentially involving the exercise of discretion (Gelsthorpe and Padfield, 2012). Charman and Williams (2021) argued that police discretion appears to enable the inequitable distribution of police resources to victims of crime. This study has found that CHs discretion has aided the inequitable distribution of police resources with a lack of consistency in grading of potentially similar incidents across space. As previously stated, there is a threat to police legitimacy if the public believe that the police service is acting in an unfair or unjust manner (Sunshine and Tyler, 2003). Therefore, although the equity analysis conducted has the potential to inform police resource decision-making (Lucy, Gilbert and Birkhead, 1977), forces should consider equity and fairness in the distribution of their resources.

Summary of Call Data Analysis

To address RQ1, RQ2. RQ3 and RQ7, this chapter has provided detailed analysis of F1 incident data. There is a general lack of understanding about police demand using police call data due to a lack of recent studies. This study utilised a large and complex data set and descriptive analysis provided a greater understanding of the data (Murphy, 2022) which has the potential to determine appropriate advanced statistical tests in future studies (May, 2017). Complex statistical analysis can be problematic

when conveying findings to stakeholders (Murphy, 2022) and as analysis on F1 call data was intended to, not only answer the research questions but, to help inform policy decision-making within the police service using descriptive statistics were an important way to communicate findings effectively with policy makers outside of academia (ibid). This study differed from the previous demand studies discussed in Chapter 2, by using a standardised list of nationally agreed categories and sub-categories (NPIA, 2011). This standardised measure should produce a clearer picture of the role of police and the extent of calls for service which are crime-related while allowing the study to be replicable.

Similar to previous research (see Chapter 2) the findings emphasise the social role of policing which takes up a considerable amount of the police workload, with calls reporting PSW incidents accounting for almost half (46.8%) of F1 demand and calls involving MH concerns accounting for 4.3% of all calls for service. These findings (addressing RQ1 and RQ3) highlight that the role of the police hasn't changed significantly since the early studies discussed in Chapter 2 and stimulate debate around the future of the police mandate and the role of other services in dealing with MH and vulnerability concerns. The findings, however, differ from Kane, Cattell, and Wire (2021) and Langton et al. (2021) who identified that a larger proportion of calls (7.8% and 10% of incidents) were MH related. Whilst Langton et al. (2021) believe that MH related calls are underestimated, Kane, Cattell, and Wire (2021) found no evidence of this. However, there are limitations in the methods used by both studies to identify MH incidents. The study by Kane, Cattell and Wire, (2021) was dependent on forces retrospectively providing MH incidents based on the new NPCC definition of MH incidents (see Chapter 2) and the use of text mining algorithms to identify MH incidents by Langton et al. (2021) has the potential to over-record incidents (Kane, Cattell and Wire, 2021). There is a great deal of uncertainty about the accuracy of estimates of MH related calls, however forces are being asked to use the new definition for recording MH incidents (NPCC, 2020) which has the potential to lead to a greater understanding of MH related demand.

Similar to reports by the College of Policing (2015) and Institute for Government, (2020) there has been a national increase in complex crimes such as Violence and Sexual Offences which require more police resources, increasing demand. However similar to previous studies (see Chapter 2) the majority (84%) of F1 reactive demand comprises non-criminal incidents, utilising much of their resources which is comparable with other forces in England and Wales (College of Policing, 2015). Similar to other studies (see Chapter 2), a minority (15.6%) of calls for service result in a crime being recorded. These findings should help contribute to the ongoing debate by providing a fresh account of both the demands placed upon police forces and the current role of the police in England and Wales (RQ1 and RQ3).

Consistent across England and Wales, there has been a shift from 101 to 999 to report incidents, however there are early signs that the volume of incidents being reported on the 'single online home' is growing (HMICFRS, 2020a) and reducing demand on the 101 number. Temporal analysis (including incidents with a MH qualifier) demonstrated clear temporal patterns in the days, hours, and months incidents are reported which can help forces recognise future demands and help inform the deployment of resources (RQ1 and RQ3). Peak time for calls to police for support with MH related incidents was toward the end of the working day and midweek which is consistent with analysis by HMICFRS (2018a) and previous studies (Lee, 2006; Vaughan et al. 2018a). It is hypothesised that this is due to the inaccessibility to GP surgeries and MH services during these times. These findings can help inform both future MH related demand and future discussions on what the policing mandate should be.

To establish any variations in how CHs deal with incidents, the grading of calls for service was also examined (RQ2 and RQ7). Similar to Walley and Adams (2019), the use of telephone resolution (without the need for deployment) was identified as a demand management practice used in particular with calls reporting certain crimes (RQ2). The chapter concluded with a discussion of the findings that there is the potential for some disparity in grading across time and space due to CHs discretion, which may facilitate the inequitable distribution of police resources, (RQ2 and RQ7). This is similar to Charman and Williams (2021) who argued that police discretion results in the unfair and

inequitable distribution of police resources to victims of crime. However, further research would be required using more granular data to identify the level of urgency in calls reporting similar types of incidents. An observational study may be beneficial, as would studies using recorded calls or details provided on the incident log. This would provide additional knowledge of the extent that discretion and/or the urgency of calls influence the CHs grading of similar types of incidents.

While this analysis is helpful in identifying demand and informing demand management practices, it does not identify the resources utilised. This can vary between incident types and therefore the following chapter will provide further analysis of F1 incident data to identify resource intensive incidents. It will also present findings from geospatial analysis of the resource data to establish whether there is a link between socio-economic factors and the deployment of resources. Further analysis will be conducted on the resource data to explore further issues relating to equity in the distribution of resources.

Chapter 6: Analysis of Resources

6.1 Introduction

To further understand the reactive demand placed on police forces across England and Wales this chapter will present findings from an analysis of F1 resource data[19][20]. To ascertain the incident types that are resource intensive, analysis was conducted on F1 resource data broken down by incident types and sub-type. Having an insight into resource intensive incidents can help inform the allocation of resources and identify any increase in resources required for specific incident types. It also has the potential to increase the awareness of the level of specialist resources required for specific incidents such as Armed Response Vehicles (ARV's). Resources differ dependent on the type of incident, however examples of what constitute one resource are a response officer or a response car (see Table 6.5).

The chapter then presents geospatial analysis of the resource data, combined with Indices of Multiple Deprivation (IMD) data, to establish whether there is a link between socio-economic factors and the deployment of resources. The overall IMD2019 deciles are also used (see p124) to assess the distribution of crimes across areas of deprivation which will allow forces to target resources to specific geographic areas.

Discussed in Chapter 5, the public expect the police to be effective at carrying out their function, however another concern is whether these services are equitably distributed (Eck and Rosenbaum, 1994). To judge equity, this chapter concludes with an analysis of the distribution of resources across LSOAs and IMD2019 deciles, after the response grade has been established, to ascertain if police resources are equitably distributed across space and whether citizens are treated in a fair manner (ibid) regardless of their geographic location.

Using F1 resource data, this chapter will address the following research questions:

[19] 2017 and 2018 only – see Appendix 4

[20] F1 were unable to provide the time taken for each officer to deal with specific incidents or the associated costs to allow for cost of resources analysis.

- RQ4. Which incident types are resource intensive?
- RQ5. Is there a link between socio-economic factors and where resources are deployed to?
- RQ6. Are resources equitably distributed across LSOAs and IMD2019 deciles?

6.2.1 Resources

As the resources used are based on the initial call[21], opening codes were used in this section. The resources detailed are based only on the resources deployed after the initial call and do not include any additional resources used as the incidents progressed. Descriptive statistics, providing an overview of measures of central tendency, measures of dispersion and the total resources used by incident sub-types[22], highlighted variability in several incident sub-types. The Standard Deviation (SD) and range shown in Tables 6.1 and 6.2 summarises the amount of variation in the distribution of values (Bryman, 2012).

[21] Additional resources may be allocated as the incident progresses and more information is gathered which may result in a different closing code. As this level of information was not provided the analysis was based on the opening code.
[22] Only sub-types with more than 1000 resources used over the period were included. The opening codes for Transport, Admin and ASB were not broken down to sub-types and were therefore not included.

Table 6.1 Measures of Central Tendency and Measures of Dispersion of Resources Used- F1 Incident Type 2017-2018

Incident Category	Number of incidents	Mean Resources used	Median Resources used	SD Resources used	Range of Resources used	Sum of Resources used
Admin	7,229	2.63	2	2.616	1-76	19,017
ASB	22,135	1.77	1	2.264	1-270	39,141
Crime	64,398	2.79	2	2.701	1-192	179,992
PSW	92,198	2.75	2	2.617	1-146	253,712
Transport	20,770	2.20	2	2.418	1-58	45,796

Table 6.2 Measures of Central Tendency and Measures of Dispersion of Resources Used – F1 Incident Sub-Type 2017-2018

Incident Category		n	Mean	Median	SD	Range	Sum of Resources
Crime – Sub-Category	Burglary	8,701	3	2	2.460	1-29	26,926
	Criminal Damage	3,337	2	2	3.947	1-192	8,201
	Drugs	1,826	2	1	1.736	1-27	3,256
	Firearms Crime	336	4	2	4.933	1-35	1,406
	Fraud	950	1	1	.899	1-10	1,365
	Other Theft	5,161	2	2	1.673	1-20	11,331
	Robbery	848	4	3	4.604	1-50	3,621
	Sexual Offence	2,820	3	1	2.628	1-31	7,421
	Theft inv. Motor Vehicle	1,072	3	2	2.669	1-21	2,998
	Violence	38,884	3	2	2.672	1-75	112,352
PSW – Sub-Category	Abandoned Call	6,863	2	2	1.799	1-46	16,179

	Absconder/ AWOL/Wanted Persons/Police and Court Orders/Bail	4,039	3	2	2.415	1-46	11,014
	Alarm	4,083	2	2	1.854	1-31	9,608
	Animal/Wildlife	1,537	2	1	1.300	1-18	2,616
	Concern for Safety/Collapse/Illness/Injury	21,262	3	2	3.228	1-16	65,794
	Domestic Incident	23,549	3	2	2.059	1-61	64219
	Firearms	534	3	2	3.414	1-26	1,729
	Missing No Apparent Risk	1,194	3	2	2.343	1-32	3,469
	Missing Person	6,635	3	2	3.697	1-72	21,874
	Sudden Death	620	4	3	3.380	1-45	2,460
	Suspicious Incident	21,397	3	2	2.403	1-94	53,582

To detect any outliers, boxplots were used (see Appendix 18). Although outliers can be attributed to errors in the recording of data (McClave and Sincich, 2009), outliers in F1 data represent actual events where it appears that larger than normal amounts of resources were utilised for incidents, and therefore these were not removed from the

dataset. Measures of central tendency and measures of dispersion were therefore deemed inappropriate in identifying resource intensive incidents. Outliers are evident within some incident types and sub-types (see Appendix 18). To accurately assess any extreme values, further in-depth information regarding the distribution of larger than normal amounts of resources would be required. It is hypothesised that such outliers are due to exceptional circumstances relating to unique incidents that required atypical levels of resources. The range for 'ASB', for example is 269, however over the two-year period, one single 'ASB' incident had 270 resources attributed to it. This incident was closed as a 'Protest/Demonstration' explaining the large number of resources. Similarly, the range for 'Admin' is 75, however the single 'Admin' incident with 76 resources closed as 'RTC - Death/Injury'. Such findings can help forces identify the kind of incidents that have the potential to require atypical volumes of police resources.

By breaking the data down further into percentiles (see Tables 6.3 and 6.4) we can calculate the number of resources broken down by 100 equal parts. The 90th percentile will omit the top 10% of data points, providing a calculation of the number of resources attributed to 90% of each incident type and sub-type. This shows that although specific incidents require a higher number of resources, the majority of incident types overall required five or fewer resources per incident (see Table 6.3). Calculating the 90th percentile for incident sub-types identifies that 'Firearms Crime' and 'Robbery', overall, require the greatest amount of resource, with 'Fraud', 'Other Theft', 'Drugs' and 'Animals/Wildlife' requiring the least (see Table 6.4). In order to accurately evaluate exceptional resource intensive incidents, further knowledge of such incidents would be required to ascertain the reasoning behind such decisions.

Table 6.3: Incident Type Percentiles – F1 Resources Used 2017-2018

Percentiles – Resources Used						
		10	**25**	**50**	**75**	**90**
Incident Category	Admin	1	1	1	2	3
	ASB	1	1	2	3	5
	Crime	1	1	2	3	5
	PSW	1	1	2	3	5
	Transport	1	1	2	2	4

Table 6.4: F1 Incident sub-types of resources used - percentiles – 2017-2018

							Percentiles – Resources used				
Incident Category		**n**	**Mean**	**SD**	**Range**	**Sum of Resources**	**10**	**25**	**50**	**75**	**90**
Crime – Sub-Category	Burglary	8,701	3	2.460	28	26,926	1	2	2	4	6
	Criminal Damage	3,337	2	3.947	191	8,201	1	1	2	3	4
	Drugs	1,826	2	1.736	26	3,256	1	1	1	2	3
	Firearms Crime	336	4	4.933	34	1,406	1	1	2	4	11
	Fraud	950	1	.899	9	1,365	1	1	1	2	2
	Other Theft	5,161	2	1.673	19	11,331	1	1	2	2	4
	Robbery	848	4	4.604	49	3,621	1	2	3	5	10
	Sexual Offence	2,820	3	2.628	30	7,421	1	1	2	3	5
	Theft inv. Motor Vehicle	1,072	3	2.669	20	2,998	1	1	2	3	6
	Violence	38,884	3	2.672	74	112,352	1	1	2	4	5
PSW – Sub-Category	Abandoned Call	6,863	2	1.799	45	16,179	1	1	2	3	4
	Absconder/AWOL/Wanted Persons/Police and Court Orders/Bail	4,039	3	2.415	45	11,014	1	1	2	3	5
	Alarm	4,083	2	1.854	30	9,608	1	1	2	3	4
	Animal/Wildlife	1,537	2	1.300	17	2,616	1	1	1	2	3
	Concern for Safety/Collapse/Illness/Injury	21,262	3	3.228	145	65,794	1	2	2	4	6
	Domestic Incident	23,549	3	2.059	60	64,219	1	2	2	3	5
	Firearms	534	3	3.414	25	1,729	1	1	2	3	7
	Missing No Apparent Risk	1,194	3	2.343	31	3,469	1	1	2	4	5
	Missing Person	6,635	3	3.697	71	21,874	1	1	2	4	6
	Sudden Death	620	4	3.380	44	2,460	1	2	3	5	7
	Suspicious Incident	21,397	3	2.403	93	53,582	1	1	2	3	5

A total of 79 resource types were documented (n=537,658 resources) with seven accounting for almost 90% of resources allocated (n=463787) (see Table 6.5). A local policing unit (LPU) officer was the most commonly used resource followed by a response car.

Table 6.5: F1 Resource Type and Opening Code- 2017-2018

Resource Type	Admin (% of Admin Resources)	ASB (% of ASB Resources)	Crime (% of Crime Resources)	PSW (% of PSW Resources)	Transport (% of Transport Resources)	Total Resources used
Local Policing Unit Officer	6,136 (32.3)	9,797 (25.0)	56,406 (31.3)	76,741 (30.3)	10,632 (23.2)	159,712
Response Car	3,476 (18.3)	7,507 (19.2)	49,757 (27.6)	74,385 (29.3)	8,411 (18.4)	143,536
Response Officer	2,084 (10.9)	3,916 (10.0)	24,908 (13.8)	36,518 (14.4)	4,447 (9.7)	71,873
Police Community Support Officer	851 (4.8)	9,694 (24.8)	6,153 (3.4)	10,393 (4.1)	2,733 (5.9)	29,824
Armed Response Vehicle	939 (4.9)	633 (1.6)	6,089 (3.3)	11,006 (4.3)	2,382 (5.2)	21,049
Local Policing Unit Supervision	1,562 (8.2)	898 (2.3)	6,956 (3.9)	9,614 (3.8)	895 (1.9)	19,925
Road Policing Unit Car	1,099 (5.8)	309 (0.8)	2,303 (1.3)	3,969 (1.6)	10,188 (22.3)	17,868

An Armed Response Vehicle (ARV) was dispatched to less than 4% of all incidents. In more than half (52%) of cases where an ARV was used it related to 'PSW'. Similarly, over half (57%) of resources documented as Roads Policing Unit (RPU) car were linked to incidents initially classified as 'Transport'. Understanding the cost of individual resources could help inform resource planning, and although the Home Office (2018b) research report provides estimates of the police costs in response to specific crimes, it does not provide costs for all types of incidents or indeed specific resource types. F1 were unable to provide the time taken for each officer to deal with specific incidents, therefore it is recommended that to allow for a comprehensive cost of resource analysis, a breakdown of estimated resource costs and measures of the time spent on all incident types would be required. Almost half of the police forces in England and Wales admitted that the data they have to measure the time spent on mental state-related incidents in particular were not very, or not at all, accurate (Kane, Cattell, and Wire, 2021) and therefore improvements are required to inform resource planning.

6.3 Resources and Mental Health Incidents

Incidents involving mental ill-health take up a considerable amount of police resources, with officers having to spend a significant amount of time with a person to identify their needs (HMICFRS, 2019a). Although it is unlikely that police cells are used as a place of safety, it is the police service and not the ambulance service in a considerable number of cases who transport the person to either arrange a handover to a suitable agency or wait in Accident and Emergency (A&E) for the person in crisis to be seen (ibid). Forces in Wales found that 12% of calls for service were MH related and assessed that officers spent, on average, three to four hours dealing with each MH incident (HMICFRS, 2018b). The estimated cost of dealing with MH incidents over a 12-month period equated to over £2.5 million of police resource (ibid). However, the Metropolitan Police estimated the costs of dealing with MH incidents was over £32,000,000 a year (Metropolitan Police, 2018).

A recent study by Langton et al. (2021) found that although 10% of incidents (based on one police force) were MH related approximately 20% of police time was spent resolving these incidents, indicating that they use a considerable and disproportionate

number of policing resources. In contrast, Kane, Cattell, and Wire (2021) observed that MH incidents did not represent a disproportionate amount of demand on police time and resources compared to non-MH related incidents. Using F1 resource data, a brief assessment was conducted on both MH and non-MH incidents, based on percentiles of resources used (see Table 6.6)

Table 6.6: Percentiles of F1 Resources Used for Both MH and Non-MH Incidents – 2017-2018

Incident type	**Percentiles- Resources Used**				
	10	25	50	75	90
Mental Health	1	2	3	5	8
Non- Mental Health	1	1	2	3	5

Similar to Langton., et al. (2021), the data here suggests that a greater number of resources are generally required to deal with MH incidents. Although MH incidents accounted for 4.7% of all F1 incidents, they utilised almost 8% of resources. Providing evidence can help support changes and inform decision-making (Tilley and Laycock, 2017). The suggestion that MH incidents use a disproportionate amount of police resources can help inform future research, analysis of data, and improve future resourcing considerations. However, with the introduction of the NPCC (2020) definition of MH incidents (see Chapter 2), further research would be required using current call data to establish the level of resources used to deal with incidents involving MH issues. Identifying the volume of resources attributed to specific incidents can help inform forces of resource intensive incidents and help manage demand, however, it is also important to identify the nature of the resources required for specific incidents.

6.4 Resources and Geospatial Analysis

Call data is usually geocoded which allows spatial analysis to be conducted on police demand, helping identify hotspots where police incidents are occurring, and the degree of police resources used (Langton et al. 2021). Resource data were combined with

IMD2019 data to provide a better understanding of the geographical distribution of the resources used by F1. Assessing resource data with levels of deprivation can identify the distribution of F1 resources deployed to specific areas and provide an evidence base for local policing strategies. This also has the potential to inform future research to compare findings across other force areas to identify any patterns.

To provide a better understanding of where F1 resources are used and to determine patterns in the distribution of resources used across IMD deciles, analysis was conducted in the following sections on F1 resources using IMD2019 data (at a LSOA level). There are [redacted] LSOAs within the F1 geographic boundary, of which [redacted] are among decile 1 (the top 10% most deprived LSOAs in England) and [redacted] are within decile 10 (the 10% least deprived LSOAs in England). ArcMap, the primary application used in ArcGIS, was used to perform a wide range of Geographical Information System (GIS) tasks, such as working with maps, automating geodatabase datasets, and performing analysis. Resource data was imported into ArcMap to explore and visually display the data. The resource and IMD2019 data were also used to further assess the equitable distribution of resources across space. Conducting geospatial analysis to identify demand can help inform the appropriate placement of officers across space.

To identify if the data points for each resource used were clustered, random, or dispersed, ArcMap's 'Average Nearest Neighbor' tool was used to measure the distance between points using Euclidean distance (see Chapter 4). The nearest neighbor ratio of 0.008373 indicates that the pattern displays clustering and given the z score is less than -2.58 (99% confidence level) with a p value of 0, there is a less than 1% likelihood that the clustered pattern could be the result of random chance (ESRI, 2020b).

6.4.1 Geographic Patterns and Concentration of Resources – Optimized Hot Spot Analysis

Whilst ArcMap allows you to display and analyse geographic information, presenting such a large quantity of datapoints (resources = 440,401) can make visual analysis problematic (ESRI, 2018d). Many resources will be deployed to the same area, resulting in numerous points plotted on top of one another, therefore hot spot analysis can be

conducted allowing patterns to be easily identified (ibid). Hot spot analysis was therefore conducted on the resources used for incidents (2017 and 2018) with valid postcodes (n=165,228). Using parameters from features of the input data, the Optimized Hot Spot analysis tool uses the Gi* statistic to create statistically significant high values (hot spots) and low values (cold spots) to produce optimal results. This was used to identify clusters of resources (ESRI, 2018c).

Figure 6.1: Optimized Hot Spot of F1 Resources Used 2017-2018

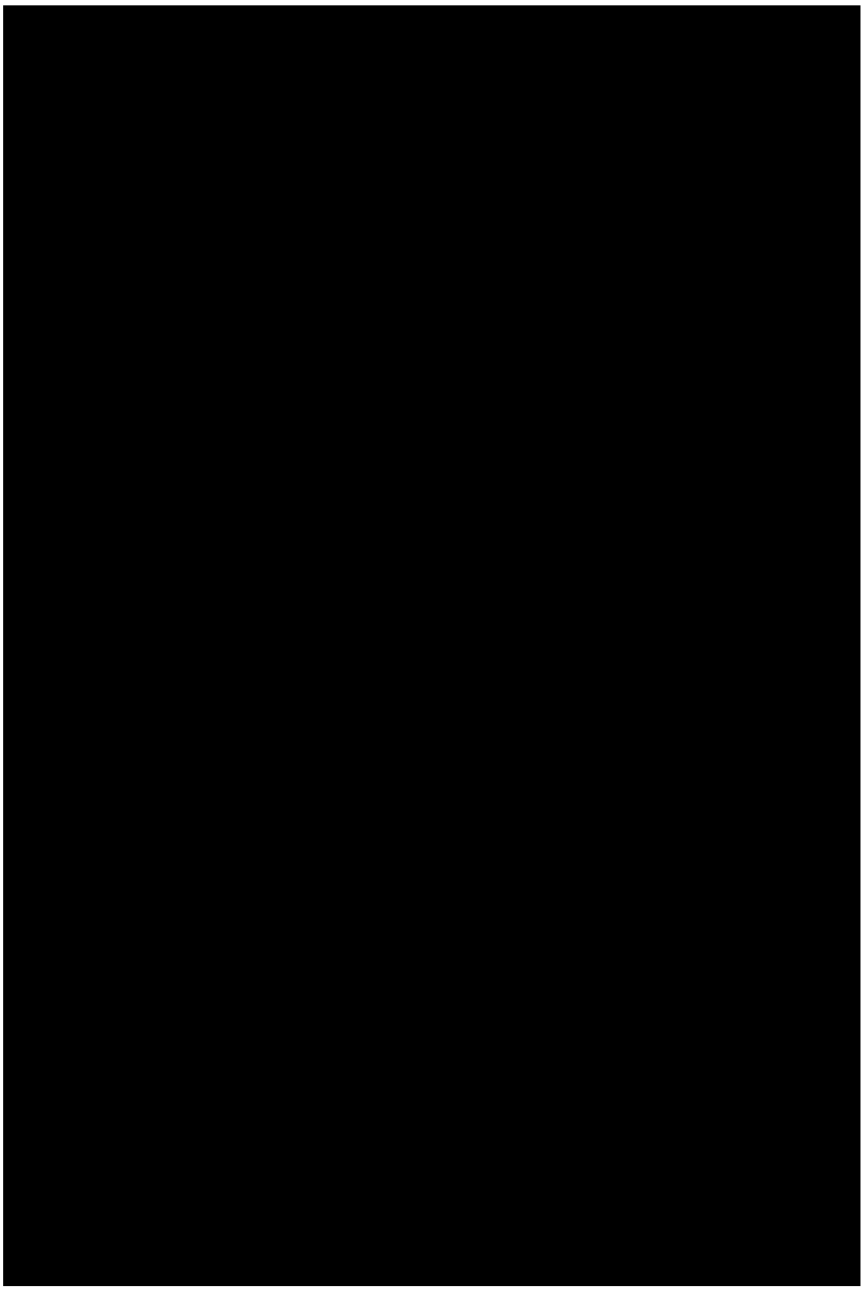


Figure 6.1 shows clusters of resources utilised in the [redacted] areas and to a lesser extent within [redacted] Using the spatial join tool within ArcMap, the IMD2019 and resource data were then joined to identify the percentage of resources used within each decile (see Chapter 4 for a discussion of the IMD2019 and deciles). Using the overall measure of multiple deprivation, Figures 6.2 and 6.3 show the resources used within deciles 1-3 (the most deprived 30% of LSOAs in England) and deciles 8-10 (the least deprived 30% of LSOAs in England).

Figure 6.2: Resources Used Within Overall IMD2019 Deciles 1-3

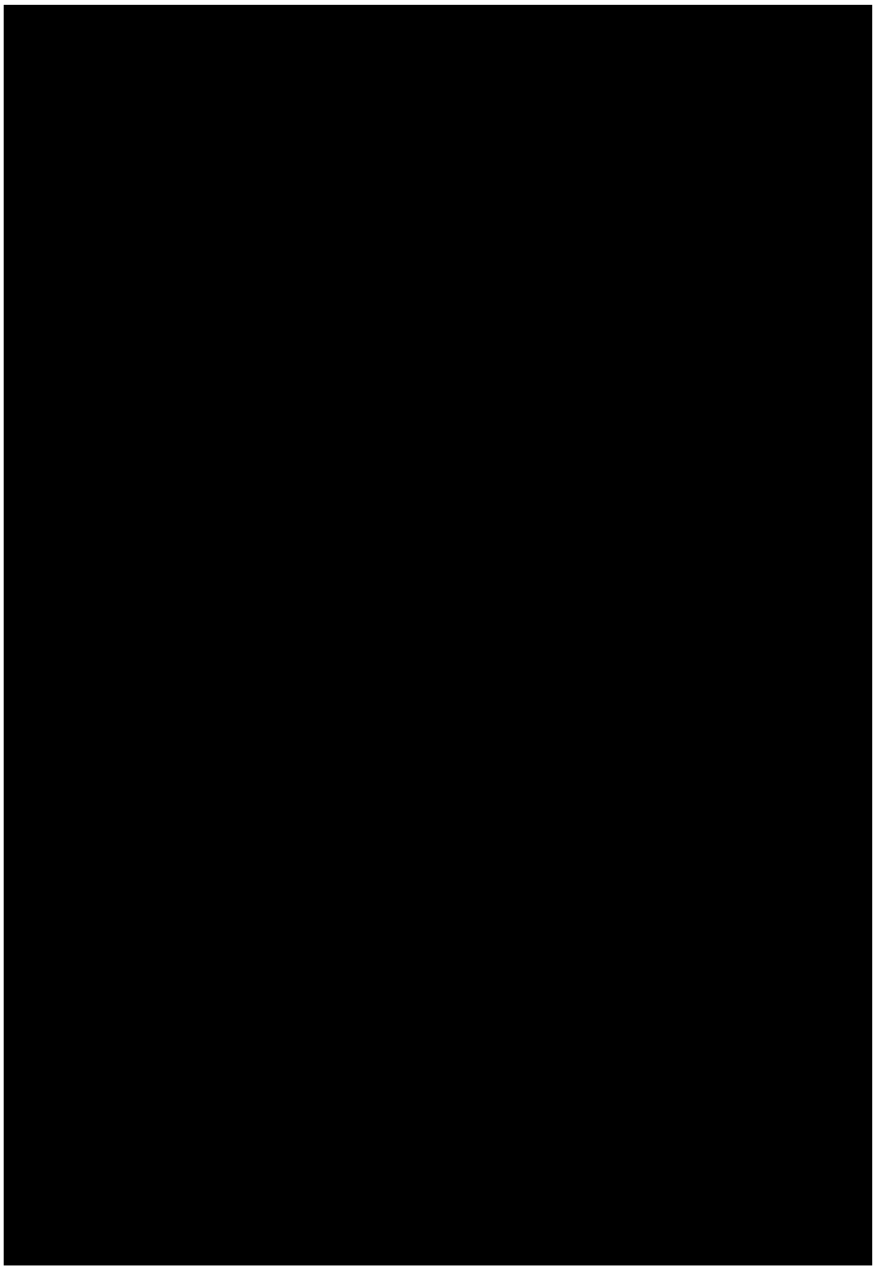
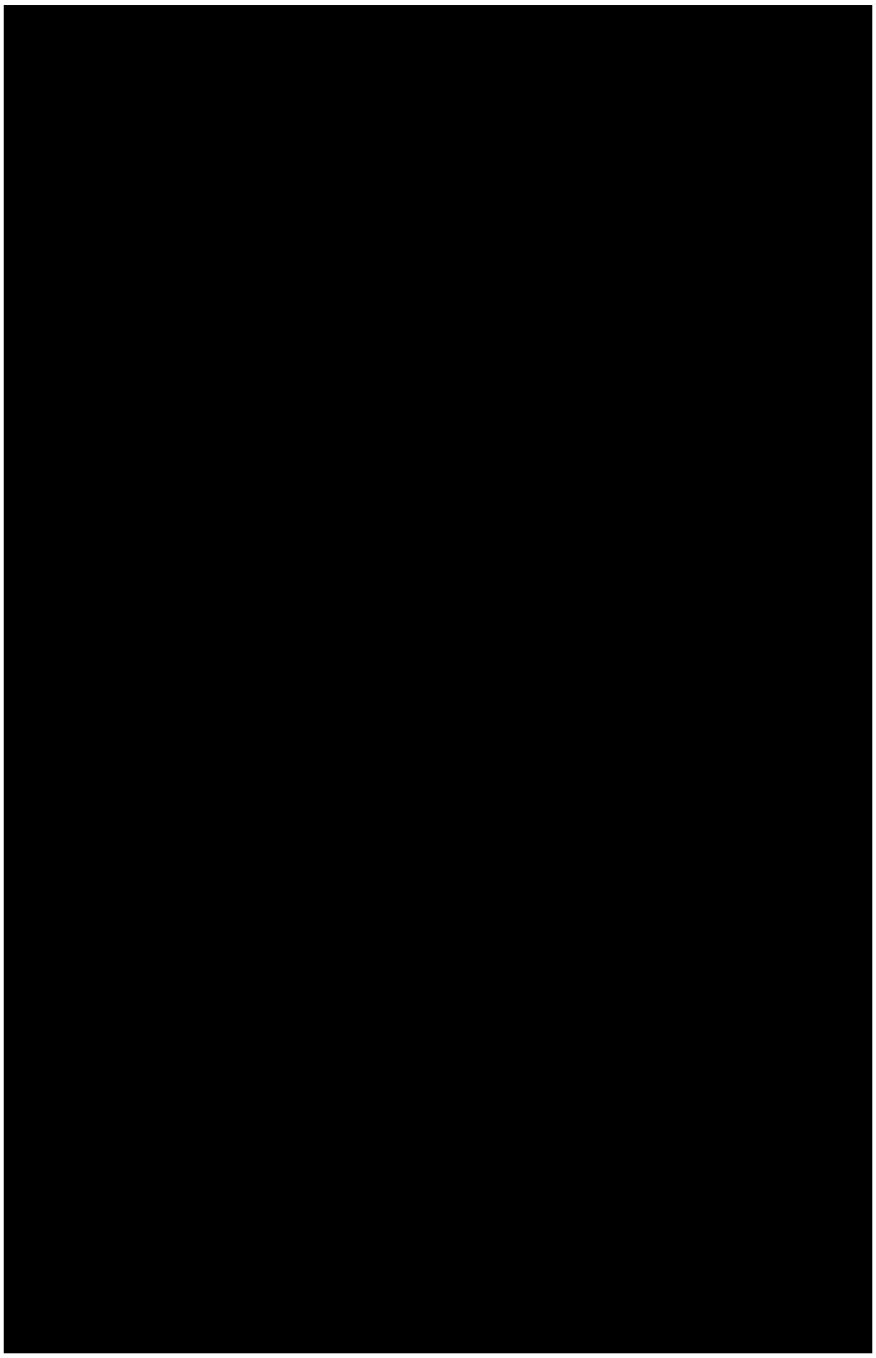


Figure 6.3 Resources Used Within Overall IMD2019 Deciles 8-10

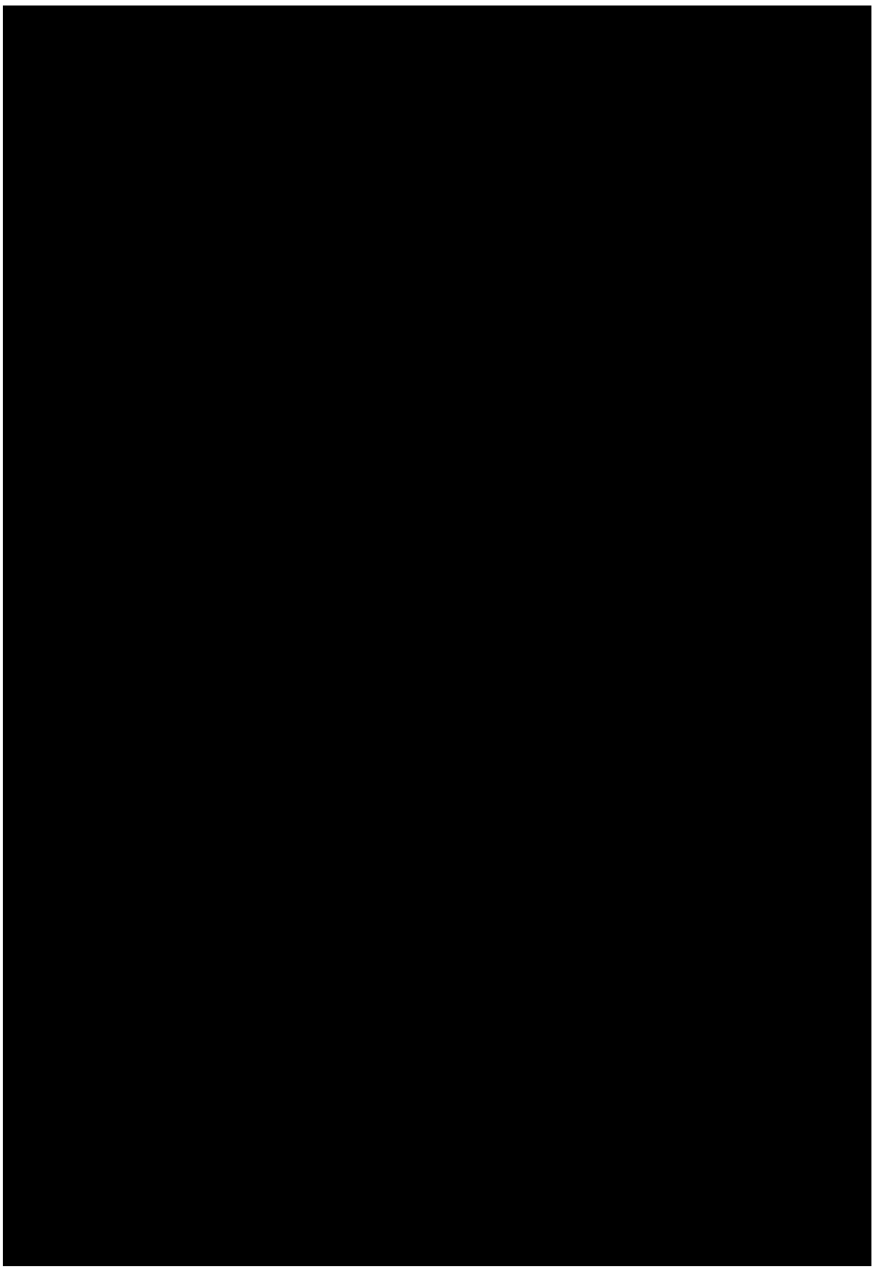


There is a stark difference in resources used within the most and least deprived 30% of LSOAs with the most deprived 30% of LSOAs receiving around half (50.4%, n=222,107) of all resources. In contrast, less than 15% (n=65,024) of resources were deployed to the least deprived 30% of LSOAs. While almost 20% (n=85,093) of resources were utilised in decile 1, only 4% (17,994) were deployed to decile 10. Resources are heavily concentrated in deciles 1-3 and in contrast are widely dispersed among deciles 8-10 (see

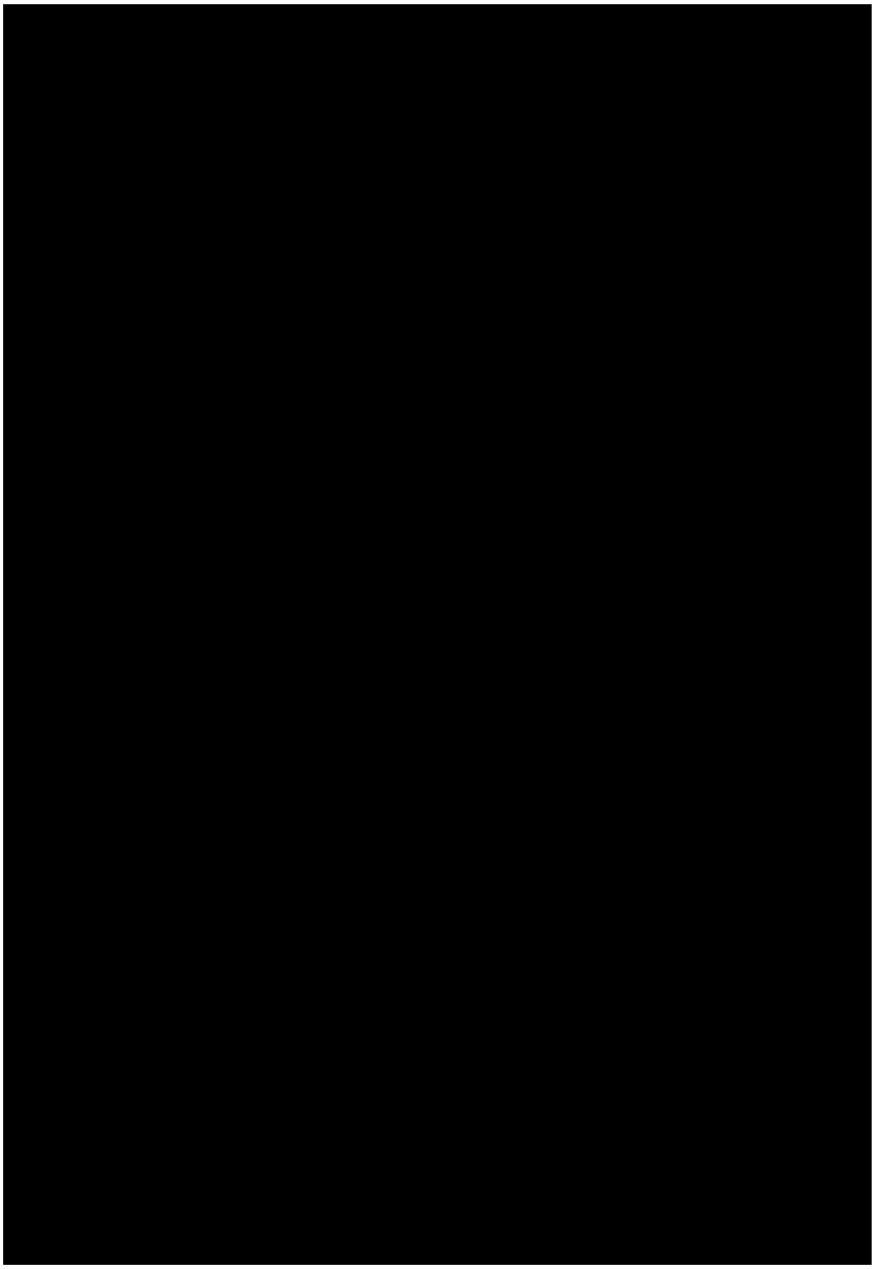
Figures 6.3 and 6.4) (see Chapter 5 for a discussion on inequitable distribution of resources).

The overall IMD2019 deciles within the F1 geographic area are shown in Figure 6.4, with Figure 6.5 displaying the distribution of resources within the overall IMD2019 deciles which shows clusters of resources utilised in [redacted] and, to a lesser extent, [redacted] Using the spatial join tool within ArcMap, the IMD2019 and resource data were then joined to identify the percentage of resources used within each decile.

Figure 6.4: Overall IMD2019 Deciles Within F1 Geographic Area



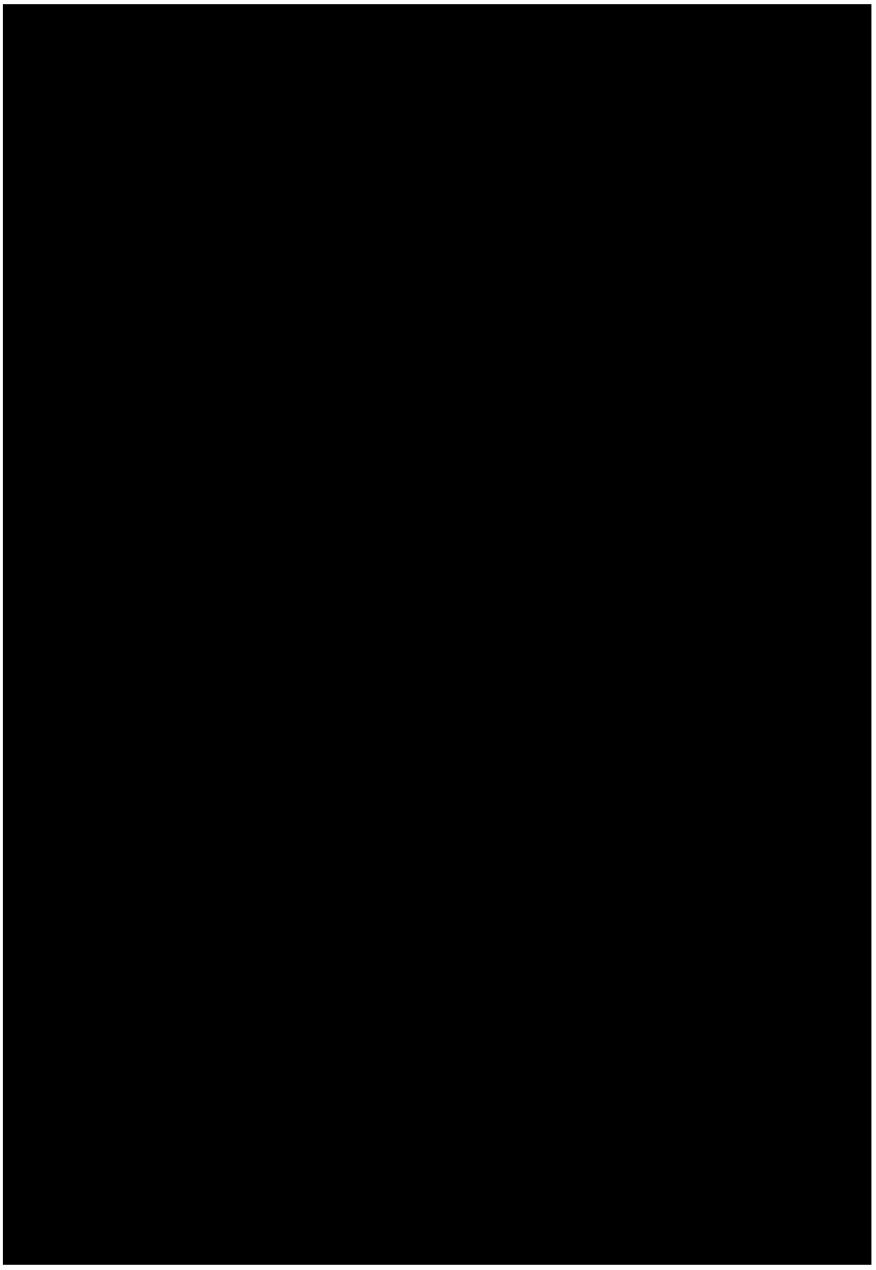
6.5 F1 Resource Hotspots and Overall IMD Deciles



6.5 Crime Data and IMD2019 - The Distribution of Crime Across Areas of Deprivation

The overall IMD2019 deciles were used in this analysis to identify the distribution of crimes across areas of deprivation. As with the resource data, ArcMap's average nearest neighbor tool was used to measure the distance between the crime data points using Euclidean distance. Optimized Hot Spot analysis was conducted in the following section on the crime data. The average neighbor ratio was less than 1, therefore the pattern displays clustering, and the z-score of -632.284985, reveals that there is a less than 1% likelihood that the clustered pattern could be the result of random chance. (ESRI, 2018b).

Figure 6.6: Crime Data and Overall IMD2019 Deciles Within the F1 Boundary

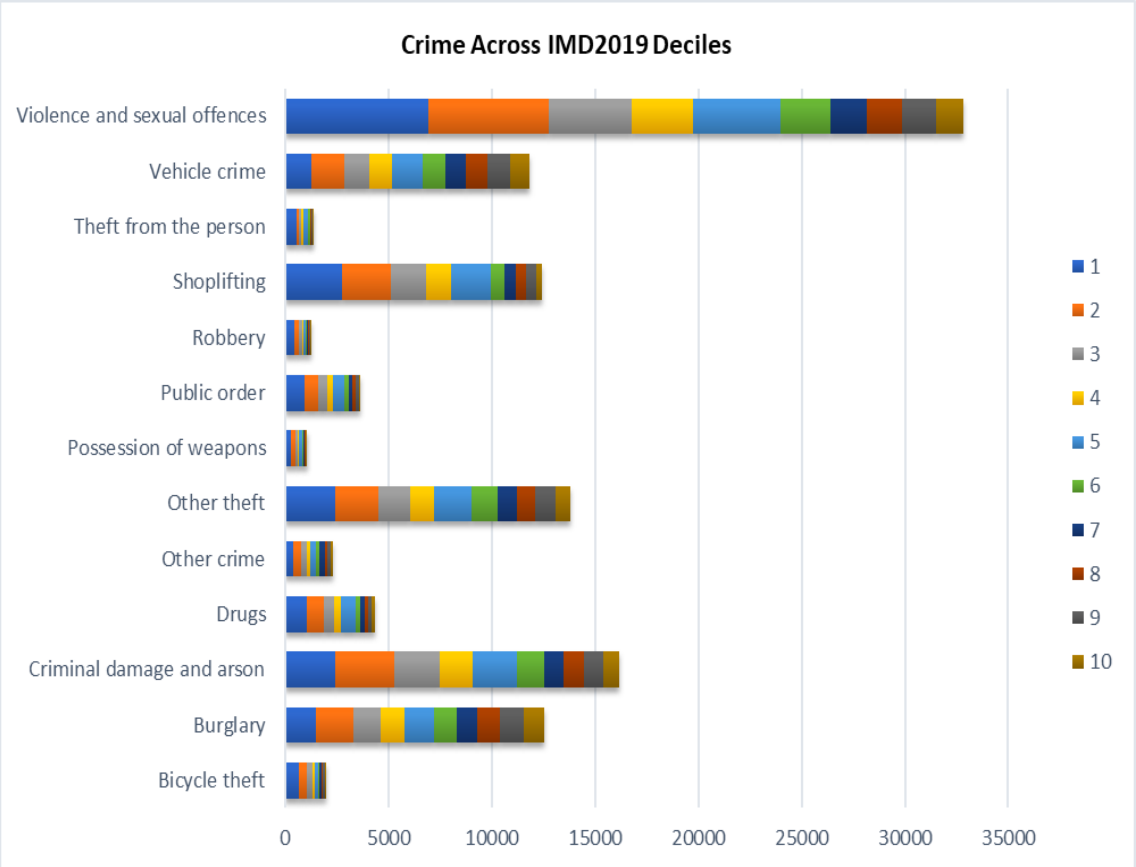


Like the resources used (see Figure 6.2) clusters of crime occur mainly within the most deprived urban areas, with large clusters around [redacted] and [redacted] (see Figure 6.6). Small clusters of crime are also evident in areas north [redacted]. As discussed earlier, around half (50.4%) of resources were used in IMD2019 deciles 1-3 in contrast to 14.8% in deciles 8-10. This could suggest inequity in the deployment of resources; however, it has been identified that almost a half (47.4%) of all crimes were reported within IMD2019 deciles 1-3, with only 16.7% reported within the least deprived 30% of LSOAs (deciles 8-10). This indicates

that resources are deployed to the areas where crime is occurring with almost no evidence of inequity.

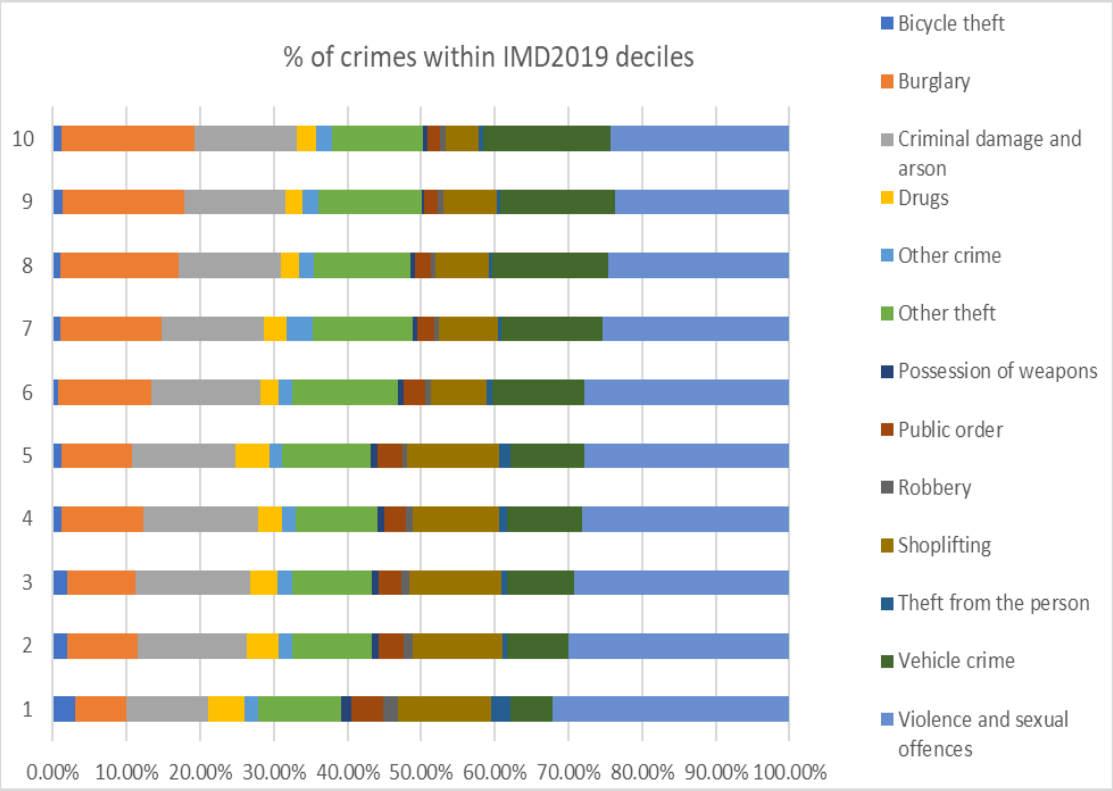
Many criminologists believe that socio-economic conditions are important in determining levels of crime within particular societies (Newburn, 2016). There are variations in the crime types spread across IMD2019 deciles, however, all crime types are more likely to occur in areas with high deprivation (see Figure 6.7). This is similar to previous studies that found a link between crime and deprivation in particular robbery (Hipp and Kane, 2017), property crime, crimes against the person (Trickett, Osborn and Ellingworth 1995) and violent crime (Quick, Li and Brunton-Smith, 2018). The results here show that over 50% (51.1%) of Violence and Sexual Offences is reported in deciles 1-3 with around only 14.2% in deciles 8-10. Similarly, 65% of all 'Robbery' is reported in deciles 1-3 with only 10% in deciles 8-10.

Figure 6.7: Crime Types Across All IMD2019 Deciles



However, looking at crimes occurring across individual deciles shows that although almost a third (29%) of all 'possession of weapons' crimes is reported within decile 1, they account for less than 2% of all crimes committed within the decile (see Figure 6.8). Similarly, bicycle theft is more likely to occur in decile 1, however only accounts for 3% of all crimes committed within the decile, although they are both low volume crimes. Residents in the 10% most deprived LSOAs are five times more likely to be victims of violent and sexual offences and 11 times more likely to be a victim of robbery than residents in the 10% least deprived LSOAs. This is similar to findings from Trust for London (2022) which reported that drugs and violent and sexual offences were more prevalent in the most income-deprived 10% of areas of London. Analysis of crimes within each decile reveals that although violent and sexual offences are more likely to occur in the 30% most deprived LSOAs, they are the most common types of offence to, both, be recorded (28.4% of all recorded crimes and occur within all deciles (see Table 6.8).

Figure 6.8: Crime Types Occurring Within Each IMD2019 Decile



6.6 Equity in the distribution of Resources

All citizens should have equity of access and an equal chance of being provided police resources if required (Lucy, Gilbert and Birkhead, 1977). The fact that resources are distributed unevenly across deciles does not suggest they are distributed inequitably, as they are allocated where they are needed and indeed where it appears there is the demand for them (Boyne, Powell, and Ashworth, 2001). Not all needs are translated into demands and not all demands have the same needs (Worden, 1993). Chapter 5 demonstrated that CHs have some discretion when prioritising calls for service with inequity in response grading identified over time, and to a lesser extent space. However, analysis of the distribution of resources across LSOAs and IMD2019 deciles did not show any significant inequitable distribution of police resources across space following the grading decision (see Table 6.7). Although it has been identified that around half (50.4%) of resources were used in the 30% most deprived areas, the average number of resources deployed to the same incident types were comparable. Although more resources were allocated to deciles 1-3, reports of similar crime types received, on average, similar resources regardless of the geographic location of the crime.

Table 6.7 Incidents and Average Resources Used Across IMD2019 Deciles

	All Incidents	Burglary	Drugs	Criminal Damage	Sexual Offences	Theft inv Motor Vehicle
IMD Decile	**Avg Resource Per Incident**	**Avg Resource Per Incident**	**Avg Resource Per Incident**	**Avg Resource Per Incident**	**Avg Resource Per Incident**	**Avg Resource Per Incident**
1	2.72	3.09	1.97	2.88	2.73	3.34
2	2.67	3.03	1.91	2.63	2.62	2.63
3	2.66	2.99	1.99	2.50	2.76	2.58
4	2.64	3.17	1.85	2.41	2.55	2.65
5	2.60	2.95	1.72	2.26	2.58	2.79
6	2.66	3.11	1.43	2.12	2.78	2.93
7	2.69	3.16	2.16	2.16	2.56	2.69
8	2.64	3.12	1.76	2.40	2.08	2.46
9	2.65	3.01	1.67	2.43	2.30	2.96
10	2.72	3.30	2.23	2.61	2.36	2.67

Summary of Resource Data

This chapter has identified that 'Firearms Crime' and 'Robbery', overall, require the greatest amount of resource, with 'Other Theft', 'Drugs' and 'Animals/Wildlife' requiring the least. Findings, similar to Langton et al. (2021), suggest that MH incidents, which accounted for 4.3% of all incidents, used a disproportionate number of policing resources (8% of all resources). However, in contrast, Kane, Cattell, and Wire (2021) found that MH incidents did not represent a disproportionate amount of demand on police time and resources compared to non-MH related incidents. These findings can help inform future research and enhance future resourcing considerations. Future research using resource data could look at the number of resources used for MH incidents now that forces are being asked to use the new definition for recording MH incidents (NPCC, 2020). Further research could also be conducted on the cost of specific resource types and the length of time officers deal with specific types of incidents. Seven types of resources accounted for almost 90% of

resources allocated with a local policing unit (LPU) officer the most commonly used resource followed by a response car.

Geospatial analysis based on F1 resource data combined with IMD2019 data (at a LSOA level) discovered that resources were disproportionately used within the most deprived 30% of LSOAs (50.4%,) with less than 15% of resources deployed to the least deprived 30% of LSOAs. Similar to Trust for London (2022), findings suggest that violent and sexual offences are more likely to be reported in the 10% most deprived areas. These findings will allow future research and police forces to investigate what factors influence crime rates in areas of high deprivation which can help inform both crime prevention strategies and assist partnership working. Levels of crime across areas of deprivation were also explored discovering that all crime types are more likely to occur in areas with high deprivation. The chapter concluded with a discussion of the equitable distribution of resources across the F1 geographic area which found no evidence of inequity in resources with resources appearing to be deployed to the areas where crime is occurring.

Producing hotspot maps helps to identify concentrations of crimes and can help inform hot spots policing. Hot spots policing has been found to be somewhat beneficial in preventing crimes and disorder in the areas identified (Braga, Papachristos & Hureau, 2012) with little evidence of spatial displacement, particularly in urban areas (Weisburd and Telep, 2014). Taking a hot spot policing approach can therefore help forces reduce their reactive demand. However, using the count of crimes to inform police deployment can be problematic as not all crimes are equal (Sherman, Neyroud and Neyroud, 2016; Ashby, 2018) nor do they require the same number of resources, which can misinform resource allocation (Sherman, Neyroud and Neyroud, 2016). In this study, for example, crimes such as Robbery and crimes involving Firearms used more resources than crimes involving Drugs or Fraud. Several scholars have argued that measuring crime *harm* is a more useful approach to inform the allocation of resources (ibid). Such measures can help inform the level of resources required for specific crimes, with more serious crimes (such as murder) requiring more resources in terms of both reactive and organisational demand (Laufs et al. 2020; Ashby 2018). This

thesis is interested in reactive demand with a focus on the immediate resources used for calls for service rather than other types of demand, however using crime harm measures to analyse the allocation of resources could be explored in future research.

Chapters 8 and 9 provide an in-depth discussion of the findings as well as offering recommendations for future research. The following chapter will provide an in-depth discussion of the survey and interview data.

Chapter 7: Decision-Making in the FCR: Survey and Interview Data

Factors that influence decision-making in the FCR are central to the theoretical aspect of this thesis. CHs set the agenda and act as gatekeepers to police resources (Antunes and Scott, 1981; Scott, 1981; Garner and Johnson, 2006) and play an important role in managing police demand. Like Lum et al. (2020b), the gatekeeper function was illustrated in the analysis of the call data (see Chapter 5) where CHs resolved 19% of all calls and around a quarter (25.3%) of MH related calls without the need to dispatch any resources. Although this gatekeeper function is important in relation to managing demand, it is just one of the key aspects of the CH role which also involves the significant task of interpreting and grading calls (Gillooly, 2020).

CHs must interpret calls, identify risk, threat, and harm as well as any vulnerability before deciding on the best course of action. Dispatchers have to make timely and informed decisions regarding the allocation of resources (Dunnett, Leigh and Jackson, 2018) therefore both CHs and Dispatchers have the potential to influence police demand. Dispatchers are often reliant on the accuracy of the information provided to them by the CH (Simpson, 2020), however they can, in some cases, regrade the call. FCR staff are restricted in their gatekeeping functions and are constrained by several factors (Lum et al. 2020b). The purpose of conducting the survey and interviews was to identify any such factors that may influence decision-making and explore opinions on a variety of current issues facing policing. Such key factors and opinions are detailed in this chapter which will examine pertinent findings from the survey data before discussing the findings which emerged from the interviews.

Previous research has identified several factors that can influence decision-making (see Chapter 3). However, previous approaches to understanding decision-making, although valuable, have not covered the distinctive nature of the FCR where decisions are often made within a difficult organisational and cultural context and in high-pressure environments (Alison, 2011). This thesis seeks to advance decision-making theoretical perspectives and, to this end, builds on the preliminary decision-making model (see Figure 3.5) by presenting an original call handler decision-making model

(CHDMM) (shown in Figure 7.1) which incorporates aspects of existing theories as well as adopting specific contextual and situational factors that may influence decision-making in the FCR identified from the surveys and interviews discussed in this chapter. The surveys and interviews identified and collected relevant information from a generally untapped source to explore and understand the opinions of FCR staff and identify any key contextual and situational factors which may influence the quality of decision-making, something that was not possible with the quantitative data alone.

This chapter addresses the following research questions:

- RQ8. How effective are current decision-making tools used by CHs/Dispatchers in the FCR?
- RQ9. What are the main challenges faced by CHs/Dispatchers when making decisions??
- RQ10. What additional factors influence decision-making in FCRs?

7.1 The Survey

The survey was active between November 2020 and May 2021 during which time the URL was sent and distributed to FCR staff within five UK police forces as well as being posted on the College of Policing Knowledge Hub and shared on a private police social media site. There were 118 responses to the survey in total (ten of which were excluded as they did not fit the criteria of currently working in a FCR) therefore the final sample size was 108. To produce rich empirical data to help answer the research questions, the survey was compiled in three sections beginning with an open question asking respondents to provide their own accounts of the main challenges they face when making decisions within the FCR (see Appendix 19). To measure respondents' opinions on factors that may influence their decision-making, their thoughts on THRIVE as a risk assessment tool, and their views on a variety of current issues facing policing, several Likert scale questions were asked. The survey concluded with four vignettes of fictional calls for service with respondents asked for their interpretation of the 'call'

based on several categories (see Chapter 4 for a further description of the survey and vignettes).

Of the respondents, 66 were female (61%), 41 were male (38%) and one was non-binary (1%). Age ranges, job role and years of experience working in a FCR were varied (see Table 7.1)

Table 7.1: Survey Respondents Demographics

Age	Total	Years of Experience	Total	Gender	Total	Job Role	Total
20-29	18	0-2	28	Male	66	Both CH and Dispatcher	6
30-39	36	3-5	25	Female	41	CH	65
40-49	26	6-8	12	Non-Binary	1	Dispatcher	10
50-59	16	9+	43			Senior CH	4
60-69	12					Supervisor	11
						Team Leader	7
						Other[23]	5

The overall picture which emerges from the surveys is that decision-making is complex, with little consistency among staff, whose interpretation of reported incidents and the appropriate police response varied greatly. The following sections discuss the findings from the survey.

7.1.1 Main Challenges

Making decisions based on the information provided by the caller was the most frequently cited challenge faced by FCR staff (n=26). Respondents, mainly CHs, reported concerns with the accuracy of the information received as well as difficulties trying to assess the situation due to the lack of information provided. In some cases, gaining vital information was problematic due to a lack of cooperation from callers, while in others the emotional state of the caller limited the ability to gain a clear and concise picture of the situation. The complexity in risk assessing calls was further complicated by evolving information which altered the element of risk.

[23] Including Police Officers and Senior Manager

Resource issues was the second most common challenge (n=24) with a lack of available resources to deal with demand a common theme, with reference to both resource issues within the FCR and the availability of resources to deploy to incidents:

> "Staffing levels, competing priorities, and balancing need against demand. The biggest challenge is to be able to identify and differentiate between need and demand and balance the resources accordingly" (Team Leader, Respondent 65).

Time pressures (n=16) and working in a fast-paced environment (n=16) were also mentioned. The pressure, urgency, and speed of having to make decisions were often referred to with the added concern of making the wrong decision:

> "Lack of time, potential for things going wrong and the subsequent impacts they could have on me, the force and most importantly that person making the call" (Supervisor, Respondent 86).

> "Having to explain decision-making process in a high pressure environment where I need to multitask with complex and potentially life and death situations" (Dispatcher, Respondent 108).

However, in many cases there were a combination of challenges faced by staff when making decisions:

> "The urgency of having to make that decision - sometimes with limited or lack of information and the pressure of limited resources" (Both CH and Dispatcher, Respondent 40).

The pressures of making correct grading decisions were also evident (n=12), with some staff highlighting concerns about accurately risk assessing incidents and making the correct decision about which calls to prioritise based on the available information, with

concerns about ‘getting it right’. The survey data also indicated that opinions varied greatly within the FCR causing conflict amongst staff with one Dispatcher suggesting that CHs provide a lack of, or limited, information to allow Dispatchers to make appropriate decisions in around 90% of cases. Conflict was further evident in the comments below:

> “Sometimes not everyone agrees with the decision made. Not everyone is always on the same page” (CH, Respondent 61).

> “I often find my decisions are countermanded or downgraded for reasons of "not enough staff" or someone else saying "It’s not a police matter" or if I’ve told caller what’s going to happen and "someone else" disagrees” (CH, respondent 24).

Other CHs commented on Dispatchers and supervisors disputing their decisions which in some cases led to the downgrading of incidents. A team leader noted they were concerned they would not receive support for their decisions with a senior CH asserting there were too many people involved in the decision-making.

Respondents were then asked their opinions on a range of factors that may influence their decision-making, to evaluate THRIVE as a risk assessment tool, and their views on a variety of current issues facing policing. The following section provides an analysis of the data retrieved.

7.1.2 Likert Scale Analysis

The results indicate that organisational issues are important factors when making decisions. The majority of respondents considered personal accountability (79%), legislation and powers (73%), policies and procedures (67%), the National Decision Model (NDM) (64%), and the National Standard of Incident Recording (NSIR) (51%) to be either very or extremely important considerations when making decisions. Although there was consensus about the general importance of most of the factors above, 20% of respondents (mainly CHs but across all years of experience) ranked the NDM, which is the primary decision-making model used in policing, as either not important or neutral. There was also disparity in the stated importance of the NSIR, which informs how incidents should be accurately and consistently recorded, with almost a quarter of respondents (mainly CHs) ranking the importance either not important or neutral. It was also noted by a few respondents in both the additional information and main challenges sections, that it can be hard keeping up with procedures and policies that change frequently.

Traditional decision-making theories assume that decisions are made in a rational manner with all of the relevant available information shared in an ideal way (Lee and Cummins, 2004). In contrast, the Recognition Primed Decision (RPD) model suggests that decision-makers will use their experience to identify situational cues and patterns allowing them to produce faster decisions (Klein and Crandall, 1996; Klein, 1993), whereas less experienced staff will rely on intuition less frequently. Respondents overwhelmingly (89%) agreed that experience of dealing with calls from the public makes it easier to make decisions; the more FCR experience respondents had, the more likely they were to strongly agree.

It has been argued that the police service is risk averse due to the tendency for the media and public to focus on the outcome of poor decision-making (College of Policing, 2013). In some cases, CHs are taught that being wrong by over-grading is better than being disastrously wrong by under-grading (Gillooly, 2020). Making decisions with elements of risk is linked to blame, fear and internal and external scrutiny with CHs

previously attempting to protect themselves from the consequences of poor decision-making by adhering to the 'just in case' principle (Ekbolm and Heal, 1985). Although the Flanagan report (2008) raised issues regarding risk aversion, staff within FCRs still maintain a risk averse approach to decision-making (Black and Lumsden, 2019). Furthermore, a study by Walley and Adams (2019) identified that although risk aversion still exists within policing, there were clear differences in risk perceptions amongst CHs partly due to their experience of handling calls.

It was therefore expected that a level of risk aversion amongst respondents would be identified. Most respondents (62%) agreed, to some extent, that it was better to be over-cautious when making decisions, with only 20% disagreeing. Less experienced staff (0-2yrs) were generally more risk averse and more likely to agree that it was better to be over-cautious when making decisions than colleagues with more years' experience. It may be that less experienced members of staff are more cautious due to the fear of making a wrong decision and the subsequent consequences. However almost all respondents (94%) acknowledged that they considered the consequences of their decisions. One experienced CH and Dispatcher, with 9+ years' experience, admitted that the thought of 'what if?' was always in the back of their mind and that they were concerned about potential serious consequences if they made the wrong decision.

Although there was little variation by gender, there were variations in responses based on the age, role of respondents and years of experience of respondents. All respondents aged 20-29 agreed that it was better to be over-cautious when making decisions compared to 16.7% of respondents in the 60-69 age group. The majority (92.9%) of respondents with 0-2 years' experience agreed it was better to be over-cautious compared to less than half (46.5% of respondents with 9+ years' experience. Furthermore, the majority (75%) of CHs agreed it was better to be over-cautious when making decisions, compared to 20% of Dispatchers. Senior members of staff (team leaders, supervisors, and senior call handlers) also tended to be over-cautious, with one supervisor acknowledging that:

> "We consider most situations to be a worse-case scenario and look for evidence that suggests it is improving. It is often easier to send on an immediate and negate an offence than treat on its merits and be wrong" (Supervisor, Respondent 32).

This disparity in risk aversion may partly be explained by the differing responsibilities of roles. As the Dispatchers don't speak to the callers they are removed from the emotion of the call. The unenviable task of accurately interpreting calls and the burden of assessing any threat, risk, and harm is the responsibility of the CH as opposed to the Dispatchers, who are mainly concerned with managing the allocation of resources (Lum et al. 2020b) and are guided by the grading decision provided by the CH (Scott, 1981) and are removed from the emotion of the call.

Available resources was the second most common challenge documented by respondents; it is therefore not surprising that 50% of Dispatchers and 75% of CHs ranked this as moderately, very or extremely important when making decisions, with comments from a senior CH and CH below:

> "For us to be able to perform our role effectively we need more staff. The demand in the room far outweighs the numbers we work with in general" (Senior CH, Respondent 63).

> "Resourcing often means that our intended response is not what actually happens…Someone who you would like to be seen within an hour or two can end up waiting for several days because of the sheer demand on the Police" (CH, Respondent 84).

THRIVE is a risk assessment tool used by many FCRs in England and Wales to inform the allocation of resources and assess risk in a consistent manner (see Chapter 3). Risk assessment tools are used by FCR staff to assess the incident and decide upon a suitable response. Findings suggest that, although there was a general consensus (81%) that THRIVE was an important factor when making decisions, most respondents

(87%) considered it to be subjective. Walley and Adams (2019) reported similar findings with some forces agreeing that THRIVE was too subjective and not uniformly applied. Most respondents (62%) agreed, to some extent, that THRIVE was effective at prioritising incidents, however this varied dependent on years of experience. Those with more experience (9+ years) were more likely to disagree than those with less experience (0-2 years) with experienced members of staff commenting:

> "THRIVE can be helpful to new staff that need to frame their decisions, but it is rarely looked at by Dispatchers unless in disagreement with them. i.e., "what were they thinking when they graded this?"" (Dispatcher, Respondent 22).

> "I feel the THRIVE process is pointless…I can't help but feel that those who are told to use THRIVE…should have enough training, knowledge, and common sense to be able to assess threats, harm, risk, and vulnerabilities…without the need for an acronym" (CH, Respondent 11).

> "Dispatchers and officers do not read the THRIVE.THRIVE is written to "cover your back". THRIVE is essentially the decision-making process that should be happening in every operator's head and is good tool to remind people to consider all the points. However, the poor decision makers don't seem to understand Thrive and any wider risk at all even with the prompts" (Senior CH, Respondent 80).

The College of Policing (2020a:9) has adopted the following definition of vulnerability:

A person is vulnerable if, as a result of their situation or circumstances, they are unable to take care of or protect themselves or others from harm or exploitation.

The survey data indicates that opinions were divided on whether THRIVE provides a clear definition of vulnerability. Although almost half (44.9%) of respondents agreed with the statement, respondents with more experience were more likely to disagree

than those with less experience. It is mooted that more experienced staff are perhaps more likely to question the ambiguity of the definition, suggested in the comments by experienced members of staff below:

> "Decisions are too often subjective, for instance vulnerability assigned due to the caller's age without reference to the definition or THRIVE assessments which appear to be generic cut-and-pastes…without saying how or how likely" (Dispatcher, Respondent 5)

> "I like THRIVE as it is common sense really which I like, however the vulnerability part doesn't cover everyone who is really vulnerable and covers some I don't consider vulnerable at all" (CH, Respondent 58).

Although THRIVE is seen as subjective and the definition of vulnerability believed to be ambiguous, the findings here, similar to Walley and Adams (2019), indicate that respondents (63%) generally believe THRIVE to be effective in identifying which incidents have vulnerability issues. Again, less experienced staff (0-2 years) were more likely to agree that THRIVE is an effective tool to identify vulnerability compared with staff with more than three years' experience. It would seem some experienced members of staff are more inclined to use their experience and rationale when making decisions rather than depending on a generic risk assessment tool:

> "I appreciate the premise of THRIVE and the way it can help staff justify their decision-making, however, this was previously done by a rationale, nothing has really changed in that respect, it just has a formal layout now" (CH, Respondent 60).

Several other factors were identified as influencing decision-making with 78% and 76% of respondents (respectively) ranking time pressures and the emotional state of the caller as moderately, very, or extremely important. Although external pressures were assessed as being important to decision-making, there were variations among the

different factors. Public expectation and force reputation were regarded as moderate, very or extremely important factors (80% of respondents, respectively). In contrast, respondents were less likely to consider media attention and political pressures when reaching a decision, with only 34% and 17% of respondents, respectively, citing these as moderately, very or extremely important issues.

Police are increasingly being used as the service of first resort for people with MH issues, with the potential for cuts to other services to increase the demand on policing (HMIC, 2017b). The most recent HMICFRS (2021) report cites that not enough action has been taken to fix the MH system, arguing that people will continue to be vulnerable until the health and social care system is fixed and support provided to those that need it, who may be led needlessly into the criminal justice system. Almost all respondents (96%) agreed that MH incidents were increasing and that other agencies should take more responsibility in dealing with MH incidents (97%). Almost all (98%) were of the opinion that other agencies should take responsibility for matters that they are best suited to respond to. Furthermore, 90% believed that police forces had improved their understanding of vulnerability.

There is a consensus amongst scholars that most calls for police service are not crime related. This is supported by the analysis presented in Chapter 5 which showed that only 15.6% of calls for service to F1 resulted in a crime being recorded. It was therefore important to examine the perspectives of FCR staff regarding non-criminal incidents given they account for a large proportion of the calls they receive. Over half (54%) of respondents believed that it was not the role of the police to deal with non-criminal incidents, with little variation across years of experience. However, there was some variation in opinion by job role with CHs and Senior CHs more likely to disagree that it was the role of the police to deal with non-criminal incidents. Non-crime related incidents, such as anti-social behaviour, concern for safety, and incidents involving MH issues are often responded to with the deployment of officers which consumes police resources (Neusteter et al. 2019). However, there is the potential for situations to escalate into something more serious if police do not attend certain non-criminal incidents

Demand management practices (such as changes in the way calls are prioritised and graded (see Chapter 3) are an important part of identifying and managing demands within policing. Although, at times forces have struggled to meet demand, recent observations have shown an improvement in their assessment and management of demand (HMICFRS, 2021). Increasing the use of telephone resolution (without the need for deployment) was a common demand management practice identified by Walley and Adams (2019). Reducing demand is an important part of police demand management and analysis of F1 call data found that the force was increasing the use of telephone resolutions to manage demand, particularly for calls reporting crimes which were increasingly managed without deployment. Although the majority of survey respondents (63%) believed that more calls should be dealt with remotely, less experienced staff (0-2 years) were less likely to agree or strongly agree than their more experienced colleagues. There was also a difference of opinions by rank with Senior CHs and supervisors more likely to agree or strongly agree than CHs and Dispatchers. However, this could be due to their FCR experience. One constable with 9+ years' experience believed that:

> "More and more incidents are being required to be police attendant call when with a bit of time could be dealt with via the phone by office-based officers to release front line officers to be available for attendant calls (CH, Respondent 96).

7.13 Decision-making Theories

Traditional decision-making theories suggest that decision makers analyse the information provided before making a rational decision. In contrast, the Naturalistic Decision-making approach (for example, the Recognition Primed Decision (RPD) model) argues that decision-making in natural settings relies heavily on intuition (Klein, Calderwood, and Clinton-Cirocco, 2010; Klein, 1993). Klein (2004) defines intuition as the way we translate our experiences into judgments and decisions.

Similar to traditional decision-making theories, the NDM requires information to be gathered to fully understand the problem with any gaps in information identified.

Analysis is conducted followed by a review of alternative actions identifying the most appropriate response, concluding with the execution of the final decision (see Chapter 3). However, as shown by the survey responses, FCR staff are not always in receipt of all the necessary information and are limited by time constraints. To gauge respondents' thoughts, they were asked whether experience of dealing with calls makes it easier to make decisions and whether intuition was more reliable than using the NDM.

Almost 90% of respondents believed that experience of dealing with calls makes decision-making easier. As years of experience increased so did the likelihood of agreeing with the statement:

> "Part of the decision-making comes from the experience, a gut feeling of what's going on before, during and even after a call sometimes" (Dispatcher, Respondent 109).

In contrast, although more than half (55.6%) believed that intuition was more reliable than using the NDM, as years of experience increased so did the likelihood of respondents disagreeing that intuition was more reliable than using the NDM. In fact, respondents with less experience (0-2years) were more likely to agree (64%), than their more experienced colleagues (9+years = 48%). It could be surmised that some FCR staff with more experience have a greater understanding of how the NDM is applied to decision-making.

CHs often have to deal with emotional calls from the public and have to manage their own emotions triggered by such calls (Tracy and Tracy, 1998a). Research by MIND (2019) identified that CHs often received abusive and distressing calls which they were often unable to deal with. With this in mind it was important to explore emotional regulation amongst FCR staff and the extent to which their emotions influenced decisions. Although the majority of respondents (86%) agreed, to some extent, that it was easy for them to control their emotions when dealing with distressing calls more experienced respondents (9+ years) were more likely to agree (93%) than respondents

with 0-2 years' experience (78%). As Dispatchers rarely speak with the caller, it was somewhat unsurprising that they all (100%) agreed that they could control their emotions.

Although most (60.2%) indicated that their emotions would not influence their decision-making, almost a third (32.1%) of respondents with 0-2 years' experience (similar to respondents with 3-5 years and 6-8 years) stated that their emotions could influence their decision-making, compared to only 2.3% of respondents with more than nine years' experience. Although there was a belief by some (especially amongst Dispatchers) that emotions were not a factor in decision-making, Bower (1983) argues that people simply cannot override their emotions which influence thinking and judgements. This was explored further within the interviews and is discussed later in this chapter.

Evidence Based Policing (EBP) has been shown to reduce the number of calls for service (Lum, 2012) however, more than half (54%) of respondents were not aware of EBP, and even fewer were aware of the College of Policing's 'What Works Centre for Crime Reduction' (5.7%) (see Chapter 2). Furthermore, less than 3% of respondents stated that they try to keep up to date with new EBP research. Although EBP within FCRs cannot replace CHs judgements based on experience, it can help to inform and, in many cases, improve such judgements (Sherman, 2013). These findings can help inform future research to identify if an increase in knowledge of EBP can improve decision-making in the FCR. This in turn can help inform future FCR training programmes by incorporating EBP guidance.

7.2 Vignettes

The final section of the survey included four vignettes of fictional calls for service. Respondents were asked for their interpretation of the 'call' with the option to add additional comments (see Chapter 4). The following section will discuss how respondents interpreted and graded the calls as well as their feelings towards both the callers and the scenarios. The contact grades are re-presented (see Table 7.2) for reference throughout the vignette analysis.

Table 7.2: National Contact Grades: Adapted from ACPO and NPIA (2012).

		Example
Response	Immediate Response	Danger to life
		Use or immediate threat of use of violence
		Serious injury to a person
		Serious damage to property
	Priority - Requires resourcing but not an Immediate response	A contact will be classified as a non-emergency if it does not meet the emergency criteria outlined above.
	Non-Urgent - Requires a resource but not Immediate or Priority	
	Scheduled Appointment- Resourced at a pre-arranged Scheduled Appointment.	
	Managed Contact - Dealt with over the phone. No need to resource	
	Non-Attendance - Dealt with over the phone. No need to resource	

7.2.1 Vignette 1

"You receive a 101 call on a Wednesday at 9pm from a local residential children's home to report a missing 14-year-old male. You are aware that he regularly runs away and is usually found at his friends' houses. You know that he has no Mental Health or Violence markers, however he has a history of drug abuse. The member of staff has stated that she has not contacted any of his friends and has reported this to you as a matter of urgency".

Dealing with reports of children missing from local authority care is a common occurrence for police with over 66,000 incidents in 2019/20 (NCA, 2020). This scenario should therefore be familiar to respondents. This was specifically phrased to elicit thoughts on what the role of the police should be and whether other organisations should take more responsibility when dealing with social issues. The scenario produced few interpretative challenges for the respondents. The fact that the teenager regularly runs away and is found safe at his friends' houses caused respondents to believe this was not a serious situation, and it was not a surprise that almost all (85.2%) believed this was a recurring issue. The caller was generally not viewed positively with few respondents (8.5%) agreeing that they were respectable. Although almost a third believed the caller to be reliable most (54.7%) felt the caller was partly responsible. Furthermore, there was general agreement amongst the 79 respondents who added additional comments that the caller should take more responsibility and make initial enquiries into the missing boys' whereabouts before involving the police.

Although it was mainly seen as an incident where there was no immediate danger many respondents (41%) thought that it had the potential to have serious consequences. Although 32% of respondents said that the time of the day was important, fewer respondents (19%) believed that it was important to be dealt with quickly, perhaps due to the judgment of respondents (26%) that the situation was unlikely to deteriorate.

Feelings of sadness and anger were occasionally noted (5% respectively) when asked about how the call would make them feel. Although a third (33%) were indifferent, several respondents (56.5%) stated that they felt frustrated, with additional comments implying this was due to the inactions of the caller before involving the police:

> "This is a repeating call…partner agencies should do more to trace the male prior to police being informed. We do not have infinite resources" (CH, Respondent 96).

Although there was an agreement about the probable outcome there was a difference of opinion in terms of the appropriate grading of the incident. Although the majority (83.5%) took the view that the teenager would be found safe, with almost half (45%) of the opinion that the situation would be resolved before the police attended, most respondents (90%) would deploy an officer to the incident. In terms of grading most (62%) would grade the call as a 'Priority' but around a third (38%) believed it merited a less urgent response. Interestingly, the staff who would grade the call as 'Non-Urgent', 'Scheduled Appointment' or 'Managed Contact' were more likely to cite that they were frustrated or angry with the scenario than staff who graded the call as 'Priority':

> "Staff at care homes often report a "child" missing because their policy states they must, even if the child states they will be late back they'll report it and then the child returns before officers arrive" (Supervisor, Respondent 21).

The time of the day (9%) and the age of the missing teenager (6.5%) were factors in how respondents would grade the call. However, there was also an indication that the lack of information provided would influence decision-making with the call graded as 'Priority' due to the uncertainty of the situation, as opposed to any high risk of harm. 'Priority', according to one respondent, is the national standard for a missing person. However, if there was a high risk it would be graded 'Immediate', which no respondents selected. The vulnerability of the teenager appears to be a factor in the decision-making with comments made regarding the history of drug abuse and the possibility they could be taken advantage of by county line drug supply dealers who (as one respondent stated) target children in care.

Although only 8.3% felt this was not a police issue, the annoyance felt by some respondents that police are expected to respond to issues that other agencies should deal with was evident:

> "After years of cuts to social services, health services and local government, the Police are now being used as a catch all for ALL vulnerable

> citizens, irrespective of criminality element. That's OK, we will deal...but you are diluting our role, diverting us to incidents that are not suited to our response and thereby making us not attend community and crime incidents we should be attending" (CH, Respondent 68).

This seems to be a common scenario faced by FCR staff, however, there does appear to be a degree of conflict in the responses provided. Although there was a general consensus that staff at the residential home should take more responsibility there was also agreement that the call warranted a police response, with less than 3% declaring they would refer the call to other agencies. It appears the individual in this scenario was not regarded as a simple missing person, and although the likelihood of serious harm was low, the fact the individual was a minor and potentially vulnerable was considered to be important for the police to locate them. Although not considered a criminal incident, searching for and finding a missing person is part of the wider responsibility of police to protect members of the public (Waddington, 1993). According to one respondent, a 'Priority' response is the national standard for a missing person, upgraded to 'Immediate' if there is a high risk to the individual (in this case no respondent chose an 'Immediate' response). While 64% believed that the call merited a 'Priority' response, 27% graded the call as 'Non-Urgent'. Such discrepancy in the response grading of an identical scenario emphasises the discretion CHs have in their decision-making and implies that a level of inequity exists with regards to how calls for service are risk assessed and responded to. The findings also lead to important questions regarding the police mandate and in what way CHs understand the role of police. Some services such as dealing with vulnerable missing teenagers may be blurring the boundary between police and social work which raises some difficult issues (Punch, 1979; Holdaway, 1986) for CHs who have to determine the merits of a police response within a risk averse culture.

7.2.2 Vignette 2

"You receive a 999 call at 2.20pm on a Tuesday from a well-spoken woman who resides in an affluent area with low levels of crime. She thinks that she heard

suspicious noises in her back garden and believes that it could be an intruder. She admits that she is not certain what she heard and has looked out of her window but can't see anyone, however she is aware that there was a report of an attempted burglary in the local area several weeks ago and admits to being scared. You are aware that a number of patrol cars are currently dealing with incidents, however she is extremely emotional and asks for someone to attend as soon as possible to put her mind at ease".

This was intended to identify if the emotions of the caller would influence decision-making and to identify if stereotypes (based on the status of the caller) were used when making judgements on the reliability and validity of calls. The possibility of ASB was contained in the scenario, as was a level of ambiguity. Similar to the Waddington (1993) study, respondents would have to interpret whether there was a genuine concern that an intruder was near the house or if the caller was mistaken in what they had heard.

The fact there had recently been a report of attempted burglary in the area could imply either that the area was at risk of further burglary attempts or that the caller was simply being more vigilant and overreacting to an innocent noise. However, unlike the Waddington (1993) study, respondents in this study tended to believe the latter. Few respondents assessed the call as serious (13%). However, although almost half (46.3%) believed there was no immediate danger, around 40% indicated that it needed to be dealt with quickly. Almost all (84%) believed that the area would be searched with no trace, with approximately 40% suggesting that the caller was mistaken and that it was a false alarm. The caller was considered to be reliable (34.9%), respectable (42.5%), and telling the truth (44.3%), as one experienced CH noted:

> "Understandably nervous given the recent events. Can't really make a judgement other than to initially assume what she is saying is true" (CH, Respondent 11).

Despite the impact on demand, the use of police resources, and the belief that the caller was mistaken, less than 4% of respondents felt that it didn't merit a deployment, with the majority (75%) grading the call 'Priority' or 'Immediate' with respondents with more experience (9+ years) more likely to send an immediate response than those with 0-2 years' experience. Furthermore, only a few (10%) believed that an arrest was a possible outcome. The views of respondents who graded the call as 'Non-Urgent' were varied including deploying someone when resources allowed, deploying a unit to search the area to appease the caller and asking the caller to ring a relative or friend to come sit with her and check the gardens were secure. Assessing risk is a key element of THRIVE, however there was a lack of consistency in how respondents interpreted the risk in this scenario. While the time of day was identified as a factor, respondents' opinions on the likelihood of an intruder in the afternoon were contradictory. The unwillingness to make decisions in conditions of uncertainty (ie., risk taking) is a core professional requirement of all members of the police service, who are expected to assess the seriousness of a risk by determining the severity and likelihood of an outcome ensuring a proportionate and practical response (College of Policing, 2013). However, the threat, risk and harm were assessed to be low with the assumption that the area would be searched with no trace, indicating that the response was not proportionate to the risk, possibly indicating that experienced staff are more risk averse than they claim. Nevertheless, like vignette 1, a deployment was deemed appropriate by most due to the ambiguity of the situation, as opposed to any high risk of harm.

Although few (30%) respondents reported having any feelings about the call, with only 17.6% saying that they could empathise with the caller due to previous experience, the emotional state of the caller was identified as a factor in decision-making by a small number of respondents in the additional comments section. Some respondents justified dispatching an officer to the scene due to the heightened state of alert and the fact the caller was a concerned and anxious citizen. One experienced CH commented the only reason they would deploy an officer would be to reassure the caller due to her fear and vulnerability (not because they expected to find anyone). A senior CH also commented that due to the caller being distressed they would get

officers to do a reassurance visit at some point to discuss security. An element of risk aversion was apparent, and while some respondents thought the likelihood of harm was low, the phrase that it is 'better to be safe than sorry' was cited. As a senior CH who graded the call as 'Priority' stated:

> "If I grade low, I could get into more trouble for grading this low and something happens to the caller or their property rather than grading high and Police on scene don't find anything" (Senior CH, Respondent 29).

> "I would be concerned about the perspective of the possible outcomes of the incident. I would rather grade higher, and no suspects be there rather than risking a low grade incident with the possibility of someone being there as I would feel this would impact my Job" (Senior CH, Respondent 29).

The threat, harm, and risk elements of THRIVE would be, as one Dispatcher indicated, minimal and low due to no one being seen and the time of day with the general assumption there was no immediate risk or harm to the caller. The fact most respondents felt the call merited a police deployment, with a quarter preferring an 'Immediate' response, indicates that due to the potential consequences of making a mistake respondents observed the 'just in case' principle identified by Ekblom and Heal (1985). The FCR is a risk-averse environment, and it appears staff often take a precautionary approach due to a fear of what might happen if they don't take any action (Black and Lumsden, 2019). It may also indicate that the grading reflected an assessment of the caller rather than the situation. This was comparable to findings from a similar scenario presented to staff in the Waddington (1993) study. The concept of failure demand (see Chapter 3) was also observed with one team leader acknowledging the opportunity to prevent future demand by noting that if they attended rapidly it may stop any future reports from the caller which may reduce failure demand. It is possible respondents believed that sending officers to reassure the caller would not only calm her fears but also stop her calling back later. This

highlights further discrepancies, with only 25% of respondents grading the call as 'Immediate' with no significant variations identified between years of experience or the ages of respondents.

7.2.3 Vignette 3

"You receive a 101 call on a Friday at 4pm from a young female who states that her partner is feeling suicidal. She apologises for calling the police but doesn't know who else to contact. She is very upset and adds that her partner is on anti-depressants and has a history of self-harming and hasn't been able to see his therapist for several weeks. She tells you that he has calmed down a bit but asks if it's possible to send someone out to help her with the situation in case it escalates further".

As demand from dealing with incidents involving MH problems and issues of vulnerability are increasing (HMICFRS, 2020b), this scenario was a call from a distressed female concerned for the safety of her suicidal partner. This was phrased to elicit thoughts on whether police are best placed to deal with MH incidents as well as identify if the emotional state of the caller influenced decision-making.

There was a consensus among respondents (75%) that although the call was not a policing issue, it did have the potential to have serious consequences (61%) with almost a third (26.9%) believing it was a life-or-death situation. It was apparent respondents could understand the anxieties felt by the caller with the majority of respondents believing that she was reliable (63.6%) and telling the truth (60.7%). However, when asked about the likely outcome, most respondents (75.9%) chose the 'other' option rather than the standardised options provided, with an understanding that it should be referred to the most appropriate agency (either the ambulance or MH services). Only one respondent thought that a detention under Section 136 of the MHA would be the appropriate outcome.

Although dealing with incidents involving people with MH problems has always been an essential part of policing (see Chapter 2) there were strong opinions cited regarding

the police being the most appropriate service to deal with such incidents. Walley and Adams (2019) found that forces believed, due to their 24/7 availability, that they are the agency of last resort. However, there are concerns police forces are increasingly being used as the service of first resort, particularly for people with MH problems (HMIC, 2017a). This was evident in the following statements:

> "This is a non-police incident and should be directed to the ambulance service or crisis team… police aren't medical professionals and should not be dealing as a point of contact for someone feeling suicidal if they are at home and not actively harming themselves or trying to leave" (CH, Respondent 4).

> "Crisis team / NHS 111 / Ambulance to deal with this. There is no immediate danger to the male, and he needs to be seen by mental health services. Police are not the most appropriate authority" (CH, Respondent 37).

Contacting the police to report MH incidents appears to be commonplace and there was an element of frustration with other services:

> "It is a recurring theme where MH services are overstretched resulting in police being called to pick up the pieces. We are lucky in that we have MH Nurses working with officers and can make contact and offer advice over the phone or attend if absolutely necessary. Many incidents such as this can be resolved or signposted over the phone" (Supervisor. Respondent 21).

> "The experience that I have about ambulance grades on incidents like this one would add to my sad feelings as I would expect ambulance to treat this as a low grade call however at the same time under this circumstance of mental health, I would not consider Police to be the most appropriate agency to attend" (Senior CH, Respondent 29).

Conflict amongst staff about how the police would respond was also evident:

> "Not a police matter. We will no doubt send police however! I would grade as resolution without deployment and get ambo (sic) to go but no doubt to cover themselves supervision would get police to go!" (Both CH and Dispatcher, Respondent 2).

Although feelings of sadness (18.7%), frustration (30.8%), and helplessness (12.1%) were documented, most respondents (67.6%) would refer the call to other agencies rather than deploy an officer. Those who graded the incident as a 'Priority' or 'Immediate' agreed that although it was not a police matter it would be best for an officer to attend, while others acknowledged that although other services should be present it was common for police to attend such incidents. Analysis on F1 call data (see Chapter 5) reveals that the majority of calls (85.7%) received with a MH qualifier were incidents involving a public safety and welfare concern, with the vast majority (83.4%) receiving a deployment. In contrast, only around 30% of respondents felt that police deployment was appropriate for this scenario with survey respondents predominantly of the view that this was not a police matter. This could indicate different approaches taken by different forces in relation to response grading for MH calls, underlining both the CHs discretion and issues with the understanding of the police mandate.

7.2.4 Vignette 4

"You receive a 999 call at 11pm on a Thursday evening, from a woman reporting an assault and theft. She states that some friends, including her ex-partner, had been visiting her for some drinks earlier in the evening to celebrate her birthday. She reports that after a disagreement one of the visitors began to assault her but has since left the premises. The caller also reports that money is missing from her purse. Although you are aware that the caller has reported her ex-partner for assault a number of times previously, the identity of the accused is unclear".

This scenario was deliberately ambiguous, from a repeat caller, reporting both assault and theft. This scenario was designed to assess whether stereotypes were used when making judgements on the reliability and validity of the caller. Although the scenario was ambiguous all respondents were provided with the same information and therefore little discrepancies in the interpretation and grading of the incident were expected.

Unsurprisingly, given the description of the call, around half of respondents (51.9%) felt this was a 'domestic incident', almost a third (29.6%) thought that it was ambiguous, and the majority (75.9%) agreed that an offence had been committed. While some respondents felt there could be serious consequences (24.1%), most (51.9%) believed there was no immediate danger. The ambiguity of the call was highlighted as an issue when trying to interpret the details of the incident and make appropriate decisions regarding the grading of the call. Some respondents argued that because the accused had left the scene, the threat, harm, and risk element of THRIVE would be reduced and the incident would be dealt with as a theft. There was also uncertainty about the identity of the accused with some assuming it to be the ex-partner while others were unclear as to who the assailant was. This comment demonstrates the uncertainty:

> "Although offender identity is unknown it is important to establish if the person who committed the assault also stole the money. Could be looking at 2 different offenders. Police attendance is necessary but not immediate as the offender of the assault has left the premises" (CH, Respondent 31).

Although almost half of respondents (43.5%) felt the caller was telling the truth, there were mixed feelings about her reliability with some questioning whether she was intoxicated which they felt could impact the reliability of the information provided. Few (5.7%) regarded the caller as respectable, however they also did not believe that she was in any way responsible. Although most (88.9%) respondents did not declare any personal feelings about the call, one CH said they felt:

> "Indifferent, this happens all the time and you eventually become indifferent to the majority of reports and just do what is required" (CH, Respondent 11).

Although the vignette was ambiguous the fact that an offence had been committed was clear therefore it was not unexpected that all respondents decided that a deployment was the most appropriate response. Most (72.9%) respondents believed that an arrest would be the probable outcome with almost a third (27%) noting that the property could be recovered. However, the grading was based on the information provided which could be revised as further information became available. Some respondents stated they would have to complete background checks and then request a call back to ascertain whether the accused was the caller's ex-partner as this would indicate safeguarding issues. Others noted they would try to ascertain whether there were one or two offenders and whether the victim was currently alone. It is clear from this scenario that incidents can evolve, and decisions can change as a result of emerging information.

There were differences in the interpretation and seriousness of the call which was reflected in the urgency of the action required. Although most (72%) believed it warranted a response within an hour, only (7.4%) believed that it merited an 'Immediate' response (mainly respondents in the 60-69 age group and with 9+ years of experience). Furthermore, the view of almost a third (27%) of respondents was that the call only merited a delayed response ('Non-Urgent' or 'Scheduled Appointment'), which could be between 4 -72 hours (similar for respondents with 3-5 years' experience and 9+ years and within the 30-39 age group). There was a general consensus that there was insufficient information to make an accurate assessment of the urgency of the call. Their response may therefore have differed if given the opportunity to gather more information from both the caller and internal systems.

Overall, the vignettes identified the role of CHs as Street Level Bureaucrats (see Chapter 3) and identified the high level of discretion in how they interpreted, and risk assessed calls with inconsistencies in the grading of each vignette (see Table 7.3) (see

Chapter 8 for a discussion of the findings). Perhaps the greatest disparity is found in relation to vignette 2 (female reporting suspicious noises). Although around half of respondents would grade the call as a 'Priority', 25% would grade it as 'Immediate' and approximately 20% as 'Non-Urgent'. The identified levels of CH discretion add weight to these findings discussed in Chapter 5 detailing that CHs discretion aided the inequitable distribution of police resources with a lack of consistency in grading of similar incidents across time and space.

Table 7.3: CHs grading of vignettes.

Response Grade	**Vignette 1 n(%)**	**Vignette 2 n(%)**	**Vignette 3 n(%)**	**Vignette 4 n(%)**
Immediate	0 (0)	27 (25.2)	11 (10.2)	8 (7.5)
Priority	69 (64.5)	54 (50.5)	19 (17.6)	68 (62.9)
Non-Urgent	29 (27.1)	20 (18.7)	6 (5.6)	11 (10.2)
Scheduled Appointment	1 (0.9)	2 (1.9)	0 (0)	18 (16.7)
Managed Contact	7 (6.6)	4 (3.7)	11 (10.2)	2 (1.8)
Refer to Other Services	1(0.9)	0 (0)	61 (56.5)	1 (0.9)

7.3 Vignettes: A Discussion

Similar to other studies, the findings demonstrate issues around the consistency of grading calls for service (Walley and Adams, 2019), with variation in the grading of responses to the same incident (Scott, 1981) and different interpretations of what action should be taken for the same calls (Waddington, 1993). In the vignettes, inconsistencies were found in the grading and interpretation of calls, with varied judgments of elements of threat, risk, harm, and vulnerability, with little agreement amongst CHs as to how the vignettes should be graded. This demonstrated the levels

of discretion CHs have in their decision-making when risk assessing calls for service, which can result in the inequitable distribution of police services (see Chapter 5 for a discussion on equity analysis).

Although the Likert scale data identified that risk aversion was more common among younger and less experienced respondents, this did not seem to correlate with the subsequent grading of the scenarios. In vignette 2 although most (89%) respondents who graded the call as 'Immediate' believed the area would be searched with no trace or that the caller was mistaken, the fact there had been a previous burglary attempt and that affluent areas are more attractive to burglars were cited as justifications for their decision. Furthermore, one respondent noted that although it was frustrating and infuriating, all incidents of this nature are treated as 'Immediate' with the need for a quick resolution. This highlights further discrepancies, with only 25% of respondents (across six different forces) grading the call as 'Immediate'. However, while no significant variations were identified by years of experience, there were distinctions by age of respondent with risk aversion more likely in the older age groups. In the case of vignette 1 (the missing teenager), younger respondents (20-29) were less likely to grade the call as a 'Priority' and more likely to think that it merited no deployment (Managed Contact) than their older (40+ years) counterparts.

A level of risk aversion amongst FCR staff was detected with over-grading incidents commonly accepted 'just in case', with the assumption that it was better to be 'safe than sorry', however levels varied depending on the respondents' years of experience, role and age. Responses to the vignettes exposed that age was as a factor in influencing decisions. For example, in the calls from the concerned female reporting suspicious noises in her garden (vignette 2) and the woman reporting an assault and theft (vignette 4), although most agreed that both deserved a prompt response, younger respondents (20-29) were much more likely to grade the call as a 'Priority' as opposed to older respondents (60-69) who were more likely to believe that it merited an 'Immediate' response. Age was also identified as a factor influencing the decision about the best course of action regarding the call from the distressed female concerned for the safety of her suicidal partner (vignette 3). Younger respondents (20-

49) were much more likely to believe that the call should be referred to other services than their older colleagues (50-69), who were more likely to grade the call as 'Immediate' or 'Priority'. It is recommended that further research would be beneficial to identify variances, including age and experience, in risk aversion amongst FCR staff.

Whilst respondents disclosed feeling certain emotions when assessing the scenarios, it was not clear whether they influenced their decision-making with no clear patterns between respondent's feelings and the urgency of the situation. Feelings of frustration were commonly cited in relation to vignettes 1 (missing teenager) and 3 (female concerned for the safety of her suicidal partner) and while some respondents could empathise with the female in vignette 2 (reporting suspicious noises in her garden) respondents were mostly indifferent to the scenario described in vignette 4 (the female reporting an assault and theft).

THRIVE was documented as being an important factor in decision-making. However, with vignette 2, although the threat, risk and harm were low, there was still an inclination to grade the call as 'Immediate' even with the assumption that the area would be searched with no trace. In contrast, a respondent who mentioned that the THRIVE assessment indicated that the threat, risk, and harm were low for vignette 4, graded the call as 'Non-Urgent' as the accused had left the scene. The lack of concern about the caller's immediate threat of harm in vignette 4 was demonstrated by one experienced CH, who graded the call as 'Non-Urgent' commenting:

> "No major considerations, seems like a usual sort of problem" (CH, Respondent 58).

Furthermore, there were stark differences between respondents' perception of the callers, with the female caller from the affluent area judged to be 'respectable' by almost half (42.5%) of respondents with less than 1% believing that she was partly responsible, in comparison to the 7.5% who regarded the caller reporting the assault and theft as respectable and approximately 10% perceiving her to be partly responsible. It was possible that a few respondents recognised the reasoning behind

the wording in vignette 2, with four respondents noting that neither an accent nor the fact that a caller resided in an affluent area would influence their decision-making. However, of the four, three assigned a higher grading to vignette 2 ('Immediate'), than vignette 4 ('Priority').

Waddington (1993) found that CHs relied on stereotypes when attempting to make sense of calls received, with the social class of the caller influential in the judgment about the reliability and accuracy of the call. As respondents were unlikely to openly confess to using stereotypes, vignettes 2 (female reporting suspicious noises in her garden) and 4 (the woman reporting an assault and theft) were designed to identify if stereotypes (based on the status of the caller) were used when making such judgements. Although respondents overwhelmingly agreed that both calls merited a deployment, a closer look at the data identifies some intriguing points. Firstly, although there was a general consensus that there was no immediate risk or harm to the caller reporting noises in her garden (vignette 2) and that she was probably mistaken, the majority of respondents thought that it merited a speedy response, even with little expectation of discovering an intruder in the area. The fact that a quarter of respondents graded the call as 'Immediate' may indicate that the grading may have reflected the assessment of the caller rather than the actual situation. This was comparable to the findings of a similar scenario presented to staff in the Waddington (1993) study. In contrast, only 7.4% believed that the female reporting an assault and theft (vignette 4) merited an 'Immediate' response, with over a quarter (27%) grading it as either 'Non-Urgent' or 'Scheduled Appointment'.

There is no suggestion that respondents' decisions were based on overtly stereotyping the callers based on their characteristics, as stereotypes are seldom used consciously or intentionally (Spencer, Charbonneau, and Glaser, 2016). Features within a FCR, such as time pressures, may result in a greater tendency to resort to stereotypical processing (Almond, et al. 2008). It is posited that implicit (or unconscious) biases were more likely to inform the grading decision. FCR staff may deal with a number of similar calls every week and their familiarity of recurring situations may provide cues which generate a likely course of action (Klein and Crandall, 1996; Klein, 1993). Such

experiences can affect implicit biases, which are more likely to influence decision-making when the situation is ambiguous (Spencer, Charbonneau, and Glaser, 2016) which was the case in both scenarios. As discussed, CHs have some discretion that can not only increase the effect of biases on the decision-making process but can also lead to a breakdown of public trust (Sandford, 2000), which is something forces should be mindful of. Unconscious bias training could be provided to FCR staff to help lessen the possibilities of biases influencing decision-making. Several factors emerged from the surveys which warranted further explanation with interviews the best way to gather this information. The vignettes could be easily replicated and tested across other FCRs and could easily be manipulated to distinguish between additional variables.

7.4 Interviews

Interviews were conducted to produce more in-depth data regarding the views of FCR staff, allowing interviewees to expand on their opinions and discuss what they regard as important factors that influence their decision-making as well as the main challenges they face (see Appendix 8 for interview schedule). In-depth interviews were conducted with seven members of staff (five males and two females) within FCRs across England, with roles including CH (n=4), Dispatcher (n=2) and Senior Manager (n=1). The objective was to gather as much additional information as possible from a range of FCR staff. The interview questions were influenced by both the themes identified from the survey responses and the theoretical framework of the thesis. Eight main themes (and several sub-themes) emerged from the interviews relating to decision-making within the FCR and the challenges faced by staff (see Table 7.4). They are discussed in more detail below with reference to the proposed decision-making model.

Table 7.4: Overarching Themes and Sub-Themes

Overarching Themes	**Sub-Themes**
Communication with Caller	Emotional State of Caller Information Provided Abusive Calls
Time Pressures	Targets
Organisational Culture	Policies and Procedures Conflict Support Personal Accountability Getting it Right Failure Demand
Risk Assessment	THRIVE
Organisational Changes	Training Resources Dispatchers Decisions
Personal Characteristics	Emotions Personal Experience Risk Aversion Stereotypes Experience
Decision-making Theories	Intuition/Rational/Dual Process
Other	Mental Health Other Agencies External Pressures

7.4.1 Theme One: Communication with the Caller

The following section will discuss how the communication between the CH and the caller can influence decision-making, focusing on the emotional state of the caller, the level of information received, and abusive callers.

7.4.1.1 Emotional State of the Caller

The survey data identified that making decisions based on the communication with the caller was a major challenge for FCR staff, in particular the availability of the information provided and the emotional state of the caller. Most survey respondents acknowledged that the emotional state of the caller was an important factor in their decision-making, however responses were varied among the interviewees. One interviewee stated that the emotional state of the caller would influence how they would deal with the call, acknowledging that they would send someone out even in circumstances that they wouldn't normally attend (CH, Int 6). Another stressed that it would be dependent on the situation and any other factors that were involved (CH, Int3). Several were adamant that the emotional state of the caller would not influence the way they would grade the call, asserting that they only deal with the available facts. One stated that the emotion itself would not influence their grading and provided an example of a domestic incident:

> "Where the female or male is in a situation where they are being attacked…there and then…the emotion influences your grading simply because it is happening…It not necessarily the emotional impact on me or what the victim is going through…the fact that it is happening now, you can hear the distress, you can hear the disturbance therefore it will get graded" (Dispatcher, Int 7).

The same interviewee went on to disclose that their grading of an incident would not be influenced by a caller who was elderly and upset, arguing that:

> "I apply a filter to take out that as the job for me is to build that rich picture from the call as best I can but what is actually going on not just the emotional state of the caller" (Dispatcher, Int 7).

As identified in several interviews, it is, however, possible that the vulnerability element of THRIVE may be considered as opposed to the emotional state of the caller, particularly if the call has been received from an elderly person who lives alone. Both the emotional state of the caller and the vulnerability issues can therefore influence the CHs decision-making.

7.4.1.2 Information Provided

Making decisions based on the information provided by the caller was the most frequently cited challenge faced by FCR staff in the survey. Dispatchers mentioned the difficulty in making resource decisions based on the information provided by the CH. The CHs interviewed also agreed that ambiguous and inaccurate information provided by callers affected their decision-making. The difficulty of prioritising incidents based on incomplete information was discussed as was the fear of making the wrong decision:

> "When they are not giving the information or it's really complicated, I do ponder in my head about that, and I do overthink it" (CH, Int 5).

The interviews also identified that the exaggeration of the seriousness of calls is a common occurrence with some (anecdotally mainly younger) members of the public aware of 'key or trigger words' and 'what needs to be said' to get the police to attend (CH, Int 7). Calls deliberately providing false information were noted as being problematic with one CH describing a call where the caller requested a police presence as a matter of urgency. When the CH requested more information to inform their decision-making, the caller stated that the person in question had a knife. Although the caller could not elaborate further, and the CH believed that "something was not quite right" the call was graded as an 'Immediate'. As the CH expected, when the

officers arrived there was no knife present. They explained that in similar situations the ability to make notes on THRIVE to let the Dispatcher know there is something they are not convinced about or that "this doesn't appear to be what it seems" allowed them to explain their decision (CH, Int 6).

7.4.1.3 Abusive Callers

CHs have to deal with callers who are angry, irritated or call for inappropriate reasons (Tracy and Tracy, 1998a). Dealing with abusive callers was a common theme in the interviews, with one interviewee discussing the training their force provides to staff. The role of the CH involves dealing frequently with people in crisis and some frustration might occur on the part of the caller. Staff are therefore trained in how to deal with specific conversations and perhaps "apply slightly different standards to that conversation than they would have normally" (Senior Manager, Int 4).

Abusive callers can influence decision-making with staff having the authority to end a call after several warnings, or even straight away if someone calls simply to be abusive. There were, however, concerns that some forces did not do enough to pursue offences against abusive callers:

> "You're effectively just expected to take a level of abuse and we very rarely pursue communications offences for that….Once or twice, I've come across instances where it's been unacceptable beyond that, or racial or a hate crime…but when I've pushed to have the appropriate crimes recorded for that and have that call handler treated as a victim of crime there's been raised eyebrows from some of the people I've spoken to like 'we don't do that '…I don't think we're very good at ensuring that there are consequences for people who treat call handlers like that" (Dispatcher, Int 1).

It was suggested that the role requires a degree of resilience and that people who stay in the role for some time have the resilience to cope 'with the steady grind of dealing with difficult and abusive people all day' and that people who can't deal with it 'tend

to turnover quite quickly' (Dispatcher, Int 1). However, there was also an element of empathy for some callers with a CH stating that they try to do as much as possible to stop callers feeling dissatisfied with the service. If they are not satisfied, they won't call back when they have a genuine need to and:

> "It makes sense to keep that good impression because sometimes people are angry because you know they feel like their emergency is important and that may be the case but in the eyes of how we grade emergencies, it's not. It's just a case of giving them advice and clearing the lines so we can answer other calls" (CH, Int 3).

Some interviewees described dealing with abusive callers as being 'just part of the job'. However, opinions tended to differ based on years of experience, with one experienced CH noting:

> If you're older and if you've done this job for any length of time, I think most call takers will say you just sit there are roll your eyes and you just carry on" (Dispatcher, Int 7).

In contrast, a less experienced CH stated:

> "I am not the best at that, they can get to me, when you're called names and people are shouting at you…It does get to you sometimes. You're there to do a job and to help people and when people are horrible and shouting at you and calling you names it's frustrating it really is. It does bother me that" (CH, Int 5).

7.4.2 Theme Two: Time Pressures

Most (78.5%) survey respondents said that time pressures were an important factor in their decision-making, something that was a common theme in the interviews. Although staff are taught "to take in only the facts that are relevant no matter how

many calls are waiting" (CH, Int 3) there was a consensus that there was pressure to rush calls on occasions, both in relation to emergency and non-emergency calls. One interviewee noted this happened more often on 101 calls where callers "just want to kinna chat with you" (CH, Int 3). Although the CH, at times, admitted that they felt rude they often have to end calls abruptly after explaining to the caller that they had to clear the lines as the next 101 call could be an emergency:

> "Sometimes we get 101 calls that are actually an emergency, and you just never know cause all we know is that there's a call waiting which is why it's always important to keep to that strict regime about getting what's needed and then moving on to the next person" (CH, Int 3).

One interviewee mentioned that they felt under pressure to rush calls on occasions where there is a heavy 999 demand due to a high-risk incident. Although it is important to answer calls quickly, it is also crucial they are answered and dealt with correctly (COPACC, 2020). Some FCRs have signs indicating waiting times for incoming calls and CH availability, however although CHs tend to rush calls if nobody is available to answer the next call, one interviewee stated that if they are dealing with an emergency the figures would be ignored. Furthermore, the interviews also discovered that although staff are supposed to restrict the time they spend on 999 calls, there are circumstances (such as speaking to a child) when the time pressures are irrelevant, and CHs will stay on the line as long as they are needed.

7.4.2.1 Targets

The Senior Manager stated that although their force is performance driven, they try to focus on the quality of rather than the quantity regardless of whether it affects their key performance indicators. Although their force witnessed an increase in the duration of their calls, they also saw an increase in their overall performance which they believed was due to CHs resolving the issue on the initial call. Cutting calls short may leave the caller unhappy (COPACC, 2020) and deter them from calling again. However, the force in question emphasised the importance of being victim focused:

> "It might be the 55th call you've taken that day, but it might be the only time that person ever rings the police" (Senior Manager, Int 4).

However, not everyone agreed with the use of targets and statistics to measure performance with one Dispatcher discussing the problems associated with dealing with 999 calls as quickly as possible to ensure they achieve their target. They noted that due to time pressures, CHs do not ask pertinent questions about incidents before passing them to the Dispatcher. This results in an increase in workload for the Dispatcher who then has to do the additional internal checks before resourcing the incident. Although there is more time to complete checks on the caller, address, and previous call history when dealing with 101 calls, according to one interviewee checks are often overlooked when dealing with more urgent calls due to time pressures on CHs (in many cases missing key information such as weapons or MH markers). HMICFRS (2018b) reported that CHs in one in five FCRs were not recording key information, resulting in officers attending incidents without the full facts and increasing the risk of danger.

7.4.3 Theme Three: Organisational Culture

The following section assesses how organisational factors such as policies and procedures, conflict, and support among FCR staff, personal accountability, and elements of failure demand influence decision-making.

7.4.3.1 Policies and Procedures/NDM

Although noting that policies and procedures regularly change, the interviewees acknowledged the importance of policies and procedures when making decisions which they said helped guide them. However, it was also acknowledged that the final decision is made by the decision maker and that their 'gut feeling' was also important. According to Rowe (2012) rules can be ambiguous and SLBs, at times, bend the rules and make decisions which may undermine policies. This was something that was identified in the interviews where it was deemed acceptable, in some cases, to go against force policy as long as the decision could be justified. One interviewee said that policies and legislation 'were programmed in' and although they didn't always agree with them it was accepted that they had to be followed. The fact that some forces

frequently change policies, procedures and guidance was raised as problematic, emphasising the difficulty in ensuring staff were kept fully informed of all updates. Although interviewees were aware of how the NDM links to THRIVE, few of FCR staff interviewed admitted to having an in-depth knowledge of it.

7.4.3.2 Conflict

Dispatchers are often reliant on the accuracy of the information provided to them by the CH (Simpson, 2020), with some tension identified between CHs and Dispatchers due to the perceived lack of information provided by the CH.

> "What happens if the call handler hasn't asked all the right questions? You can see there are questions missing, as the answers are missing. So, if a call takers missed it…I am doing the rework on the police systems and I'm looking at the information I have and then looking at the call and thinking 'that's more than what you've put'. That risk is much higher, as there's information there we need to assess differently. I am told to use it as it comes to me as the call handler was the person on the call and I wasn't, but you look at it and sometimes I can grade them up or grade them down from that and I will" (Dispatcher, Int 7).

One Dispatcher (Int 1) was sympathetic towards CHs, acknowledging that time pressures and targets can result in them not always having the time to look at all the information held on people, addresses, and previous call history. They also pointed out that there was a disparity between the average age and the average experience in service between CHs and Dispatchers stating that CHs "might have less of a perspective across the organisation at how we deal with things", and provided several examples including the following:

> "We had one yesterday where the mental health team wanted a welfare check doing for somebody, but they weren't aware of a previous incident at the address…the call handler hadn't looked at the address history and

> the result of that job from yesterday allayed their concerns entirely so that downgraded and closed" (Dispatcher, Int 1).

Walley and Adams (2019) found the relationship between call handling and dispatch difficult in several forces, with a small number of cases where dispatch staff routinely re-graded calls that handlers had passed on. Similar tensions were identified during the interviews with the relationship described by one CH as "very much an 'us and them' situation" (CH, Int 6). Although it was noted that having to re-THRIVE the calls (where Dispatchers go through the THRIVE again and change the grading) process again was part of the process, it was acknowledged that some CHs may take this personally:

> "Oh, they've changed the grading cause (sic) I've not graded it correctly, and then you feel a bit deflated about yourself. Have I done something wrong? Is it me?" (CH, Int 5).

The interviews indicate that CHs may be less confident than Dispatchers and may be more cautious about their decision-making. Practices will vary by force, however in some force's CHs are on lower grades than Dispatchers and must apply to become a radio Dispatcher. The phrases "bottom of the pile" and "lowest rung on the ladder" were used (Senior Manager, Int 4), with one CH (Int 6) stating they often felt "like the underdog". The Dispatchers interviewed advised that whilst they could upgrade an incident an incident could not be downgraded without being authorised by a supervisor, which they believed provided a good safety net. One Dispatcher admitted they frequently change grades after finding more information and commented that they look at the THRIVE assessment to see if they agree with it as they get "quite a lot of generic THRIVE assessments that are almost cut and pasted" (CH, Int1). The author was made aware of one force where a process is in place to deal with disagreements between CHs and Dispatchers. Anecdotally, this mainly happens with new staff, who tend to take it more personally, with some CHs admitting that they can feel a bit

disheartened. As with the surveys, the interviews identified conflict amongst FCR staff which appears to be related to the differences in roles and responsibilities.

7.4.3.3 Support

CHs can become stressed when dealing with the caller's anguish when reporting incidents involving intruders, suicides, and domestic violence (Tracy and Tracy, 1998a). One interviewee explained that emotional calls can have long-term effects on the call-taker with other similar calls bringing back painful memories. Although a recent review of policing found that CHs felt they did not receive support after dealing with a difficult call (Betts and Farmer, 2019), there was general consensus amongst interviewees that support was available to staff if needed and that some forces "have got a lot better over the last few years at recognising the effect that this job does have on people" (Dispatcher, Int 1).

According to the interviews some forces have an informal process in place to help people who are struggling, giving them time away from taking calls and support from members of the management team. Some forces have specially trained members of staff, provide referral services to trauma management specialists, and publicise support services via posters and emails. However, while supervisors in some forces may recognise when someone is visibly distressed, in others 'supervisors are so busy themselves' that they don't notice when someone has had an upsetting call. What was apparent from the interviews was the support network provided by staff members themselves who often looked after each other after distressing calls. Although support was available to staff, MIND (2019) found that time was a barrier to accessing support due to the pressure of taking calls. However, similar to the MIND (2019) study, there was a general agreement that the quality and availability of support had improved in recent years.

7.4.3.4 Personal Accountability and Getting it Right

The pressures of being accountable for decision-making and the pressure of making the wrong decision was apparent during the interviews. The fact that a wrong decision

can have a massive impact was described as 'one of the hardest parts of the job'. A CH, relatively new to the role, believed that they, as the first contact with callers, had the responsibility to get 'it right' feeling that it would be their fault if they made the wrong decision, and something went wrong. However, an experienced CH had no concerns about making the wrong decision. Although they mentioned that 'mistakes could be minimum and very minor but in the long term, they can have big consequences', they believed that training and learning from past mistakes taught them how to deal with things differently. However, there did not appear to be any element of 'blame culture' with interviewees stating that staff would be supported by senior officers and staff provided they had recorded their decision-making somewhere on the incident and could justify their decisions.

> "If it's a decision for the right reason we will back you up on it and we will support you, even if it's the wrong decision if your intentions were good, if you thought you were doing the right thing, if it's the wrong decision for the wrong reasons then obviously it's a different matter altogether" (Senior Manager, Int 4).

One experienced Dispatcher was clear in their assessment of both the role of CHs when making an initial decision and the Dispatcher when faced with a build-up of incidents:

> "You would have to be blind stupid to come into this job not realising that if you take a call and don't take it well that it will have ramifications for the victim and the offender….. You can be sat on quite a few immediates, so if you're not frightened by that. If that sits easy with you and you're blasé about it then I think you're in the wrong job" (Dispatcher, Int 7) "

7.4.3.5 Failure Demand

'Failure demand' is defined by Seddon (2003:26) as ''demand caused by a failure to do something or do something right for the customer". Walley and Jennison-Phillips

(2018) and Walley and Adams (2019) noted that failure demand such as preventable demand included victims not being updated and having to call back for information, and police failing to deal with incidents appropriately in the first instance. An element of trying to avoid failure demand was identified from the interviews with previous callers contacting the police to request updates considered a common occurrence. Interviewees explained that such calls looking for updates were due to a lack of resources available to update victims/callers. One Dispatcher likened the police officer's workload to that of social workers, arguing that they have little time in between jobs to conduct inquiries and provide updates to callers admitting that:

> "You know you should be calling people back to say 'sorry we're not going to get to you tonight' but sometimes the demand is there, and the complexity of the demand is there, you're not making those calls. I've to be honest, you don't" (Dispatcher, Int 7).

This results in the caller phoning 101 again seeking an update; the failure to deal with that initial demand prompts that call back. This results in increased demand with the CH having to deal with the subsequent call as well as having to communicate with the specific officers asking them to contact the caller. Although such calls were apparently common, some interviewees believed that callers expect too much from the police and were described as impatient or having too high expectations. Nonetheless, not returning a call can impact demand and resources with Seddon (2003) arguing that within police forces 'failure demand' accounts for as much as 80-90% of contacts which are avoidable and unnecessary.

7.4.4 Theme Four: Risk Assessment and THRIVE

Risk assessment tools such as THRIVE are aligned to the National Decision Model (NDM) which is the primary decision-making model used in policing. THRIVE is a risk assessment tool used to inform the allocation of resources and assess risk in a consistent manner. Both the survey and interviews revealed that FCR staff identified THRIVE as being subjective, acknowledging that it was based on the interpretation of

the CH. The interviews found that one person's THRIVE will be different to another person's THRIVE as members of staff have their own values and life experiences which will affect how they THRIVE an incident:

> "A THRIVE assessment is only as good as the information that informs it" (Dispatcher, Int 1).

If used effectively, THRIVE has the potential to be a useful tool which complements the NDM. There needs to be a mechanism to help support people risk assess incidents, and it was mentioned that THRIVE is a tool that supports a broad spectrum of people of different abilities, confidence, and experience to do this. Few interviewees believed that THRIVE was a good tool at identifying vulnerability and CHs noted that THRIVE is completed at the end of a call when any risk and vulnerability have already been identified. Although THRIVE does not tell staff *how* to deal with a call, it is useful for determining the urgency of calls and how they should be prioritised. Respondents stated THRIVE is more often used to justify how the call has been dealt with. Dispatchers also mentioned that THRIVE benefited them if the CH provided a rationale explaining why the call required an officer to attend an incident. Issues were raised about the way arbitrary factors such as threat and vulnerability are interpreted:

> "Someone's clearly decided 'I like the sound of the word THRIVE and I'm just going to shoehorn a different meaning onto the word threat…people interpret the word threat as a threat… people interpret it quite literally" (Dispatcher, Int 1).

A Dispatcher (Int 1) claimed that, due to a lack of a definition, their force sometimes over designate vulnerability due to age stating: "What actually makes them vulnerable beyond being 60?"

An additional issue discussed was that CHs use THRIVE to assess risk and vulnerability but don't necessarily consider police powers and force policies. THRIVE doesn't consider "Do we need to do this?" "Should we be doing this?":

> "We're getting jobs that are quite highly graded and marked as vulnerable and THRIVE assessed as 'we need to go to this' but actually what can we do when we get there, when we send someone to this that's not a police matter?" (Dispatcher, Int 1).

Although interviewees were aware of how the NDM links to THRIVE, according to the Senior Manager, few FCR staff had an in-depth knowledge of the NDM.

7.4.5 Theme Five: Organisational Changes

7.4.5.1 Resources and Dispatcher Decisions

Although resource issues were the second most common challenge cited by CHs, Dispatchers, and Senior members of staff in the survey, it was mainly Dispatchers who were keen to discuss this further during the interview, discussing the issues dealing with multiple priorities and lack of resources. CHs interviewed tended to focus on risk assessing incidents, relying on Dispatchers to make resource decisions and rarely considered the availability of resources. As discussed, Dispatchers make decisions regarding the allocation of resources (Dunnett, Leigh and Jackson, 2018) as opposed to interpreting and risk assessing calls. It is common for Dispatchers to manage several incidents with similar grades which they have to either deploy to or find alternative resolutions. Indeed, demand v supply was a common concern, and it was suggested that resources should be part of the overall decision-making process alongside THRIVE and the NDM. One Dispatcher explained they would consider deploying Sergeants, Inspectors, and even other units from surrounding patrols in different areas if there was a shortage of resources. Another Dispatcher discussed the problems they have dealing with multiple priorities:

> “Five minutes later something else comes in, a knife point robbery and you totally reconsider so we juggle a few things at once. There’s some pressure to it when the jobs on delay start to build up and you haven’t got much downtime and it’s one thing after another after another…you’re in the middle of reading something and you’ve got to stop and do something else and then come back to it and there’s a few things in your head. So, there’s some pressure…you can feel the fatigue after a long day definitely” (Dispatcher, Int 1).

Although the lack of an available unit is not a reason to downgrade an incident, balancing demand and supply was mentioned by several interviewees as a common issue. One Dispatcher was adamant that resourcing should be part of the decision-making process, as demand can only be managed with the available resources. They offered an account that highlighted the pressures of supply and demand:

> “It baffles me in dispatch that the resources can't be part of the picture because how can you start hitting me with 'get that job dispatched' How? Where would you like me to pull the extra bodies from? I've already done what I can do. I don't see how your (police forces) resourcing can't be part of the overall picture any more than a lack of intelligence on the call or a good or bad THRIVE” (Dispatcher, Int 7).

Rationing services such as by delaying responses or holding incidents in queues is one of the strategies discussed by Fleming and Grabosky (2009) to deal with circumstances where demand exceeds supply. Restricting access to services when demand increases will result in inevitable delays in the response to calls for service. Altering the capacity of resources to meet fluctuating levels of demand for services is a significant problem (Maxfield, 1982) for Dispatchers and FCR managers. Dispatchers admitted feeling frustrated with the lack of resources and discussed the decisions to delay responses as a way to manage the demand:

> "We have what we call delay queues, and we delay things for certain periods of time, so 15 mins, 20 mins, half an hour whatever whilst you work around your resources". (Dispatcher, Int 1).

Managing calls during periods of high demand in this manner is, according to Maxfield (1982), more of a response to excess demand rather than an explicit strategy.

7.4.5.2 Training

There was general agreement that the necessary training was provided in both THRIVE and the role of a CH. However, the depth of training varied with a suggestion that additional training on soft skills such as confidence in managing calls and communication skills would be beneficial. One interviewee acknowledged that although extensive THRIVE training was provided to response supervisors, team leaders and Dispatchers, it was not delivered to CHs in their force due to problems finding the time to relieve staff from their duties to provide the training. They say this resulted in staff who use THRIVE the most having the least training which was often evident in the THRIVE assessments. There was a suggestion that to improve future training, role plays, and live scenarios should be included, something already implemented in one of the forces.

7.4.6 Theme Six: Personal Characteristics

7.4.6.1 Emotions and Personal Experiences

Receiving calls from the public can be an emotional job, particularly in relation to emergency calls. CHs have to deal with callers who are angry, irritated or call for inappropriate reasons and can often become stressed when dealing with the caller's anguish when reporting incidents involving robberies, intruders, suicides, and domestic violence (Tracy and Tracy, 1998a). Although most (60.2%) survey respondents indicated that their emotions would not influence their decision-making, staff with less experience were more likely to agree that emotions could influence their decision-making. Although there was the belief by some survey respondents that emotions were not a factor in their decision-making, Bower (1983) argues that people simply

cannot override their emotions which influence thinking and judgements. This was explored further in the interviews.

Research by MIND (2019) found that dealing with suicidal callers, or those with other MH needs, was one of the most stressful and upsetting aspects of the CH role. When asked about dealing with distressing calls, interviewees repeated the notion that "everyone has a trigger", with calls involving children mentioned frequently. Although FCR staff do not physically witness incidents unless CCTV or images come into the control room, they can, on occasions, hear the distress or disturbance happening on the call. A 2019 policing review found that unlike officers who witness incidents, FCR staff do not receive debriefing or welfare checks after distressing calls (Betts and Farmer, 2019). One Dispatcher discussed the impact of listening to what is happening in an emergency situation, describing the long-term effects on one of his colleagues being on the line while a caller committed suicide. Whilst it is acknowledged that specific calls can impact CHs, it was unclear if emotions influence their decision-making. Although interviewees agreed they were not emotionally affected by calls, they did acknowledge that calls involving their 'trigger' were more difficult to handle, although this appeared to lessen with experience:

> "I wouldn't say that I personally tend to get emotionally involved in the jobs I deal with because you just can't. At the end of the day these aren't people that you know, they aren't your friends or family members" (Dispatcher, Int 1).

Although participants felt they behaved professionally and did not let their emotions influence their decision-making, some stated they sometimes had to take a break after certain calls, with others declaring that they thought about the calls when they were away from the working environment:

> "The moment that you leave the office you just block it out of your head erm which is difficult. I think when you're in the room you don't really think about it as you're always busy with the next call…it's only until you stop you know and you're driving home or you're walking home that your mind is open, and these things start to come back to you" (CH, Int 3).

Although one CH noted that "you do teach yourself to separate yourself from the situation", they also stated that at times "you do sometimes have to take a minute and just go outside and leave the room and reflect" (CH, Int 5). CHs tended to agree that "you can't take it personal" or "let it get to you", similar to Tracy and Tracy (1998a). There was no evidence that having personal experience of specific crimes influenced decision-making, with the consensus that personal emotions are separated from the situation as best as they can be. It was acknowledged that bringing personal feelings into a call can cause complications and although dealing with calls that evoke memories of previous experiences can be emotional, it appears that such feelings are "kicked to the back until you are finished doing what you are doing" (CH, Int 6).

Research has identified that incidental emotions commonly carry over from one situation to the next, affecting subsequent judgements and decisions that are unrelated to that emotion (Lerner et al. 2015; Lerner and Tiedens, 2006); a process known as the carryover of incidental emotion (Loewenstein and Lerner 2003). This did not seem to occur with any of the interviewees, with one CH noting that emotions "don't tend to carry on the next call', which is a "completely different set of circumstances that your focus reflects on to" (CH, Int 5). Although another Dispatcher (Int 2) dismissed the suggestion that emotions can carry on to another call, they did admit that this did occur on one occasion when they were working as a CH, but they received support to deal with the call.

There appears to be conflicting responses from interviewees in relation to the role of emotions in decision-making. There is the possibility that social desirability bias was evident in the interviews, with interviewees preferring to give a socially accepted

answer due to the sensitive nature of the topic (Grimm, 2010). Indeed, social desirability bias is more likely to occur when questions relate to social norms or behaviours (ibid). Further research would be required to determine the extent emotions play in decision-making such as an observational study within a FCR to witness whether emotions carry on to other calls or to assess how emotions affect CHs.

7.4.6.2 Risk Aversion

Police decision makers have been described as professional risk takers (College of Policing, 2013), something that was acknowledged by the interviewees with one Dispatcher mentioning that "we are described as professional risk takers". A fundamental professional requirement of all members of the police service is to make decisions in conditions of uncertainty (ibid). As discussed, Ekblom and Heal (1985) found that due to the fear and potential consequences of making mistakes CHs often observed the 'just in case' principle. A level of risk aversion was identified amongst the survey respondents with clear differences in risk perceptions among CHs. On the whole, more experienced staff were less risk averse and more likely to disagree that it was better to be over-cautious when making decisions than colleagues with fewer years' experience. Similar to the Walley and Adams (2019) and Scott (1981) studies, the grading of the vignettes indicated there are issues in the consistency of grading between respondents. This was explored further in the interviews.

The recognition and acceptance of over-grading incidents was a common theme among interviewees, particularly with less experienced members of staff. The Senior Manager said it was their preference for CHs to over-grade incidents and give them a high priority as they could subsequently be downgraded by managers if they didn't believe it merited that response. Experience was seen as a factor in how risk averse FCR staff were:

> "Anybody who is lacking experience will be risk-averse because you don't have the confidence to maybe make decisions that might have an element of risk attached to them" (Senior Manager, Int 4).

> "The police service is very geared towards experience with the length of service being indicative of someone's ability…generally there's a reason behind that" (Dispatcher, Int 1).

It was suggested that staff can be programmed to think the worst and that it is better to be safe than sorry. In some cases, calls are over-graded "just in case' as "although it may be nothing, it could be something" (CH, Int 5). However, an experienced Dispatcher rejected this idea, claiming that staff have to make decisions with an element of risk in order to ensure efficiency and preserve resources:

> "The job grinds to a halt if people are afraid of making decisions, but it also grinds to a halt if people make only the risk averse decisions to deal with everything we have to...we convinced ourselves that we have to negate every risk to the nth degree for everything…we will immediately run out of resources, and if everything is treated as high risk then nothing is because you can't see the woods for the trees" (Dispatcher, Int 1).

There is an inherent risk in not interpreting or assessing calls properly with some decisions based on contingencies. CHs must speculate and assess what might happen. In many cases CHs admitted they sent resources to an incident as a preventative measure which was deemed as acceptable with several forces adding P onto THRIVE to incorporate preventative measures. However, high levels of risk aversion were also attributed to CHs previous negative experiences, particularly when 'jobs have gone wrong' or mistakes were made resulting in an adverse outcome. This lack of confidence can result in CHs becoming less effective in their role.

There are also circumstances where CHs will send calls to the Dispatchers asking them 'if it is worth sending someone just in case?' One CH noted that "rather than suggesting officers go "just in case' it's good to have information for awareness" (CH, Int 3). This is usually dependent on the available resources. One interviewee noted that some calls are documented to ensure that information has been recorded which allows staff to assess any additional calls reporting similar issues which would increase the importance of attending.

7.4.6.3 Stereotypes

Although there is little suggestion that survey respondents' decisions were based on overtly stereotyping the callers based on their characteristics, it was identified that experiences can affect implicit biases. CHs have been described as Street Level Bureaucrats (see Chapter 3) with high levels of discretion. However, this discretion can increase the possibility of biases being introduced into their decision-making (Sandford, 2000). It was noted by several interviewees that experience can result in staff making assumptions about previous calls or callers, but views were mixed on whether this can influence decision-making. Most interviewees dismissed any notion that they stereotype callers and were clear their decisions are based on the information provided on the call and not the previous history of the caller. Decision makers must ensure that they assess the actual criminality or vulnerability being reported, regardless of who the caller is or how often they call. However, one CH admitted that having to deal with repeated calls from specific addresses reporting non-emergencies can influence decision-making, although there is an element of caution from the CH, as their next call may be an emergency. One Dispatcher explicitly stated that stereotypes do exist and although they may not always be accurate they felt labels exist for a reason, commenting that:

> "Our brains are hard wired and short cuts that cause a problem with biases and other things but of course you are going to block things together into groups and use that as experience" (Dispatcher, Int 7).

Although stereotypes were evident, there was little suggestion from Int 7 that this would overtly influence his decision-making:

> "Here comes that stereotype. If I speak to person A who I deal with on a regular basis…and they say they are going to throw themselves off that bridge, my original reaction is go on then…I know you're not going to…you know by calling me that I'm going to have to send someone 'cause you've now threatened to throw yourself off a bridge. I have no option but to go even though every fibre in my body is screaming 'don't do it'. I've got no choice" (Dispatcher, Int 7).

7.4.6.4 Experience

The interviews provided further evidence that experience of dealing with calls from the public makes it easier to make decisions, as:

> "Generally, there aren't many new things under the sun, when you've been there for a certain length of time you've seen most things before…you become more comfortable and more familiar with the process of managing risk and making risk decisions" (Dispatcher, Int 1).

It was claimed by interviewees that experience enhances the ability to interpret calls and allows CHs to better understand the kind of response callers are looking for based on their analysis of the conversation with the caller. Experience was also linked to an increase in confidence about making decisions, with the Senior Manager (Int 4) commenting that they tend to put more experienced staff on call handling duties on particular occasions such as New Year's Eve due to their experience of dealing with a range of calls and because "they've dealt with an awful lot of jobs, and the more experience they have got the more confident they feel". This infers that less experienced staff sometimes lack the confidence to make rapid decisions. One CH also commented that "your experience kicks in" (CH, Int 6) when trying to understand ambiguous calls. However, it was also acknowledged that regardless of the level of

experience there will always be a new or unique situation that staff will have never dealt with before and that staff will still make mistakes regardless of their experience.

It was also acknowledged that experience was beneficial in improving Dispatchers' decision-making and making better judgements on the kind and number of resources required in specific situations. Dispatchers agreed that experience improves the ability to assess each situation and manage resources more effectively, with the confidence to pull resources from one incident to divert them to another. Experience also helps Dispatchers manage response officers:

> "Bobbies have a nasty habit of all going to a job that they think is going to be interesting, so you will often find, cause it's an adrenalin rush it's a chance to put the blue lights on…if you are clever, you'll keep half an eye on your map system and say ' What the hell are you doing there, I need you to go to this job'. I think the more experience you've got the more you control and handle the desk" (Dispatcher, Int 7).

Although it was acknowledged that experience makes decision-making easier, it was also recognised that experienced staff can become desensitised to specific types of calls with the potential for "compassion fatigue" to affect decision-making. Regular calls reporting similar incidents can result in thoughts such as "not another jumping off the bridge call" (Dispatcher, Int 7) and it is important that staff assess each call based on the information provided and be resistant to previous calls influencing their decision-making. The RPD model (see Chapter 3) suggests that decision-makers translate their experiences into judgements and decisions (Klein, 2004). This study has identified that experience is a significant factor in decision-making.

7.4.7 Theme Seven: Intuition/Rationale

Although most survey respondents believed that experience of dealing with calls makes decision-making easier, the more FCR experience respondents had, the more

likely they were to strongly agree. This was explored further in the interviews to ascertain if experienced staff used their intuition when making decisions more than less experienced staff. There was a consensus that all FCR staff used their intuition or had a "gut feeling" when dealing with calls reporting familiar incidents which allowed them to identify what they should do quickly, however there is a degree of intuition that develops with experience and life experience:

> "There is some gut feel that comes into it…and I think it's because you just see the wheel turning so often you are used to seeing results" (Dispatcher, Int 7).

Although FCR staff must follow stringent processes, it was stated that although using intuition may not be openly acknowledged by some members of staff it does play a part in decision-making:

> "Nobody is probably going to want to say in our environment that intuition plays a part because we should be following NDM, policies, procedures, legislation, and risk. We are so heavily modelled in everything we do in case it goes wrong and it comes back on us I don't think many people would say yeah I follow my gut feeling" (Dispatcher, Int 7).

As previously discussed, the possibility of social desirability bias seems to be alluded to in this statement suggesting that respondents will provide an answer which is deemed to be more acceptable to the interviewer (Grimm, 2010). Several less experienced CHs stated they both evaluated information and used their intuition. Using their intuition was beneficial when dealing with familiar calls or callers, particularly with 999 calls where decisions have to be made quickly. However, one said they did not use their intuition when dealing with unfamiliar 101 calls as they didn't want to 'get it wrong'. Several interviewees said that sometimes intuition can be wrong and lead them in the wrong direction, for example receiving a call from a regular caller reporting a non-emergency does not mean that the next time the caller contacts the police that it is not a genuine emergency.

Although intuition is an important part of decision-making, it was also acknowledged that staff must be aware of other factors, such as available resources before making decisions. Both Traditional Decision Theories and Naturalistic Decision Model approaches (see Chapter 3) can help provide an understanding of decision-making processes within the FCR domain (Eyre and Alison, 2007). Staff generally appear to use their intuition when making decisions particularly with common calls, with less experienced staff more cautious with unfamiliar calls. However, it appears that CHs use both System 1 (intuition) and System 2 (rational) when making decisions and tend to evaluate information and use their intuition dependent on the circumstances. However, experience can be associated with institutional memory, described by Fleming and Rhodes, 2018:13) as:

'selective retelling of the past to make sense of the present…. and used to explain past practice and events and justify present activity and recommendations' .

Whilst we can learn from experience, our memory is selective and can be biased (Fleming and Rhodes, 2018) and this selective memory may have implications for effective decision-making. FCR staff can also use their intuition and knowledge to make decisions based on their local knowledge, which is closely linked to discretion and while this can be important it is contextual and complex (Fleming and Rhodes, 2018). Indeed, Durose (2009) argues that local knowledge is developed from subjective understandings of previous situations. It is therefore argued that, while experience and intuition can be helpful in informing decision-making, there is also the requirement for a more evidence-based approach to help support decisions in the FCR.

7.4.8 Theme Eight: Other

7.4.8.1 Source of Calls

Both FOI data and F1 call data reveal a shift in the source of calls, with increases in 999 calls coupled with a decrease in calls to 101 (between 2015 and 2018) with analysis of all source data showing a reduction (as a percentage of all calls) in 'ASB', 'PSW' and

‘Transport’ incidents to 101, coupled with an increase in reports to 999 with incidents closed as ‘Crimed ‘increasing in both 999 and 101 calls (see Chapter 5). As 999 calls take up more resources than 101 calls (see Table 7.5) forces should attempt to identify factors that may have influenced the shift from 101 to 999 to increase understanding of their demand. The interviews provided a number of views on the increase in non-emergencies being reported to the emergency number. According to the interview respondents, calling 101 can result in lengthy waits to speak to an operator and therefore people tend to give up and call 999. One interviewee (Dispatcher, Int 7) estimated that, out of 999 demand, only a third is what they would call “a proper criminality based 999 call”. In fact, only 23.6% of F1’s 999 calls were reports of criminal behaviour. Respondents expressed feelings of frustration with the belief that callers were abusing the system and blocking the lines for emergencies. A common theme identified was that callers learn fast, and some have ‘learned to work the system’; knowing that if they call 999 and use a trigger word that the police will have to attend:

> “You get a lot of younger people or people that know how to work the system, they know the key words, they know that if you say that the police have to attend, and when you get there it's not as they say at all” (CH, Int 6).

An element of exasperation was also evident with what was described as “two extremes”. Anger towards people misusing the 999 service and sadness that elderly people are calling 101 to report a crime as they didn’t want to bother the police, with the use of stereotypes evident with one CH noting:

> “I get infuriated when the little old lady rings you on 101 to report that they've been burgled not long ago but they didn't want to bother us. Whereas a 22-year-old will ring 999 just because their child’s not doing something, so you get the two extremes; you get the younger people now who are quite happy to ring 999 straight away and the older people who think twice as 'I didn’t want to bother you’” (CH, Int 6).

Table 7.5: Origin of Calls and Resources Used – Percentiles – F1 Call and Resource Data (2017-2018)

	Percentiles- Resources Used				
Origin of Call	10th	25th	50th	75th	90th
101	1	1	2	2	4
999	1	2	2	3	6

However, one interviewee (CH, Int 3) noted that many people call 999 as they are unaware that 101 exists. They felt there is a lack of knowledge around the non-emergency number and that an awareness advert or campaign would be beneficial. There is a focus across policing on shifting non-emergency reporting from 101 to the 'single online home' – the new national platform to report non-emergencies. There are early signs that the volume of incidents being reported on the 'single online home' is growing steadily (HMICFRS, 2020a) and reducing demand on the 101 number. However, one interviewee (Senior Manager, Int 4) argued that live chat appears to be more popular as people tend to prefer interacting with another human, and described how their force's live chat has grown from around 10-20 to 70-80 interactions a day; however further research would be beneficial to assess any future reporting trends to assess any shifts from calling 101 to online reporting.

7.4.8.2 Mental Health Incidents

Although there was general consensus amongst interviewees that MH incidents have been increasing, Kane, Cattell, and Wire (2021) argue that a large number of cases flagged as MH incidents are actually related to other vulnerabilities rather than the individual's mental state, such as homelessness or drugs and alcohol abuse. One interviewee noted that over the last five years incidents involving MH and wider social issues have increased and that:

> "Every third or fourth job will have some element of a labelled diagnosis…Suicide, mental health, anxiety; all these things have massively ramped. COVID hasn't help at all, but it was well big before that" (Dispatcher, Int 7).

Indeed, incidents involving public, safety and welfare issues accounted for almost half (46.8%) of F1 incidents and 85.7% of incidents with a MH qualifier (F1 call data). However, research by Kane, Cattell, and Wire (2021) suggests there may be an element of uncertainty with the classification of MH incidents, and it is unclear if certain incidents involving social vulnerabilities such as homelessness and drug abuse are being mistakenly classified or interpreted as MH incidents. However, the social role of policing was evidenced in the quote by an experienced Dispatcher:

> "The perception is we've kind of withdrawn from fairly serious crimes in order to do what appears to be a social service type function and that's not just us, that's a national issue. There are reports going back 5/10 years that highlight this being a problem which is accelerating over time" (Dispatcher, Int 1).

The extent of police incidents linked to MH issues is uncertain with varied estimates and recent studies divided as to whether incidents involving MH concerns use a disproportionate number of policing resources (see Langton, et al. 2021 and Kane, Cattell, and Wire, 2021). One experienced Dispatcher noted:

> "The College of Policing will tell you that approximately 5% of incidents are mental health related but generally response cops you speak to will say nah b*****ks…but if you adjust that by what we actually deploy to it leaps above that. We are two to three times that in terms of our emergencies…about 45% of our business is mental health related or concerns for welfare more so than we deal with crime" (Dispatcher, Int 1).

This is a substantial estimate by the Dispatcher, considering that F1 MH incidents accounted for 4.3% of all calls and incidents closed as Concern for Safety accounted for 10% of all incidents. The College of Policing (2015) previously estimated that between 2% and 20% of police incidents were linked to MH with HMICFRS (2018b) providing a more recent estimate of 2.8%. The estimates suggest that levels of MH incidents vary among forces. While F1 data suggests that 4.3% of incidents are MH related, the Metropolitan Police estimated that 40% of incidents are linked to MH (Metropolitan Police, 2018). The number of resources used certainly appears to be dependent on the type of MH incident, with one Dispatcher explaining their decision-making in relation to calls reporting threats of suicide. Some calls, where the caller is at home and just needs someone to talk to, were described as "lesser jobs". However, calls reporting a suicidal member of the public threatening to jump off a bridge were described as "time consuming to deal with" and result in "the disappearance of resources quickly", explained by a Dispatcher:

> "If you are talking about our regular customers who threaten to jump, I've got to put…two cars from two sides of the bridge…I've got two traffic cars to block the traffic either way on the motorway, so straight away you've taken probably eight officers out the game…Cause if he jumps…I can't allow that person to die and can't allow other people to be involved in it. I'm going to have to cover both sides of the bridge in case they run, and then they become a missing person with suicidal intent which is even worse cause then my whole shift goes, and I am probably calling people from wider afield to go looking for them…And the length of time it takes to deal with it if we do get to them. So, we will sit with that person, they then go to hospital sit in A&E with them because they are a flight risk and then we wait for six hours while we wait for a mental health practitioner to come down and do the assessment. That's two bobbies I've lost now for the whole shift" (Dispatcher, Int 7).

A report by the College of Policing (2015) estimated that in 2013/14, due to shortages of beds and staff, waits of six to eight hours for police officers taking callers with MH issues to hospital was common. The findings here suggest that this is a common practice, with one interviewee arguing it is better to have officers stay in the hospital citing the scale of resources required to deal with a missing person from A&E:

> "It's often better to lose the two officers and leave them at hospital…than to have a missing suicidal person somewhere where I then have to send the entire shift out looking for. So, then every other demand doesn't get met. That now includes the dog units, the helicopter, it involves everybody…you can imagine the resources of leaving two in hospital versus 16-20 and external agencies…that scale of resources. These are the decisions we need to make and that's why the mental health side is such a problem for us" (Dispatcher, Int 7).

Interviewees described their encounters with 'regular' callers with MH issues who frequently contacted them, something highlighted in the MIND (2019) study. Forces have different variations of MH support, including NHS funded MH nurses, MH street triage teams and hubs (HMICFRS, 2018b).

While some forces have office-based MH support, others have mobile support. In one force, according to an interviewee, MH nurses are used as an information tool as part of risk assessment. Although MH nurses don't decide whether to respond or not, they do provide valuable information to guide decision makers. One interviewee explained they have both a MH support including nurses based in the FCR as well as MH nurses attending incidents in partnership with a police officer which has anecdotally resulted in a reduction in repeat callers. Further research would be required to determine whether this is common across other forces with similar MH support. Research questions could include: What is the impact on demand, including failure demand? How much time and resources are spent on MH support? Is having MH support in FCRs cost efficient? Do people who need MH help who contact forces with MH support

receive a better service? Does having MH support give officers more time to deal with other incidents?

7.4.8.3 Other Agencies

The interviews further confirmed FCR staff opinions that other agencies should take more responsibility for people with MH issues but their views on other agencies varied. It was acknowledged that other agencies such as MH services, the NHS, and social services were struggling to meet their demand, with one interviewee praising their partnership working with vital services in the local area. However, conflict between services was evident with one CH stating that social services regularly try to get the police "to do their job" (CH, Int 6). Some were empathetic towards resource issues and time pressures experienced by other agencies, with one interviewee noting that "the NHS is probably in a worse state than we are, similar to the ambulance service" (Senior Manager, Int 4). By contrast, another interviewee was critical of the ambulance services ability to refuse to attend incidents and was also keen to point out that their workload was no different to that of police officers who must attend incidents regardless:

> "We are not the right agency… but we are forced into it as we are the agency of last resort. [Name of ambulance service[24]] they get to refuse jobs because of their demand. If [Name of ambulance service] get a job like that and we phone them and say 'look we got a suicidal person can you deal?' I guarantee you, every time, they will not go to it... They will say… 'but that's a mental health thing which isn't really an ambulance thing'… well, it is, because you are in the health service and we're not" (Dispatcher, Int 7)
>
> "Nobody wants to go into mental health or social services. The ones that are there have got 40-50 cases they are sitting on. No different to my bobbies. My bobbies on average carry a caseload of probably 20 crimes.

[24] Removed to preserve anonymity.

> 'How the hell are they meant to get through that when I'm sending them from immediate to immediate for 10 hours of a 12-hour shift?" (Dispatcher, Int 7).

CHs in this study often felt that the police were filling gaps left by other organisations such as social services, referring to the period before the reduction of staff in services over the weekend as the '5pm Friday calls' (Lumsden and Black, 2018). This was recognised in the interviews with one interviewee discussing the issues they have as a result of the failings of other agencies:

> "It's an increase in pressure from other agencies… the issue we have is at the weekend. So where social services and some departments close and go home at half past three on a Friday and come back at 9 o'clock on a Monday well, I'm afraid people still need help outside those hours" (Dispatcher, Int 2).

According to one interviewee, the police "are not the owners of all risks in society and it's not appropriate for us to be taking risk off other agencies where they are best placed to deal with it" (Dispatcher, Int 1). According to the interviewees, the perception of risk, priorities, policies, and objectives differ between agencies which results in competing risk assessments. Several interviewees talked about conflict between the police and social services, who expected police to deal immediately with situations that did not have a degree of urgency resulting in 'differences of opinions'.

It was suggested that a good call taker should be able to recognise MH calls and signpost them to the appropriate services, which may be evident in F1 call data where around a quarter (25.3%) of MH related calls were resolved without the need to dispatch any resources. However, it was also acknowledged that people suffering from MH issues contact the police for a number of reasons, one being their 24/7 availability and the knowledge that they will generally respond quicker than other services. Long waiting times for support or help from other agencies was also cited as a reason people call the police as well as the suggestion that some people don't necessarily get

the help they need or want from other agencies, and therefore contact the police as a service of last resort. One interviewee explained that callers openly admit this on the call:

> "I rung you cause (sic) no one else is listening. I rung you, 'cause (sic) I know if I ring you, I know you're going to have to come to me. People aren't stupid" (Dispatcher, Int 7).

There was obvious sympathy for callers reporting MH issues and respondents certainly did not apportion any blame to them. One interviewee commented that contacting the police should never be the easiest way to access MH care and that callers who felt the need to make threats of suicide to be taken seriously was improper. Interviewees believed that there has been an increase in people who describe themselves as having MH issues and seeking support resulting in increased demands placed on policing (Dispatcher, Int 1).

7.4.8.4 External Pressures

Although there were variations among the different factors, external pressures were judged by survey respondents to be important when making decisions, however this rarely came up in the interviews. CHs actions can attract media and public interest in the few cases where inappropriate response leads to serious consequences. One such example is the grave error made by Police Scotland control room staff which resulted in the death of two civilians in 2015 (McLean, Norton and Ludwig, 2016). One interviewee did comment that external pressures such as media attention or public expectations played a minor role in their decision-making. They mentioned that they ask questions such as "how would a Chief Constable react if this went wrong?" and "what would a Chief Constable expect?" (Dispatcher, Int 2) before making decisions and argued that their training and skills ensured they almost always make the right decisions. Although survey respondents were less likely to consider media attention in their decision-making, the majority (80%) regarded public expectations as a moderate to extremely important factor when making decisions with little variance amongst respondents' years of experience. However, although respondents believed that public

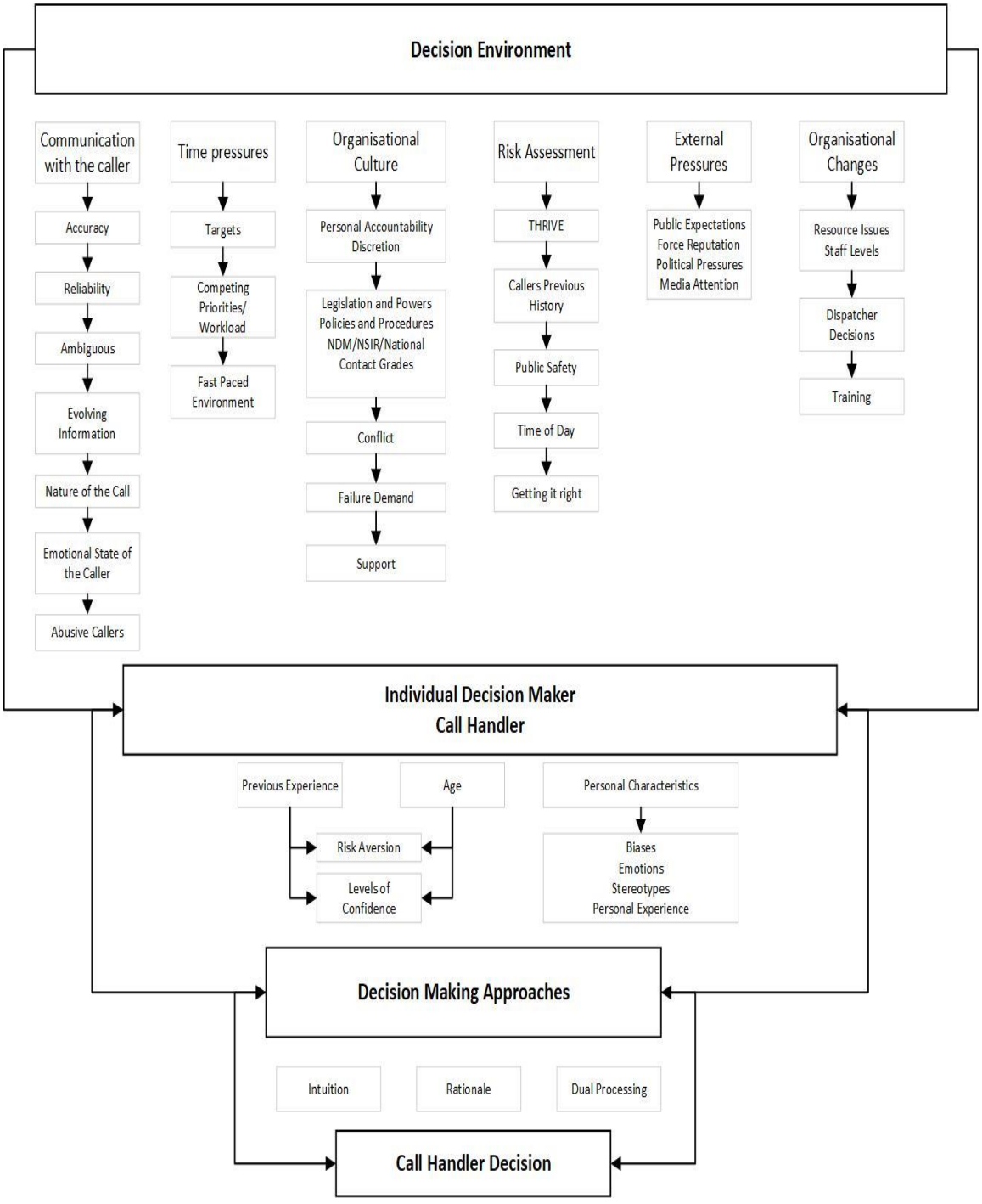
expectations and force reputation were important factors, they were less likely to consider media attention when reaching a decision with only a minority noting the importance of political pressures.

This chapter has discussed several factors that may influence decision making in the FCR. To increase our understanding of decision-making and advance decision-making theoretical perspectives, the chapter will proceed to discuss theoretical considerations and the proposed Call-Handler Decision-Making Model.

7.5 Theoretical Considerations - Call-Handler Decision-Making Model (CHDMM).

The concept of a decision-making model was influenced by Mullins, Alison and Crego (2011) who presented a Senior Investigating Officer decision-making in murder inquiries model. This thesis proposes a Call-Handler Decision-Making Model incorporating the survey and interview findings from this study. The preliminary model (see Figure 3.5) encompassed factors that influence decision-making within policing. Such factors were informed by FCR policies and procedures, the theoretical framework of the thesis and previous research (Waddington, 1993; Fahsing, 2019; MIND, 2019). The research has allowed the development of the model which has been tested and evaluated through the survey and interview data to find out how applicable and transferable it is to the FCR domain. The completed model (see Figure 7.1) is based on the unique data from the surveys and interviews utilising the decision-making processes of staff with different levels of experience within the FCR domain.

Figure 7.1: Final Call-Handler Decision-Making Model (CHDMM)



Summary of the Survey and Interview Data

The thesis has presented some unique findings relevant to decision-making by CHs within the FCR environment. Findings from both the survey and interviews fill several

gaps identified in the decision-making literature. This chapter aimed to address the following research questions:

- RQ8. How effective are current decision-making tools used by CHs/Dispatchers in the FCR?
- RQ9. What are the main challenges faced by CHs/Dispatchers when making decisions?
- RQ10. What additional factors influence decision-making in FCRs?

RQ8: THRIVE is the key risk assessment tool used within FCRs and aligns with the NDM both of which were considered to be important factors in decision-making. Although THRIVE was described as subjective it was believed to be effective at prioritising incidents. Similar to Walley and Adams (2019), it was also established that THRIVE was effective at identifying vulnerability issues, although interviewees tended to dispute this claim. The interviews revealed that THRIVE was completed at the end of the call after any risk and vulnerability had been identified. CHs claimed that they used it to justify decision-making as opposed to helping them deal with the call. If used effectively THRIVE has the potential to be a useful tool complementing the NDM, in particular in determining the urgency of the call, however this opinion varied dependent on years of experience. Although the NDM is the primary decision-making model in policing, more than half of survey respondents (55.6%) believed that intuition was more reliable than using the NDM.

RQ9: The accuracy and availability of information provided was the main challenge faced by CHs, followed by resourcing issues. Time pressures and working in a fast-paced environment was also regularly cited, in particular in relation to concerns about making mistakes. Conflict among FCR staff was apparent with a degree of 'us vs them' mentality identified. Questioning CHs decisions and changing grades by both Dispatchers and managers was highlighted as an issue by CHs, with Dispatchers complaining that CHs did not always ask pertinent questions about incidents resulting in an increase in workload for the Dispatcher. The importance of factors that influence decision-makers varied by role, age, and years of experience of the respondents.

RQ10: An array of additional factors that influence decision-making within the FCR was identified and is shown in the CHDMM (see Figure 7.1) such as organisational changes and personal characteristics. A unique contribution to knowledge is the findings that the importance of factors that influence decision-makers varied by age, role, and years of experience. External pressures were judged to be important when making decisions, although there were variations among the different factors. CHs actions can attract media and public interest in the few cases where an inappropriate response results in serious consequences. Similar to Walley and Adams (2019) this study found that risk aversion still exists within policing although there are clear differences in risk perceptions amongst CHs partly due to their experience of handling calls with less experienced staff generally more risk averse. In some cases, being over-cautious was encouraged with the just in case principle still apparent.

Traditional decision-making theories assume that decisions are made in a rational manner with all the relevant available information shared in an ideal way (Lee and Cummins, 2004). This was noticeable, with less experienced staff inclined to use all the available information particularly with unfamiliar calls. In contrast, the Recognition Primed Decision (RPD) differentiates between experienced and less experienced decision-makers suggesting that decision-makers will use their experience to inform their decisions (Klein, 2004). This was apparent in this study with more experienced staff appearing to use their intuition when making decisions. However, it seems that CHs use both System 1 (intuition) and System 2 (rational) when making decisions, dependent on the circumstances. This aligns with the Dual Processing theory which argues that decision-making can be intuitive and/or analytical and rational (see Chapter 3). Intuition tends to be used when dealing with more familiar calls. Integrating evidence and theory, Chapter 8 will provide an examination of the findings linked to the themes identified throughout the thesis and will expand on decision-making theories.

Chapter 8: Integrating Evidence and Theory

There has been a long-standing debate in the UK about the role of the police, in particular what the police mandate is (Loader, 2020). The first stage of this study used quantitative data to inform that debate; providing evidence relating to reactive demand (mainly 999 and 101 calls for service) and how one force is currently dealing with that demand. The quantitative data were also used, in conjunction with the survey and interview data, to determine the role the Call Handler, in particular their role as gatekeeper to police resources and to establish how their levels of discretion in decision-making influenced the equity of response grading. (See Chapter 5 and the analysis of call data which found inequity in the response grading over time and to a lesser extent over space).

The thesis also sought to advance decision-making theoretical perspectives and, in response to gaps in the literature, has focused on the role of the CH and Dispatcher. The second stage of the study sought to identify factors that may influence CHs and Dispatchers' decision-making and to obtain the views of FCR staff on a variety of current issues facing policing.

This chapter brings together findings from both stages of the research and integrates them with existing literature and theory. It will be structured around several key themes discussed throughout the thesis, namely police demand, the role of police, resource-related matters, the role of the CH and decision-making in the FCR and finally the CHDMM. In addition, the chapter will outline how research findings specifically address each of the research questions.

Theme 1: Police Demand

- *RQ1: What is the nature of police demand in relation to calls for service from the public?*

As previously discussed, financial pressures and reductions in resources combined with the increasingly complex nature of police work, places even more importance on having a clear understanding of demand. Analysis identified fluctuations in demand with clear temporal and seasonal patterns evident. Calls increased in the summer months with variations in the time of day and day of the week incidents were reported. A key finding is that incidents classified as Crime only accounted for 15.6% of all incidents over the reporting period, consistent with previous studies (see Chapter 2). Complex crimes such as violence, sexual offences, and fraud increased which is consistent with CSEW and police recorded crime data. However, rises in recorded violent offences across all forces in the year ending December 2018 is believed to be due to improved crime recording practices and an enhanced understanding of crime recording rules (Office for National Statistics, 2019a). In contrast, there was a decline in reports of Theft/Robbery and Burglary over the reporting period. Overall, demand for incidents classified as Transport, which accounted for 15.2% of F1 demand, reduced over the reporting period with Highway Disruption (which includes roadblocks, breakdowns, and abnormal loads) Road-Related Offences and RTC-Damage Only most commonly reported. ASB incidents, consistent with police recorded crime across England and Wales reduced, however reports of domestic incidents increased. These findings can help inform resource decision-making by planning for the correct resourcing level within their response teams as well as helping assess future demand and assist in producing future FMS. Forces should utilise their call data to identify trends and patterns in their calls for service as well as shifts in demand.

The findings emphasise the social role of policing which takes up a considerable amount of the police workload, with calls reporting PSW incidents accounting for almost half (46.8%) of F1 demand and calls involving MH concerns accounting for 4.3%

of all calls for service. Similar to Langton et al. (2021), the data suggests that increased resources are required to deal with MH incidents. Although MH incidents accounted for 4.3% of all F1 incidents, they used almost 8% of resources.In contrast, Kane, Cattell, and Wire (2021) found that MH incidents did not represent a disproportionate amount of demand on police time and resources compared to non-mental state related incidents. However, almost half of forces admitted that their measure of the time spent on MH related incidents were not very, or not at all accurate.

Although it was unclear whether the MH qualifier is being applied appropriately, there was a consensus among interviewees that MH incidents are increasing with an agreement that current estimates in relation to the extent of MH incidents are underestimated. Interviewees mentioned 'regular' callers with MH issues who frequently contacted them. MH incidents can be both time consuming and resource intensive, therefore it is important for forces to evaluate their MH demand accurately for them to manage that demand. The police service should encourage national debate about who should have responsibility of MH incidents, including the possibility of Government funding to appropriate services.

The findings can help forces with their resource allocation for specific MH incidents as well as inform future policy decisions for police forces and other services such as the NHS, Social Services, Ambulance Services, and MH services. However, the fact that the police are being used increasingly as the service of first resort, the 24/7 availability and risk averse decision-making in the FCR staff creates difficulties in managing MH demand. Forces should utilise their call data to identify any trends and patterns, and variations in MH incidents identifying where and when they are occurring. They should also ensure that they have appropriate processes in place to accurately classify MH incidents allowing them to have an accurate picture of MH demand. For example, training should be provided to CHs to help them identify MH incidents utilising the NPCC (2020) definition of a MH incident.

Although The NHS (2019) Long Term Plan sets out investment plans to expand crisis MH services, the current demand from MH related incidents outstrips the police

capacity to deal with it (The Police Foundation, 2022). It is therefore important for forces to have an accurate understanding of the extent of their MH incidents (Koziarski, Ferguson, and Huey, 2022) and work with the appropriate partners allowing them to jointly review and manage demand linked to MH issues (NPCC, 2022). Increased debate amongst service providers should help to establish where key responsibilities for specific MH concerns lie. It is therefore important for partners to reach an agreement to delegate responsibilities to the most appropriate agency. It is important to identify why previous dialogs have not resulted in any change and to identify the issues blocking progress and how these can be resolved. Findings suggest that even when they believed other partners should be dealing with specific MH calls, CHs still felt obligated to deploy resources adding to the complexity of finding a solution. The 2021 Policing and Health Collaboration acknowledged that the drivers of wider social detriments and vulnerable groups and an effective policing approach to mental health and wellbeing are key future research priorities across the UK, which will help improve the evidence base for public health approaches to policing (Bath et al., 2021).

Additionally, demand also comes from different neighbourhoods, with crime demand occurring mainly within the most deprived urban areas. Indeed, police resources were disproportionately used in the most deprived 30% of LSOAs (50.4%). In contrast, less than 15% of resources were deployed to the least deprived 30% of LSOAs. Such findings can help influence crime reduction policies by identifying which types of crimes are more likely in which areas as well as informing discussions with services such as local councils who can identify areas of concern and assess what action is required, such as additional investments or Youth Endowment Fund type activities. As there is a need to agree responsibilities to tackle this demand at a local level, it is recommended that strategies should be created through Community Safety Partnerships (see p35) to help tackle and reduce the crime demand in the most deprived urban areas.

Like Walley and Adams (2019) an element of failure demand was also discovered, in particular preventative demand with previous callers contacting the police to request

updates considered a common occurrence. There was an opinion amongst staff that, while this was partly due to resource issues, high expectations from the public were also a contributory factor. Realistic timeframes for updates should be provided to the caller on the initial call who should be advised that updates cannot be provided by calling 101. Options such as providing a general email address to contact the force for updates should be considered.

Recent research has identified that the COVID-19 pandemic has since shifted demand, changed how forces manage their demand and prioritise their resources and continues to have significant implications for the police service (Aitkenhead et al. 2022). The pandemic increased the vulnerability of people already vulnerable and led to limited access to support services for people in need, increasing the demand on policing (HMICFRS, 2021) with calls increasing to the police to intervene at the point of crisis (Aitkenhead et al. 2022). The level of demand from child protection incidents changed during the pandemic with children being more at risk of online exploitation (ibid). It would be beneficial for future research to assess whether any changes in demand during the pandemic are short or long-term shifts (see Chapter 9 for future policy and research recommendations). As discussed, (see p46), the aim of the Online Safety Bill (due to pass in 2023) is to protect both children and adults online and outlines the duties of providers of services (Department for Science, Innovation and Technology and Department for Digital, Culture, Media & Sport, 2022).

- *RQ2: How are forces currently managing their demand?*

Chapter 3 discussed several demand management practices designed to help forces manage or reduce their demand. The 101 non-emergency number was designed to reduce the number of emergency calls and was seen as a useful way to reduce police deployments (Bain et al. 2016). However, data requested for this study via FOI requests identified that 999 calls increased by 25% between 2015 and 2018 across forces in England and Wales, coupled with a reduction of 12% in 101 calls. This may be partly explained by the public losing faith in the non-emergency number and rather than waiting for a 101 call to be answered, opting to call 999 instead (HMICFRS,

2020b). One interviewee estimated that, out of 999 demand, only a third is what they would call "a proper criminality based 999 call", something substantiated by F1 data where only 23.6% of 999 calls were reports of criminal behaviour. Feelings of frustration were evident among FCR staff who believed that callers were abusing the system and blocking the lines for actual emergencies. In fact, two extremes were identified: people misusing the 999 service and people calling 101 to report a crime as they didn't want to bother the police. This has consequences for police forces with unnecessary demand rising from misleading emergency calls. By contrast, an unwillingness to call 999 to report an emergency could lead to the escalation of an incident. It is therefore important for forces to increase the public's understanding of when to call the emergency and non-emergency number, for example by running public information campaigns or having local events. There is also the possibility, suggested by FCR staff, that many of the general public are not aware of the non-emergency number and that an awareness advert or campaign would be beneficial.

If forces are beginning to understand the benefits of channel shift, whereby calls from the public are shifted to digital channels allowing more incidents to be resolved online (NPCC, 2017a) via the 'single online home' (the new national platform to report non-emergencies) to help reduce demand on the 101 number. There are early signs the volume of incidents reported via the 'single online home' is growing steadily (HMICFRS, 2020a) and reducing demand on the 101 number, however further research would be required to assess any shift from 101 to online reporting. For example, further FOI requests could be sent to forces in England and Wales to ascertain any changes in reporting patterns.

An effective way to reduce demand and the number of non-emergency calls for service receiving an immediate response is to increase the use of alternative responses (McEwan, Connors, and Cohen, 1986). Forces in England and Wales have already implemented Differential Police Response (DPR) Strategies with the introduction of National Contact Management Grades and the use of decision-making models to help prioritise incidents and inform the response grades. Fleming & Grabosky (2009) discussed strategies of deflecting requests for service to other agencies, delaying

responses with calls held in queues, and denying requests. Although the call data cannot identify whether calls were deflected to other services, the survey data identified that in certain circumstances calls would be referred to other agencies in particular when CHs believed that the police were not the best placed agency to deal with the request. A vignette involving a MH related call by a female reporting that her partner was feeling suicidal was more likely to be referred to another agency. However, some respondents felt that although it was not a police matter, it would be best for an officer to attend, while others acknowledged that although other services should be present it was common for police to attend such incidents. These findings highlight policy implications for both police forces and other services such as MH services, social services, and the NHS in relation to who is best placed to deal with MH incidents. However, it is also acknowledged that even if we know who is best placed to deal with specific incidents, factors such as the availability of staff and resources would still need to be addressed.

Similarly, although it was not possible from the call data to identify if responses to calls were delayed, Dispatchers during the interviews admitted feeling frustrated with the lack of resources and discussed the decisions to delay responses to manage demand using delay queues. This downgrading of calls is another method of demand management, with evidence of F1 increasing the use of telephone resolutions to manage demand. There were some shifts in the management of calls reporting crimes (such as criminal damage, drugs, and fraud) shifting from scheduled appointment to managed contact and increasingly managed without deployment in an attempt to resolve incidents rather than resource them. Such findings suggest that grading policies are being altered to help meet demand which has the potential to impact on public confidence in policing. However, this will free up resources allowing the police to deal with other incidents which may positively impact police confidence.

Theme 2: The Role of Police

- *RQ3: What is the current role/mandate of policing and has this changed in recent years?*

It has been acknowledged that police forces do have some statutory responsibilities which they are obliged to carry out which are set out in various legislation. These are discussed throughout the thesis, in particular the fact that police forces, alongside other agencies have distinct specified roles and responsibilities in certain situations. However, the question of what the police do has been an area of interest for researchers for several years with studies reviewing calls for service in an attempt to ascertain what the police actually do (see Chapter 2). However, defining the role of policing is problematic as is it variable over time as are changes in response to public demands and legal constraints (Manning, Elmer, and Brooks, 2014). Although tackling crime is a primary function of policing, this is not necessarily reflective of the actual demand on policing and although it is important, it is only one element of police work (Muir et al. 2020). Indeed, the findings suggest that police are more than the 'tough, no nonsense crime fighters' as described by Theresa May (2011), with less than 16% of F1 incidents resulting in a crime report.

Findings suggest that police officers deal with a wide range of issues including ensuring the safety of the public, locating missing persons, dealing with ASB incidents, and dealing with incidents involving people with MH issues, as well as ensuring the road network functions efficiently and that people who use it can do so safely and securely (HMICFRS, 2020c). Similar to previous studies, the social role of policing was a common theme, with police forces expected to deal with an array of Public Safety and Welfare (PSW) incidents (which accounted for nearly half of all of F1 incidents (46.8%) over the reporting period), such as calls reporting concern for safety or a person's welfare, missing persons, domestic incidents, suspicious incidents/circumstances, and to a lesser extent civil disputes, protests and demonstrations, and incidents involving concerns for pets or wildlife. Survey respondents' views of the public and other services expectations of policing, appear to align with previous scholars' descriptions of the police service as being: 'The only 24 hour, fully mobile, social service' (Punch and Naylor, (1973:358); 'The Secret Social Service' (Punch, 1979); a 'Philosopher, Guide and Friend' (Cumming, Cumming and Edell, 1965); 'Street Corner Psychiatrists' (Teplin and Pruett, 1992) and Peace Officers (Banton, 1964). Similar to the Lumsden and Black

(2018) study, there was frustration about both the public and other agencies expectations of the service police could provide to the public and that they were filling the gaps of other services, such as social services and the ambulance service. However, the vignettes found that respondents' interpretations of police work appeared to be related to how they responded to the incident, with vignette three (caller phoned to report that her partner was feeling suicidal) the only scenario respondents overwhelmingly agreed was not a policing issue, subsequently favouring to refer the call to other services rather than deploying officers.

Dealing with incidents involving individuals with MH issues has been an essential part of policing (see Chapter 2). F1 MH-related incidents represented 4.3% of all calls for service which remained relatively consistent across the years. FCR staff believed that MH related incidents were increasing and that other agencies should take more responsibility for people with MH issues, however interviewees views on other agencies varied. It was acknowledged that other agencies were struggling to meet their demand, however, some conflict between services was evident with the view that social services regularly try to get the police 'to do their job'. There was also a consensus that the police service is not the correct agency to deal with MH incidents with an acceptance that the police are filling gaps of other organisations, such as social services, often referring to the period before the reduction of staff in services over the weekend as the '5pm Friday calls' (Lumsden and Black, 2018). Analysis of F1 call data found that the peak time for calls to police for support with MH related incidents was toward the end of the working day, between 1500hrs and 2100hrs across Monday to Friday with one interviewee arguing that people still need help outside those core hours. It was argued the police "are not the owners of all risks in society and it's not appropriate for them to be taking risk off other agencies where they are best placed to deal with it".

These findings highlight that the role of the police and the police mandate hasn't changed significantly since the early studies discussed in Chapter 2. However, the findings also stimulate debate around the future of the police mandate and the role of other services in dealing with MH and vulnerability concerns.

The findings have the potential to help inform partnership working which can allow various agencies to come to an agreement on how to solve such issues. It has been recognised that the Police service does have a statutory role in safeguarding vulnerable adults. In England, the Care Act (2014) requires that local authorities set up a Safeguarding Adults Board (SAB) which must include members from the local authority, the NHS and the police to develop plans for safeguarding of vulnerable adults (Home Office, nd). Resource implications for any changes are acknowledged, however police MH and vulnerability related demand must be addressed in partnership with other agencies (NPCC, 2020). Relevant questions that need to be addressed are: should the onus be on the police to reduce their demand, or should other services take more of a responsibility for incidents they are better placed to deal with? Should the role of the police encompass the social service functions identified by previous research? Are the police best placed to deal with MH related incidents? Who is best placed to deal with vulnerability issues? Is there the potential for MH services to extend their opening hours or provide 24/7 emergency in person support to relieve the pressure from the police service and who should have the responsibility for MH patients taken to A&E departments by police officers? Or rather than increase the current services to allow them to deal with such crises, should we, as suggested by Thacher (2022), work with current agencies to reduce the likelihood of these crises occurring in the first place? It is important to address these questions to both reduce police demand and ensure that people receive the appropriate care and support they require. It can also be debated whether, rather than delegate specific PSW concerns to other agencies, funding should be provided to the police service to help them adapt to dealing with such calls by employing specialist teams with the appropriate expertise. This is already occurring in some forces in relation to dealing with MH calls and could be extended to deal with other vulnerabilities. A further option is to create and fund a bespoke 24/7 MH emergency service.

Similar to studies discussed in Chapter 2, findings here show that current police mandate is that of crime fighters; resolving conflict and maintaining order; peacekeeping; ensuring public safety; social work provision; protecting the vulnerable; and to provide

a 24hr emergency service when required. However, it is unclear whether this is sustainable long term with the current economic climate. It is important for policing and other agencies to reconsider both what the police mandate is and what the future police mandate should be whilst considering the disparity between the public expectations and policing priorities (HMICFRS, 2019a). The public have a traditional view of what police should be doing, ranking visible local policing, responding to emergency situations, tackling serious and sexual violence and countering terrorism highly (Higgins, 2020). The findings, however, reveal that the public are not aware of what the police mandate is, with the public calling the police to report incidents involving MH and vulnerability concerns. PSW accounts for almost half of incidents which include calls reporting concern for safety for a person's welfare which in many cases are best dealt with by other agencies. However, when the public have a greater understanding of what modern policing demand entails, they are generally agreeable to changes in priorities (ibid).

Theme 3: Resource Related Matters

- *RQ4: Which incident types are resource intensive?*

Resources used varied between incident types, with Firearms Crimes, Robbery, and Sudden Death using more resources than incidents involving Drugs, Fraud, and Criminal Damage. However, while these types of incidents used the most resources, further research would be required to ascertain which incidents are the most time-intensive and costly as this data was unavailable. A Local Policing Unit Officer was the most used resource across all incident types followed by a Response Car. The use of an Armed Response Vehicle and Local Policing Unit Supervisor and Road Policing Unit were used the least. Findings here, similar to Langton et al. (2021), suggest that a disproportianate number of resources are required to deal with MH incidents. Where MH incidents accounted for 4.3% of all F1 incidents, they utilised almost 8% of resources. A calculation (based on percentiles of resources used) of the number of resources assigned to 90% of all MH and non-MH incidents, discovered that MH incidents used eight resources per incident compared to five for non-MH incidents.

This has implications for resource planning, and it is therefore essential that forces across England and Wales have an accurate picture of their MH demand.

- *RQ5: Is there a link between socio-economic factors and where resources are deployed to?*

This phase of the research found a stark difference in the number of resources used within the most and least deprived 30% of LSOAs, with the most deprived 30% of LSOAs receiving around half of all resources used. In contrast, less than 15% of resources were deployed to the least deprived 30% of LSOAs. In relation to the distribution of crime across areas of deprivation, clusters of crime occurred mainly within the most deprived urban areas with all crime types more likely to occur in areas with high deprivation. Almost half of all crimes were reported within the most deprived 30% of LSOAs, compared to only 16.7% within the least deprived 30% of LSOAs. Such findings can help inform crime prevention policies in an attempt to reduce criminal activities within the most deprived areas. Once police forces have a clear picture of crime within their local areas, Community Safety Partnerships (see p35) should be utilised to engage with residents to identify issues that are affecting them, evaluate potential initiatives and develop strategies to tackle priority concerns (Office of the Police and Crime Commissioner for Warwickshire, 2023).

- *RQ6: Are resources equitably distributed across LSOAs and IMD2019 deciles?*

Analysis of the distribution of resources across LSOAs and IMD2019 deciles (after the grading decision had been made) did not discover any significant inequitable distribution of police resources across space, with the average number of resources deployed to similar incident types regardless of the geographic area of the incident. Although resources were unevenly distributed across IMD2019 deciles this does not suggest they were distributed inequitably, as they were allocated where they were needed and indeed where it appears there was the demand for them (Boyne, Powell, and Ashworth, 2001).

Theme 4: The Role of the CH and Decision-making in the FCR

- *RQ7: What is the role of the CH, and what level of discretion do CHs have?*

CHs have been identified as Street Level Bureaucrats who have a great deal of discretion in their decision-making (Antunes and Scott, 1981). They have to deal with demands from the public and act as gatekeepers to police resources, while applying discretion which can be irrational or even prejudiced (Rowe, 2012). In this study, CHs resolved 19% of all calls and around a quarter (25.3%) of MH related calls without the need to dispatch any resources. The analysis of call, resource, and interview data raised questions regarding CHs discretion and whether this could lead to inequity in grading decisions.

Like previous studies (Scott, 1981; Waddington, 1993; Walley and Adams, 2019) this research has identified issues around the consistency of grading calls for service, with such disparities potentially involving the exercise of discretion (Gelsthorpe and Padfield, 2012) with responses to the vignettes showing varied judgments regarding threat, risk, harm, and vulnerability amongst CHs. Analysis of the call data assessing CH discretion and equity in response grading over time and space identified expected small fluctuations in the response grades due to the varying content and perceived urgency of calls. Clear patterns, however, were identified over time, with findings indicating inequity in the response grading of calls. Responses to particular calls appeared dependent on the time of day the call was received. Clear patterns across space and variations in grading practices were also identified suggesting an inequity in response grading dependent on the geographic location of calls, albeit to a lesser extent than over time. Discretion can not only increase the effect of biases on the decision-making process but can also lead to a breakdown of public trust (Sandford, 2000) and it is therefore recommended that unconscious bias training could be provided to FCR staff to help lessen the possibilities of biases influencing decision-making. These findings also highlight policy implications in relation to decision-making tools used within the FCR. It is recommended that forces reassess their decision-

making and risk assessment policies utilising the CHDMM to inform future training packages and FCR policies.

- *RQ8: How effective are current decision-making tools used by call-handlers/Dispatchers in the FCR?*

The THRIVE model is used to assess risk at the point of contact to allow CHs to determine an appropriate response and although there are variations in models, THRIVE is the key risk assessment tool used within FCRs and aligns with the NDM, both of which were important factors in decision-making. The survey findings suggest that, although there was a general consensus that THRIVE was an important factor when making decisions, most respondents considered it to be subjective, similar to the Walley and Adams (2019) study. Although opinions were divided on whether THRIVE provides a clear definition of vulnerability, it was generally believed to be effective in identifying which incidents have vulnerability concerns, similar to Walley and Adams (2019). Although CHs have high levels of discretion, they are still accountable for their decisions. THRIVE was felt to be useful for justifying decisions as opposed to helping make decisions. Some experienced members of staff appeared to use their experience and rationale when making decisions as opposed to a generic risk assessment. The survey identified that, although assessing risk is a key element of THRIVE, there was a lack of consistency in how respondents interpreted risk across different scenarios. The interviews corroborated the survey findings and provided additional insight into the views of FCR staff, who stated that the subjectivity of THRIVE was because the assessment is based on the interpretation of the CH.

However, CHs noted that THRIVE is completed at the end of a call when any risk and vulnerability have already been identified and although it was not deemed to be beneficial in helping to make a decision, it was useful for determining the urgency of calls and how they should be prioritised. It was suggested that without THRIVE there would be a lot more resources unnecessarily dispatched to incidents. A limitation of THRIVE noted in the interviews was that it does not consider police powers and force policies which would prompt staff to ask: 'Do we need to do this?' 'Should we be doing

this?' If used effectively THRIVE has the potential to be a useful tool complementing the NDM, in particular in determining the urgency of the call. However, although interviewees were aware of how the NDM links to THRIVE, few of the FCR staff interviewed had an in-depth knowledge of it (n=2). Disparity in responses was evident across years of experience with FCR staff with more experience having a greater understanding of how the NDM is applied to decision-making. This raises questions regarding the effectiveness of THRIVE as an officially accepted decision-making tool used in the FCR. Further research is recommended to discover if CHs across police forces use THRIVE after they have risk assessed the call (as opposed to during) and identified any vulnerability. If CHs use THRIVE after they have risk assessed the call, then THRIVE would become an inadequate risk assessment tool. Findings suggest that the degree of THRIVE training across forces is inconsistent with a varied understanding of how to complete THRIVE among CHs. A recommendation is for a standardised training package on how to appropriately use THRIVE to be created and rolled out across all forces in England and Wales.

- *RQ9: What are the main challenges faced by Call-Handlers/Dispatchers when making decisions?*

The survey enabled staff to provide their thoughts on the main challenges they faced in their role within the FCR when having to make decisions. The findings suggest that decision-making is complex and that evolving information which alters the element of risk, a lack of cooperation from callers, the emotional state of the caller and the lack of information provided all add to the complexity in risk assessing calls. Information provided by the caller can be implicit, explicit, or complex, and staff must interpret this to identify what, if any, police response is required (Manning, 1988). The accuracy of the information, the reliability of the caller, the clarity of the information, the evolving nature of the information, the nature of the call, and the emotional state of the caller were all identified as factors involved in respondents' decision-making.

The lack of available resources to deal with demand was a common theme with reference to both resource issues within the FCR and the availability of resources to deploy to incidents. Time pressures, competing priorities and working in a fast-paced

environment were also mentioned frequently. Respondents cited the use of THRIVE, the time of day the call was received, the previous history of callers, and the safety of the public as factors that influence their decision-making. The pressures of accurately assessing the risk associated with calls was noted in both the surveys and interviews, with concerns about making the "wrong decision" and the need to "get it right". described by one interviewee as being "one of the hardest parts of the job". However, this was dependent on the experience of staff, with more experienced CHs less concerned about making wrong decisions.

- *RQ10: What additional factors influence decision-making in FCRs?*

The survey and interview data highlighted several factors that can influence decision-making, all of which have informed the Call Handler Decision-Making Model (CHDMM). Resource issues (specifically, staffing levels) within the FCR were cited as being a factor when making decisions as was the availability of resources to deploy to incidents. Although the assigned importance differed among respondents, organisational culture factors such as personal accountability, legislation and powers, policies, and procedures, NDM, and NSIR were all considered important factors when making decisions. The frequency of changes to policies and procedures was considered by some to be problematic. There was no evidence of a blame culture, with a consensus that support was available to staff, although the quality varied between forces. Factors such as the information derived from the caller, time pressures, abusive callers, organisational culture, risk assessment, external pressures and organisational changes all have the potential to influence decision-making. Individual decision makers personal characteristics and levels of experience also contributed to their decision-making. Some degree of risk aversion was also evident in the survey data, with the interviewees acknowledging that grading incidents 'just in case;' was generally accepted within FCRs. However, findings indicated that experienced staff were generally less risk averse than their less experienced colleagues. The job role of respondents was also significant in determining the level of risk aversion, with Dispatchers less likely to be risk averse than CHs. Risk aversion appears to be associated with personal accountability and concerns regarding 'getting it right' as well

as, to a lesser extent, external pressures such as public expectations and force reputation.

According to survey respondents, controlling their emotions when dealing with distressing calls was easy, particularly among more experienced respondents with most indicating that their emotions would not influence their decision-making. However, staff with less experience were more likely to state that emotions could influence their decision-making. Interviewees did acknowledge that calls involving a 'trigger' (such as calls involving children) were more difficult to handle, although this appeared to lessen with experience. Findings from the survey and interview data were contradictory, making it difficult to ascertain if emotions influenced their decision-making. Although there was no evidence in the surveys of respondents' basing their decisions on overtly stereotyping the callers based on their characteristics, it is suggested that experiences can affect implicit biases (or unconscious biases) which have the potential to inform grading decisions. Although there was an admission that stereotypes do exist there was little suggestion that this would overtly influence decision-making.

A degree of conflict between CHs and Dispatchers was also evident with Dispatchers citing the lack of/limited information provided to them by CHs to allow them to make appropriate resourcing decisions. The issue of Dispatchers and managers changing grades was also raised. Concerns were also raised that decisions would not be supported by management and that, at times, there were too many people involved in the decision-making process. FCR staff in some forces rotate between CH and Dispatcher which may resolve such issues by gaining a better understanding of each role. A unique contribution to knowledge is the findings that the importance of factors that influence decision-makers varied by age, role, and years of experience.

Theme 5: Theoretical Considerations - Call-Handler Decision-making Model (CHDMM).

Decision-making in natural settings relies heavily on intuition (Klein, Calderwood, and Clinton-Cirocco, 2010; Klein, 1993) (see Chapter 3 for a discussion on decision-making models). The RPD model argues that the decision maker will recognise cues linked to the situation which generate a plausible course of action (Klein and Crandall, 1996; Klein, 1993). Similar to research by Roycroft (2019b), the findings here show that experienced members of staff use their intuition or 'gut feeling' using 'cues' from previous similar calls which provide access to information stored in memory (Simon, 1992).

In contrast, traditional decision theories assume that decisions are made in a rational manner and that, rather than using intuition, decision makers analyse and evaluate the information before making a rationale decision (Uzonwanne, 2016). Less experienced staff appeared to use both intuition and analysis, which is supported by dual process theories. According to Kahneman (2011), we have two separate modes of cognitive processing: system 1 and system 2. Less experienced staff appeared to use system 1, which is fast, intuitive and operates automatically with little or no effort when dealing with familiar calls and callers, in particular with 999 calls where decisions have to be made quickly. However, they also used system 2, which is slow, conscious, analytical, and rational and looks for more information to make decisions (Kahneman, 2011; Evans, 2008), when dealing with unfamiliar calls so they don't 'get it wrong'.

Experience enhances the ability to interpret calls, is beneficial in improving Dispatchers' ability to manage resources more effectively and is associated with an increase in confidence about making decisions, with some less experienced staff lacking the confidence to make rapid decisions. This is an important factor to consider for FCR management, in particular in relation to staffing busy periods within their force area, where it may be beneficial to ensure that an element of experienced CHs and Dispatchers are available to deal with calls quickly and effectively. Findings suggest that there is a degree of intuition that develops with experience and respondents

agreed to some extent that having experience of dealing with calls from the public made it easier to make decisions. However, it appears that CHs use both system 1 (intuition) and system 2 (rational) when making decisions and are inclined to evaluate information and use their intuition dependent on the circumstances. Even with experienced staff there will always be the occasional unfamiliar call where intuition is ineffective, and rationale is applied.

Decision-making, according to EBP (see Chapter 2), proposes that police decision-making should be based on 'What Works' and that evidence, including research, should be used to address specific issues (Engel, McManus and Isaza, 2020). Although this thesis has identified that experience is a significant factor in decision-making, it has also acknowledged that intuitive decision-making can be unreliable and is prone to cognitive biases (Tversky and Kahneman, 1974).

Conducting the surveys and the interviews has resulted in an improved decision-making model which can be used in forces across England and Wales to help inform FCR training packages by emphasising the factors that could influence decision-making in the FCR. The initial model (see Figure 3.5), informed by FCR policies and procedures, the theoretical framework of the thesis and previous research (Waddington, 1993; Fahsing, 2019; MIND, 2019), was developed and modified throughout the research process resulting in the completed model offered in Figure 7.1). Although only one factor (call-handling standards) was identified as having no influence on decision-making and was omitted from the model the study identified numerous additional factors which have enhanced the value of the unique model. It has also acknowledged that whilst important, experience and intuition should be used in conjunction with evidence-based practices for more effective decision-making. Decisions based on experience and intuition has the potential to inform grading decisions and it is hoped that the Call-Handler Decision-making Model (CHDMM) can help inform evidence-based practices and training packages within FCRs.

Summary of Key Findings

This thesis has utilised police call data to identify patterns of public demand which has helped to assess the reactive demand placed on policing and identify the current role of policing. Similar to other studies (Reiss, 1971; Webster, 1970; Wilson, 1970; Bercal, 1970; Scott, 1981), findings suggest that much police work is related to public safety and welfare with less than 16% of calls for service resulting in a crime being recorded. Previous studies could not be replicated due to the variations in how incidents were categorised which limited the accuracy and comparability of the findings. This study uses a standardised list of nationally agreed categories and sub-categories (NPIA, 2011) which allows the study to be replicable. The study also fills gaps in current knowledge by providing a comprehensive review of police demand and the role of current policing. The police mandate does not appear to have shifted much since the early studies (Cumming, Cumming, and Edell, 1965; Wilson, 1970, Reiss, 1971; Bercal, 1970) discussed in Chapter 2. This thesis does not seek to provide an answer to what the role of the police *should* be, but analysis of the call data does provide a detailed insight into the *current* role of the police.

The thesis has presented some unique findings relevant to decision-making by CHs within the FCR and has identified a range of factors that influence decision-making identified in both the survey and interviews filling knowledge gaps. The research findings suggest that decision-making is complex with a lack of uniformity in the perception of risk and urgency of calls. Relatedly, they indicate that issues exist in the consistency of grading between CHs. Similar to other studies, the findings highlight issues regarding the consistency of grading calls for service (Walley and Adams, 2019; Scott, 1981; Waddington, 1993). It is apparent that the CH role requires a degree of resilience, in particular when having to deal with abusive and sometimes difficult and disturbing calls. The notion of CHs as gatekeepers to police resources and Street Level Bureaucrats (SLB) (see Chapter 3) was supported. CHs have levels of discretion in their decision-making and although the use of discretion can be positive, the thesis has shown it can also lead to inequity in response grading and the inequitable distribution

of police services. It also recognises the mismatch between policy makers and SLBs in relation to decision-making tools and policies.

The research has also highlighted that, although assessing risk is a key element of THRIVE, there is a lack of consistency in how CHs interpret risk. In addition, although THRIVE was generally believed to be effective in identifying which incidents have vulnerability concerns it does not provide a clear definition of vulnerability. Furthermore, although THRIVE was deemed to be subjective, if used effectively it has the potential to be a useful decision-making tool to complement NDM. However, there appeared to be a general lack of knowledge of how the NDM links to THRIVE. The added fact that CHs believed THRIVE to be useful for justifying decisions as opposed to helping make decisions suggests that policy makers need to reassess their risk-assessment policies within the FCR. A further key finding that emerged from the surveys and interviews is that FCR staff decision-making and the importance of factors that influence decision-makers varied by role, age, and years of experience within a FCR. Such disparity will impact the consistency of decision-making and is something that should be addressed by forces when designing and implementing FCR decision-making and THRIVE training packages.

Findings also suggest a link between socio-economic factors and the deployment of resources with a greater proportion of resources deployed to the most deprived 30% of LSOAs. However, it was also recognised that an uneven distribution of resources across LSOAs does not necessarily suggest that they are distributed inequitably with resources being deployed to where crimes and incidents are reported.

Although there is a great deal of uncertainty regarding the accuracy of the recording of MH related incidents, the data here indicate that such incidents use a greater proportion of policing resources. These findings can help inform future discussions around the role of policing in dealing with incidents involving MH concerns. The NPCC (2020) strategy states that partners should take preventative action to reduce MH related incidents through early interventions and argues that partners should work together to both understand their demand and who is best placed to deal with it. The

findings can also help inform the general discussion about what the police mandate should be.

The thesis has also made several theoretical contributions to the understanding of decision-making within FCRs. The theoretical and evidence-based findings obtained from the research will improve the understanding of decision-making within the FCR. The unique CHDMM has the potential to inform future training packages for FCR staff as well as help find policy solutions and proposals. It is hypothesised that the research findings which informed the model are largely applicable to FCR staff across all UK police forces, however future decision-making research can utilise the model to test for any inconsistencies across different forces.

Chapter 9: Conclusion and Future Contributions

This thesis has sought is to increase understanding of police demand, to help inform the debate around the police mandate and provide a unique insight into the role of the CH in managing that demand. It has also made key contributions to the understanding of decision-making within the FCR and has advanced decision-making theoretical perspectives by providing an original Call Handler Decision-Making Model (CHDMM). As a reminder, the aims of this thesis were:

1. To provide a picture of the role of the police and the nature of police demand and assess how forces are currently dealing with their demand, including mental health related demand.
2. To identify the role of the CH in managing demand, specifically in relation to their role as gatekeepers to police resources and whether their discretion has the potential to lead to the inequitable distribution of police services.
3. To provide a theoretical basis to identify the decision-making processes within control rooms and increase understanding of the decision-making process. The study will build a model which incorporates aspects of existing theories as well as adopting specific contextual and situational factors that can influence CHs decision-making.

9.1 Summary of Findings

A key strength of this study was the use of a mixed methods approach (discussed in Chapter 4) which was employed to draw on the strengths and reduce the weaknesses of each method (Hammersley, 1996; Bryman, 2012). It was also used to provide a better understanding of the topic and research questions (Creswell, 2014; Bryman, 2012) and was the most appropriate methods to answer the research questions.

In relation to RQ1, call data provided by F1 was analysed to provide a picture of police demand. The call data were complemented by three additional sources of data: information from Freedom of Information (FOI) requests; Crime Survey for England

and Wales (CSEW) information; and open-source police crime data available from police.uk (2021a). Chapter 2 discusses the early studies into police activity which found that less than 30% of police incidents were crime related. However, the inconsistencies identified among early studies, in the way they categorised incidents, limits the accuracy and comparability of the findings. It is contended that by using a standardised list of nationally agreed categories and sub-categories provided by the National Standard for Incident Recording (NPIA, 2011), this study offers a clearer contemporary picture of the role of the police. Findings in this study identified that only 15.6% of calls for service were crime related.

The majority (84%) of F1 reactive demand comprised non-criminal incidents, utilising much of their resources which is comparable with other forces in England and Wales. There has been a national increase in complex crimes such as Violence and Sexual Offences which require more police resources, increasing demand. It was also discovered that demand was higher within the most deprived urban areas.

Chapter 2 also discusses the role of police in dealing with MH related incidents, arguing that the police are not always best placed to deal with incidents involving MH concerns. Chapter 5 provides an analysis of demand from MH incidents, which accounted for 4.3% of all incidents. However, it is cautioned that there is a lack of understanding about the extent of police incidents linked to MH issues, with varied estimates. Data from the surveys and interviews in Chapter 7 suggest that MH incidents are increasing with current estimates in relation to the extent of MH incidents underestimated, something that was indicated in the College of Policing (2015) demand report. The current demand from MH related incidents outstrips the police capacity to deal with it (The Police Foundation, 2022). The Chapter also discusses the new NPCC (2020) definition of a MH incident which, if used consistently across all forces in England and Wales, has the potential to provide a more accurate picture of the volume of MH incidents reported to forces.

Chapter 5 provides an analysis which addresses RQ2 and highlights a shift from 999 to 101 to report incidents, however it also reveals early signs that the volume of incidents

being reported on the 'single online home' will help reduce 101 demand. A key finding is the increase in the use of telephone resolutions to manage demand with calls reporting crimes (such as criminal damage, drugs, and fraud) increasingly managed by F1 without deployment. Unlike Walley and Adams (2019) and HMICFRS, (2018a), no evidence of downgrading incidents due to a lack of resources was identified, with respondents' adamant that such practices were not employed. Indeed, a lack of resources was not considered to be an appropriate part of Dispatcher's decision-making, although it was suggested that resources should be part of the overall decision-making process alongside THRIVE and the NDM. The concept of 'failure demand' was also observed. Walley & Jennison-Phillips (2018) and Walley and Adams (2019) noted that failure demand such as preventable demand included victims not being updated and having to call back for information, and police failing to deal with incidents appropriately in the first instance. This study found that previous callers contacting the police to request updates was considered a common occurrence by FCR staff and although they were aware of this avoidable demand, they cited a lack of resources as a reason for it occurring.

Chapter 2 also discusses the police mandate (RQ3) revealing that the use of the police as a social service is a consistent theme across several studies (Webster, 1970; Cumming, Cumming, and Edell, 1965; Punch and Naylor, 1973; Bercal, 1970). The chapter explores the views of HMICFRS (2017) who argue that the police are being used increasingly as the service of first resort, particularly where people with MH problems require urgent help and call for services to stop relying on the 24/7 availability of the police (HMICFRS, 2018b). This study has found that the police mandate hasn't changed significantly since the early studies discussed in Chapter 2, with the social role of policing a common theme across both the call data analysis (Chapter 5) and the survey and interview analysis (Chapter 7). The social role of policing takes up a considerable amount of the police workload, with calls reporting PSW incidents accounting for almost half (46.8%) of F1 demand and calls involving MH concerns accounting for 4.3% of all calls for service. Similar to Walley and Adams (2019), FCR staff believed that the police are filling gaps of other organisations, such as

social services, with peak times for calls to police for support with MH related incidents toward the end of the working day across Monday to Friday.

RQ4 considered which incidents were resource intensive and found overall that Firearms Crime and Robbery require the greatest amount of resource, however Chapter 6 also discusses the limitations in providing an accurate assessment of resource intensive incidents due to the unavailability of pertinent information such as the time taken for each officer to deal with specific incidents, or a breakdown of estimated resource costs and measures of the time spent on all incident types.

Incidents involving mental ill-health take up a considerable amount of police resources (HMICFRS, 2019a) with the police service sometimes having to transport the person in crisis to Accident and Emergency (A&E) for them to be seen (ibid). The views of FCR staff in Chapter 7 corroborated these assertions arguing that MH incidents were 'time consuming to deal with' and result in 'the disappearance of resources quickly'. Forces in Wales found that officers spent, on average, between 3- 4 hours dealing with each MH incident (HMICFRS, 2018a). Similar to Langton et al., (2021), findings here show that MH incidents are resource intensive and use a considerable and disproportionate number of policing resources compared to non-MH incidents using eight resources per incident compared to five for non-MH related incidents.

Chapter 6 also helped to address RQ5 and RQ6 with analysis of resource data discovering that a greater proportion of resources were used in the most deprived 30% of LSOAs receiving around half of all resources used. However, almost half of all crimes were reported within the most deprived 30% of LSOAs. Although resources were unevenly distributed across IMD2019 deciles, no significant inequitable distribution of police resources across space was identified. The average number of resources were deployed to similar incident types regardless of the geographic area of the incident with resources seemingly allocated where there was the demand for them.

The role of the CH and the level of discretion CHs have (RQ7) was explored in both Chapters 5 and 7. CHs are influential in managing police demand and, similar to Lum et

al. (2020b), the gatekeeper function was illustrated in the analysis of F1 call data where CHs resolved 19% of all calls, and around a quarter (25.3%) of MH related calls without the need to dispatch any resources. CHs can be defined as Street Level Bureaucrats who have discretion in deciding on the appropriate response to calls for service. The survey and interview data led the researcher to reassess the call data to identify if any inequity in grading existed over time or space. This analysis showed that the use of discretion can lead to inequity in response grading and the inequitable distribution of police services across time and space, however there was no evidence of inequity in the distribution of resources after the grading decision had been made and the incident passed to the Dispatcher for resourcing. The research findings acknowledge that decision-making is complex with a lack of uniformity in the perception of risk and urgency of calls. A key point identified from the surveys and interviews is that issues exist in the consistency of grading between CHs. Similar to other studies, the findings demonstrate issues around the consistency of grading calls for service (Walley and Adams, 2019; Scott, 1981; Waddington, 1993).

Chapter 7 analysed data retrieved from surveys and interviews to ascertain the effectiveness of current decision-making tools used by CHs/Dispatchers in the FCR (RQ8). The Chapter also assessed the main challenges faced by call-handlers/Dispatchers when making decisions (RQ9) and any additional factors that influence decision-making in FCRs (RQ10). It was acknowledged that although THRIVE does not provide a clear definition of vulnerability, it can be effective in identifying which incidents have vulnerability concerns. A key finding is that some CHs noted that THRIVE was completed at the end of the call after any risk and vulnerability had been identified and that it was useful for justifying decisions as opposed to helping make decisions. A further key finding is that although THRIVE is believed to be extremely subjective, if used effectively it has the potential to be a useful tool complementing the NDM, in particular in determining the urgency of the call. However, findings from this study suggest that FCR staff decision-making may be influenced by their role, age, and years of experience within a FCR, with staff with less experience more likely to agree that THRIVE was effective in prioritising incidents.

The accuracy and availability of information provided by callers was the main challenge faced by CHs, followed by resourcing issues. Conflict among FCR staff was apparent with a degree of an 'us vs them' mentality identified. Issues such as the regrading of calls and the lack of appropriate information provided to Dispatchers to inform their decision-making were causes of discontent. Further research is recommended to ascertain whether having FCR staff rotating between the role of CHs and dispatchers, as is the practice in some forces (personal correspondence), would be beneficial in creating a more inclusive working environment. Int 7 (Dispatcher) cautioned that this system did not work in their force arguing that staff struggled to do both. However, it is unclear whether having a greater understanding of both roles could potentially lead to less conflict within the FCR and result in less regrading of calls or whether the issues would remain due to the pressures of working in a fast-paced environment.

A significant finding was that risk aversion still exists within policing in particular among less experienced staff. Concerns about making the 'wrong decision' and the need to 'get it right' were evident, in particular among less experienced staff. In some cases, being over-cautious was encouraged with the 'just in case' principle (Ekblom and Heal 1985) still apparent.

9.2 Theoretical Considerations

A CHDMM (see Figure 7.1) has been developed which identifies factors that influence decision-making in FCRs which can help inform future training packages within FCRs. Particular factors influence some CHs more than others with their importance in influencing decision-makers seeming to vary by role, age, and years of experience. This has implications for consistent risk assessments and the grading of similar calls. It is envisaged that the theoretical decision-making model provided will help enhance decision-making skills within FCRs by raising awareness of factors which may influence decision-making as well as providing a checklist of factors for staff to consider. This should result in less failure demand, a more efficient use of resources and increase public confidence.

In relation to the theoretical contribution of the thesis, it was acknowledged that dual process theories appear to best explain how FCR staff make decisions. FCR staff use both intuition and rationale when making decisions, dependent on the circumstances. Less experienced staff tend to use rationale however use intuition, particularly when dealing with familiar calls. However even with experienced staff there will always be the occasional unfamiliar call where intuition is ineffective, and rationale is applied. Indeed, a key finding was that experience enhances the ability to interpret calls and is associated with an increase in confidence about making decisions, with less experienced staff lacking the confidence to make rapid decisions. A key implication resulting from this study is that the individual, contextual and situational factors presented in the CHDMM are key to understanding why inconsistencies in the grading of incidents exist.

9.3 Limitations

It is recognised that there are limitations to this research. With regard to the call data, the resources used for each incident (e.g., patrol vehicle, foot patrol) were only documented in 78% of all incidents in 2017 and 2018 and as such may have a limited effect on the resource findings. As previously discussed, there are also concerns regarding the accuracy of incidents involving a MH qualifier with the possibility that this qualifier could either be used incorrectly or inconsistently among CHs. It is hypothesised that current estimates in relation to the extent of MH incidents are underestimated. Furthermore, although it is acknowledged that the first stage of this study uses one police force as a case study, It has demonstrated that this has provided rich data to address the research questions. It is also argued that the findings could be generalisable to a number of police forces across England and Wales as the general characteristics of F1 are typical of many of the forces across England and Wales. It is however accepted that further research using additional case studies would enhance the findings.

With regard the survey and interview data, unfortunately, it was not possible to gain access to the FCR to conduct interviews in person due to COVID-19 restrictions. Due to such restrictions, online methods were used instead, with surveys the preferred option

for the police forces involved in the project. Several online interviews were also conducted. It is acknowledged that non-verbal signs can be missed when conducting interviews virtually, however information can be gathered from the participants voice (Saarijarvi and Brett 2021).

There are also limitations in the use of vignettes. Respondents could not probe the caller to gain additional information or gain access to information normally available to them in the FCR. They could only interpret the call based on the information provided and therefore could not properly assess the emotions or urgency from the caller. The preferred option of conducting an observational study coupled with interviews could have enhanced the findings, however, the survey and interviews included a diverse set of staff from several forces across the UK who differed in terms of age, years of experience and job roles producing valuable data which helped provide an insight into the unique nature of decision-making in the FCR.

9.4 Recommendations. Future Research and Policy Implications

The findings presented in this thesis have implications for both police policy makers and practitioners within the FCR. This thesis has identified the following recommendations both in terms of suggested further research and policy and training proposals.

The police mandate does not appear to have shifted much since the early studies discussed in Chapter 2 (Cumming, Cumming, and Edell, 1965; Wilson, 1970, Reiss, 1971; Bercal, 1970). These findings presented herein provide a foundation upon which future police workload studies can expand. It would be beneficial to conduct further research to compare findings across different UK forces in the aftermath of COVID to identify any shift in the role of policing. Cross-force research would also be beneficial in the further examination of inequity. Evidence of inequity has the potential to result in a threat to police legitimacy if the public believe the police service is acting in an unfair or unjust manner (Sunshine and Tyler, 2003). It is therefore recommended that further research should be conducted to determine the influence CHs discretionary

decision-making has on the inequitable distribution of police services as well as identify if the inconsistencies in the grading of calls leading to the inequity of distribution of resources across time and space, found in this study, can be extrapolated to other forces.

Determining the scale of calls for service involving MH issues has become a priority in evidence-based policing research and practice (Langton et al., 2021). However, there are varied estimates of the volume of police incidents linked to MH issues. The uncertainty of the extent of MH incidents makes informed decisions around removing responsibility from the police service to deal with such incidents problematic (Koziarski, Ferguson and Huey (2022). With the introduction of the NPCC (2020) definition of MH incidents (see Chapter 2), it is recommended that future research use long-term call data across a number of forces to establish the level of resources used to deal with incidents involving MH issues including ascertaining changes over time. It is also recommended that CHs document their reasons for adding MH qualifiers to incidents to aid understanding. NPCC (2020) have stated that partners should take preventative action to reduce MH related incidents through early interventions and should work together to both understand their demand and who is best placed to deal with it. The findings here can also inform future discussions with partners around the role of policing in dealing with incidents involving MH and vulnerability concerns. To create an evidence base, it is recommended that forces share knowledge about effective partnership working to reduce MH and vulnerability demand. It is recommended that the Safeguarding Adults Board (See p42) ensure that they have an appropriate strategic plan to ensure that partners are working together effectively to tackle safeguarding issues and protecting vulnerable adults (Home Office, nd).

Furthermore, forces should explore why calls to police for support with MH related incidents increase toward the end of the working day. Identifying why callers contact the police out of hours will help provide a greater understanding of their reasons and ensure that callers gain access to the most appropriate services. It is also important to address who is best placed to deal with other PSW concerns in order to both reduce police demand and ensure that people receive the appropriate care and support they

require. One option is rather than delegate specific PSW concerns to other agencies, funding should be provided to the police service to help them adapt to dealing with such calls by employing specialist teams with the appropriate expertise should be considered or providing a dedicated 24/7 mental health, in-person emergency service to complement existing services.

A further option is for the police to work with other agencies to help reduce the likelihood of these crises occurring in the first place (Thacher, 2022). A national follow-up study using the nationally agreed NPCC (2020) mental-health incidents should be conducted to look at the proportion of demand accounted for by MH-related calls and resources used across all forces. As previously discussed, (p48) police forces must deal with a range of 'wicked problems', described by Rittel and Webber (1973) as being complex and difficult to define social issues and must respond to calls relating to a broad range of challenging behaviours caused by alcohol and drug misuse (Huey, Ferguson, and Schulenerg, 2022). The police cannot deal with such social problems in isolation, with a joined-up approach required to address both the causes and potential solutions. It is recommended that strategies should be created through Community Safety Partnerships (see p35) to help tackle and reduce MH related incidents.

Consideration should be given to studying the outcomes of the police response to people in MH crisis to identify any benefits or disadvantages to the police responding to such incidents. Furthermore, future research could be conducted engaging with the public to find out why they and when they call the police to get a greater understanding of the reasoning behind calls for service. Further analysis of call data should be conducted to better understand failure demand is recommended in particular what proportion of calls would be classed as such and how to reduce this. Further research should also be conducted on the link between deprivation and police demand to help Identify factors that underpin criminal activity across IMD2019 deciles and increase the understanding of how deprivation influences criminal activity. Through mapping crimes, this thesis has helped improve our understanding of what crimes are being committed and where. This can help forces identify where to target their resources, as well as informing policy decisions and crime prevention

interventions to help reduce demand. Indeed, the research evidence suggests that short term crime reduction effects are evident with hot spot policing strategies with little displacement effects (Sherman, 2022). A recommendation would be for further investment in deprived, urban areas as well as research into what works in those areas. e.g., work of the Youth Endowment Fund.

It was suggested by FCR staff that some members of the public may not be aware of what number to call, therefore a recommendation would be for forces to consult with Wiltshire Constabulary who have run campaigns to help increase the public's understanding of when to call the emergency and non-emergency number (Wiltshire Police, 2020) to assess the effectiveness of the campaign and examine any impact the campaigns had in shifting demand from 101/999 calls. A further recommendation, identified from the interviews, would be to better promote the online chat function of the single online home portal to reports incidents such as ASB, with early evidence suggesting that this reduces demand on the 101 number (HMICFRS, 2020c). Although there are early signs that the volume of incidents being reported on the single online home is growing steadily (HMICFRS, 2020c), further research analysing the source of calls received by police forces would be beneficial in identifying any potential shift from 101 to online reporting which will allow forces to predict the future source of their demand.

It is also recommended that the vignettes, which are easily replicated, should be used by forces and tested within their FCRs. This will help identify any consistencies in gradings and opinions across FCRs which would enhance the reliability of this studies results (Bryman, 2012). The CHDMM has provided a theoretical framework to improve understanding of decision-making within FCRs and an outline of factors that can influence CHs decision-making. It is suggested that this theoretical model would benefit academics and help inform further research on decision-making within the FCR. Firstly, the model could be tested on further CHs in FCRs across England and Wales, with results compared across a range of forces with any similar results increasing the validity of this study. This study gathered views from participants in a good range of roles within the FCR from across eight forces. Further studies would

benefit from an increased sample size across more forces supported with senior buy-in from the likes of the College of Policing to encourage participation across England and Wales This would allow further testing of the CHDMM and the factors that have been identified, in this study, as influencing decision making. This may strengthen the inclusion of particular factors identified in this study or discover new factors.

Secondly, the CHDMM was initially intended to identify factors that influence decision making within the FCR. The model is useful in raising awareness of what influences decision-making among senior officers and policymakers in a FCR. For example, particular aspects of the call such as communication with the caller (including the accuracy, reliability, and ambiguity of the information provided) are difficult to manipulate i.e., it would be difficult for forces to pre-empt or alter the level or precision of the information provided by callers. However, other factors such as risk aversion, biases, stereotypes, and failure demand could be reviewed.

Further research can could be conducted to test particular aspects of the model improving practices in FCRs. A first step could be to conduct Randomised Control Trials, across several forces, to measure the effectiveness of chosen interventions, e.g., training. Table 9.1 highlights one such example using one aspect highlighted by the CHDMM as influencing decision-making, the risk aversion factor. Vignettes 1, 2 and 4, discussed in Chapter 7, highlight elements of risk aversion amongst all CHs.

Participants should be randomly selected from the target population (FCR staff within individual forces with the sample size dependent on the number of staff in the FCR) and placed into two groups (treatment and control group) with the outcomes measured for both groups (Bryman, 2012).

Table 9.1: Example of an RCT Testing the Effectiveness of an Intervention to Address Risk Aversion)

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Factor	**Intervention**	**Target Population**	**Intended Outcome**	**Measures**
Risk Aversion	New guidance should be introduced and provided to the treatment group to allay fears of potential consequences of making mistakes and encourage the reduction in the use of the 'just in case' principle. This would be provided via a training portal due to time constraints to conduct a full training session for a number of staff. Staff should be assured that they will be supported if mistakes are made provided the steps taken to makes their decisions are justified.	CHs within FCRs.	This should reduce risk aversion among less experienced staff, improve decision-making and result in a reduction of resources used.	6 months of participants call data (i.e. grading of calls) with comparisons of participants grading before and after the intervention. Pre- and post-intervention surveys (which could include the vignettes) asking CHs questions about their views on risk aversion. Identify resources used pre and post intervention for both treatment and control group. Assessment of caller complaints, internal investigations, and Independent Office for Police Conduct (IOPC) investigations.

Comparisons of participants grading (before and after) should be conducted to measure any changes to levels of risk aversion, e.g., changes to patterns of over grading incidents. Other measures could include pre- and post-intervention surveys asking CHs questions about their views on risk aversion. The surveys could also include the vignettes used in this study to identify any changes to their confidence in making decisions. A further option would be to identify resources used pre and post intervention for both treatment and control group.

Incidents reported by the public can have several possible outcomes and even if decisions made by CHs are justified, being less risk averse has the potential to lead to negative consequences occurring (Heaton, 2010) which could result in complaints being made against the police. As previously discussed (see p33), there is often a difference in what the public report an incident as and how it is classified by the police (see Reiss (1971) for a comparison of public and police characterisation of the same incidents). Caller complaints, internal investigations, and Independent Office for Police Conduct (IOPC) investigations could also be used as metrics to identify any changes after the intervention.

The effectiveness of interventions designed to address additional factors identified as influencing decision-making (e.g., biases, stereotyping, failure demand) could also be tested by randomly selecting a sample of FCR staff and providing targeted training on specific factors to assess outcomes as above. Forces can then analyse call and participant survey data to identify any differences before and after the training. If this was deemed effective in reducing resources and demand, then training packages could be rolled out to all new members of staff and incorporated into the initial training. This would be a valuable tool to police practitioners.

The police review by Sir Ronnie Flanagan (2008) challenged the risk averse culture within policing, recommending the need to move away from being risk averse to risk conscious. The College of Policing (2013) Authorised Professional Practice guidelines encourage police forces to adopt ‘a more positive approach to risk by openly supporting decision makers and building their confidence in taking risks’. Risk aversion

however still exists in policing, although there was also an element of risk consciousness evident, with respondents stating that they would support colleagues who made mistakes provided the steps taken to make their decisions were justified. It is recommended that further observational studies would be beneficial to identify variances (in particular related to experience and age) in risk aversion amongst FCR staff. This would allow practitioners and policy makers to target appropriate training opportunities and help establish effective risk assessment policies. In order to conduct a comprehensive cost of resource analysis, it is also recommended that police forces provide a breakdown of estimated resource costs and measures of the time spent on all incident types including MH related incidents.

This thesis has identified several training opportunities which could improve decision-making in FCRs, however the interviews and personal communication with several English forces identified that training provided to FCR staff varies greatly. For example, the length and method of initial CH training differs between forces. This was discussed during the interviews, and while one force was keen on continued training and development (Senior Manager, Int 4) and another stated that they receive THRIVE refresher courses (Dispatcher, Int 2), another force acknowledged that there were problems trying to provide any THRIVE training to CHs due to finding the time to relieve staff from their duties to provide the training (Dispatcher, Int 1). The lack of training was evident in some of the THRIVE assessments (Dispatcher, Int 1). If this practice is widespread throughout other forces, it could result in significant challenges providing sufficient and effective training to improve decision making within FCRs. It is important that FCR staff receive adequate training and continuous professional development to ensure that staff have an understanding of decision making to ensure that decisions are made effectively.

9.5 Original Contribution to Knowledge

This thesis has made several contributions to the field of British Policing and has provided a unique insight into the role of the CH in managing police demand. Firstly, it fills the gaps in current knowledge by providing a contemporary picture of police

demand and the current role of policing. By doing so this thesis contributes to the long-standing debate surrounding the police mandate. It promotes debate regarding the responsibilities of various sectors and helps inform future policy and practice changes. The variations in how incidents were categorised in previous studies limits the accuracy and comparability of the findings. This thesis took a unique approach by using a standardised list of nationally agreed categories and sub-categories provided by the National Standard for Incident Recording (NPIA, 2011) allowing the study to be replicable. However, it is important to have a detailed understanding of the data before undertaking further statistical analysis. Although an in-depth understanding of the data was lacking in this study, to the author's knowledge, the volume of data used represents the largest and most detailed exploration of police demand, the role of CHs in managing demand, and decision-making within police FCRs.

Secondly, this study is believed to be the first empirical study to explore the factors that influence CHs decision-making within police FCRs in relation to managing demand. By doing so it has improved our understanding of key internal and external factors which influence decision-making within this unique domain. It has identified that, if used effectively, THRIVE has the potential to be a useful tool complementing the NDM, in particular in determining the urgency of the call. However, CHs believed THRIVE to be useful for justifying decisions as opposed to helping make decisions which suggests that policy makers need to reassess their risk-assessment policies within the FCR.

Thirdly, in response to gaps in the literature, the thesis has also developed a unique Call Handler Decision-Making Model (CHDMM) has been presented to help advance decision-making theories and inform training within FCRs. By using this model, forces can demonstrate which factors can influence decision-making and design their training packages to address and emphasise these issues. The model has theoretical implications as it demonstrates ideas from Traditional Decision-Making Theories, the Naturalistic Decision-making approach, and the Dual Processing Approach as well as adopting specific contextual and situational factors that can influence CHs decision-making. The study also contributes new knowledge to decision-making theories by

demonstrating that CHs decision-making is best explained by dual processing theories and that both intuition and rationale are used by FCR staff when making decisions. Indeed, it has found that experience and age are important factors in decisions making, with CHs often using their experience and rationale when making decisions as opposed to a generic risk assessment.

The CHDMM model has established the foundations of an evidence base which academics can build on with future research and practitioners can utilise in training packages. An improved understanding of key internal and external factors which may or may not influence decision-making can help provide a better insight into how forces manage their resources and help effectively design FCR training packages and assist in identifying and improving professional good practice across forces (NPCC, 2017a).

Finally, this thesis has also found that CHs can be defined as Street Level Bureaucrats with discretion which has the potential to lead to inequity in response grading and the inequitable distribution of police services across time and space which has the potential to lead to a decrease in public confidence in policing. The findings can be instrumental in informing policy and practice within FCR as well as providing academics with the opportunity to build on the preliminary findings.

In conclusion, this research has made key contributions to the understanding of police demand, the police mandate, the role of the CH, and factors that influence decision-making. The research has identified that the police mandate hasn't changed much since the early studies in the 1960s with the social role of policing remaining a common theme. This study has also shed light on an important but largely unexplored area of decision-making relating to CHs within the FCR. It is anticipated the CHDMM will become a valuable tool for practitioners and policy makers to apply. This new evidence is presented with the intention of informing and improving police practice. The police should use evidence to target their limited resources effectively and efficiently and although EBP cannot wholly replace CHs judgements based on experiences, it can help to inform, and in many cases, improve such judgements (Sherman, 2013).

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Appendix 1: Previous Studies Categorisation of Incidents

Previous studies categorisation of incidents: Relevant studies using dispatch or activity records were utilised. Banton's (1965) observational study was excluded as were Bayley's (1990) and (2005) studies as they were international studies with varying collection methods and results.

Study and Data Collection Method[25]	**Categories and Findings**	**Incidents Included in the Categories[26]**
Reiss (1971) Dispatch Records[27]	Criminal Incidents - 17 percent Non-Criminal Incidents - 83 percent	Criminal Incidents: Assault, Armed Robbery, Burglary and Theft. Non-Criminal Incidents: Traffic Accident, Disturbance, Sick and Injured, Suspicious Person.
Webster (1970) Dispatch Records	Crimes Against Persons - 3 percent Crimes Against Property - 14 percent Traffic - 7 percent On-View - 20 percent Social Services - 17 percent Administration - 39 percent	Crimes Against Persons: Murder, Non-Negligent Manslaughter, Rape, Assault and Battery, Robbery. Crimes Against Property: Burglary, Burglary Alarms, Theft. On-View: Observed incidents when on patrol. Social Services: Family Crisis, Drunkenness, Suicide, Mental Illness, Ambulance Services, Public Nuisances. Administration: Coffee Breaks, Meals, Attending Court, Serving Warrants.
Wilson (1970) Dispatch Records	Information Gathering - 22 percent Service - 38 percent Order Maintenance - 30 percent Law Enforcement - 10 percent	Service - Accidents, Ambulance Calls, Assist a Person, Drunk Persons, Lost or Found Person or Property. Order Maintenance - Gang Disturbances, Family Trouble, Assault, Fights, Neighbour Troubles. Law Enforcement - Burglary in Progress, Prowler, Open Door or Window.
Cumming., et al., (1965) Dispatch Records	Calls for Things - 32 percent Calls for Support - 49 percent Others - 19 percent	Calls for Things: Traffic Violations, Losses or Thefts, Unlocked doors. Calls for Support: Health Services, e.g Ambulance Escorts, Investigation of Accidents, Suicide Attempts. Others: Information only, Not Police Business.
Punch and Naylor (1973) Dispatch Records	Law Enforcement - 41 percent Service - 59 percent	Law Enforcement: Burglaries, Theft, Wounding's, Suspicious Circumstances, Unnecessary Obstructions. Service: Family Quarrels, Loud Music, Domestic Disputes and Personal Problems, Mental Illness, Attempted Suicide, Missing Persons.

[25] The study may have involved more than one data collection method.

[26] Not an exhaustive list.

[27] Data collected at the police command and control centre via calls made to the police, calls radioed to patrol units, and some aspects of the use of patrol time (Cordner, 1980).

Bercal (1970) Dispatch Records	Crime - 16 percent (All calls) Using different categories: (Detroit and St Louis) Predatory and Illegal Service Crimes - 39 percent and 51 percent Public Disorder - 34 percent and 27 percent Crimes of Negligence - 12 percent and 10 percent Service - 14 percent and 12 percent	Predatory and Illegal Service Crimes: Prowlers, Alarms, Recovery of Property Public Disorder: Youth Disorder, Family Trouble, Missing Persons, Neighbour or Tenant Trouble. Crimes of negligence: Accidents-Vehicles Service (Health): Sick Person, Injury, Misc Accident, Attempted Suicide, Suicide, Ambulance Call, Animal Bites, Deaths. Service (Safety): Animal Injured, Direct Traffic, Fire, Street Defect, Misc Hazards.
Martin and Wilson (1969) Activity Reports	Crime - 28 percent Civil Order - 39 percent Traffic - 23 percent Internal Organisation - 10 percent	Crime: All Investigations of Crimes, including Petty Crime, Gathering Intelligence, Court Work. Civil Order: Civil Incident, e.g Accidents, Lost Children, Public Work e.g Patrols where no direct criminal or traffic work was undertaken. Traffic: Accidents unlikely to result in court proceedings, School Crossings, Directing Traffic. Internal Organisation: Domestic Matters including Administration such as Pay, Pensions, and Purchasing.
Scott (1981) Dispatch Records	Violent Crimes - 2 percent Non-Violent Crimes - 17 percent Interpersonal Conflict - 7 percent Medical Assistance - 3 percent Traffic Problems - 9 percent Dependent Person - 3 percent Public Nuisances - 11 percent Suspicious Circumstances - 5 percent Assistance - 12 percent Citizen Wants Information - 21 percent Citizen Gives Information - 8 percent Internal Operations - 2 percent	Violent Crimes: -Violence directed towards persons such as Homicide, Assault, Robbery, Rape, Sexual Assaults. Non-violent Crimes -No violence, or violence directed only at property such as Burglaries, Theft from Motor Vehicle, Vandalism, Arson. Interpersonal conflict: Arguments or fights in which no serious injuries are sustained, Disputes. Medical Assistance: Emergency Medical Transport, Traffic Injuries, General Medical Assistance. Traffic Problems: Vehicle Violations, Damage caused by Accidents. Dependent Person: Missing Persons, Juvenile Runaways, Mentally Health Issues. Public Nuisances: Noises Disturbances, Prostitution, Drug Violations, Trespassing. Suspicious Circumstances: Prowlers, Open Doors or Windows. Assistance: Lost Pets, Utility Problems, Downed Power Lines. Internal Operations: Transporting People into Custody, Other Legal Procedures.
Shapland and Hobbs (1989)	Burglary of Dwelling -4 percent Shoplifting - 5 percent	n/a

Dispatch Records	Theft from Motor Vehicle - 8 percent Disturbances - 22 percent Domestic Incidents - 11 percent Civil Emergencies - 11 percent Injury Traffic Accidents - 4 percent Disturbed People - 8 percent Found Property - 17 percent Shotgun Licensing - 10 percent	
Waddington (1993) Dispatch Records	Crime -26 percent Help - 13 percent Messages - 15 percent Reports - 9 percent Trouble - 16 percent ABA (automatic burglary alarm) - 20 percent	Crime: Crimes in Progress, Historic Petty Offences, Shoplifting. Help: Water Leak, Welfare of the Elderly, Road Traffic Accidents. Messages: Recovered property, Court summons. Reports: Reports of Non-Criminal Incidents such as Missing Persons, Abandoned Vehicles, Lost Property. Trouble: Domestic arguments, Youths, Public Disturbances, Fights.

Appendix 2: Suggested Questions/Considerations (Source: College of Policing, 2014).

Stage	Suggested Questions/Considerations
Information Gathering	What is happening? What do I know so far? What do I not know? What further information (or intelligence) do I want/need at this moment?
Assessment of Threat and Risk	Do I need to take action immediately? Do I need to seek more information? What could go wrong (and what could go well)? What is causing the situation? How probable is the risk of harm? How serious would it be? Is that level of risk acceptable? Is this a situation for the police alone to deal with? Am I the appropriate person to deal with this? What am I trying to achieve? Will my action resolve the situation?
Powers and Policy	What police powers might be required? Is there any national guidance covering this type of situation? Do any local organisational policies or guidelines apply? What legislation might apply? Is there any research evidence?
Options and Contingencies	**To consider:** The options that are open The immediacy of any threat The limits of information to hand The amount of time available The available resources and support Their own knowledge, experience and skills The impact of potential action on the situation and the public What action to take if things do not happen as anticipated **Is the Decison:** Proportionate, legitimate, necessary and ethical? Reasonable in the circumstances?
Action and Review	**Action:** Implement the decision Does anyone else need to know what you have decided? Record the actions if appropriate What happened as a result of the decision? **Review:** Review the decisions using the NDM. What lessons can you take from how things turned out and what might you do differently next time? If appropriate, evaluate the impact of the decision on outcomes.

Appendix 3: Mullins, Alison and Crego (2011) model of Senior Investigator Officer decision making in murder inquiries

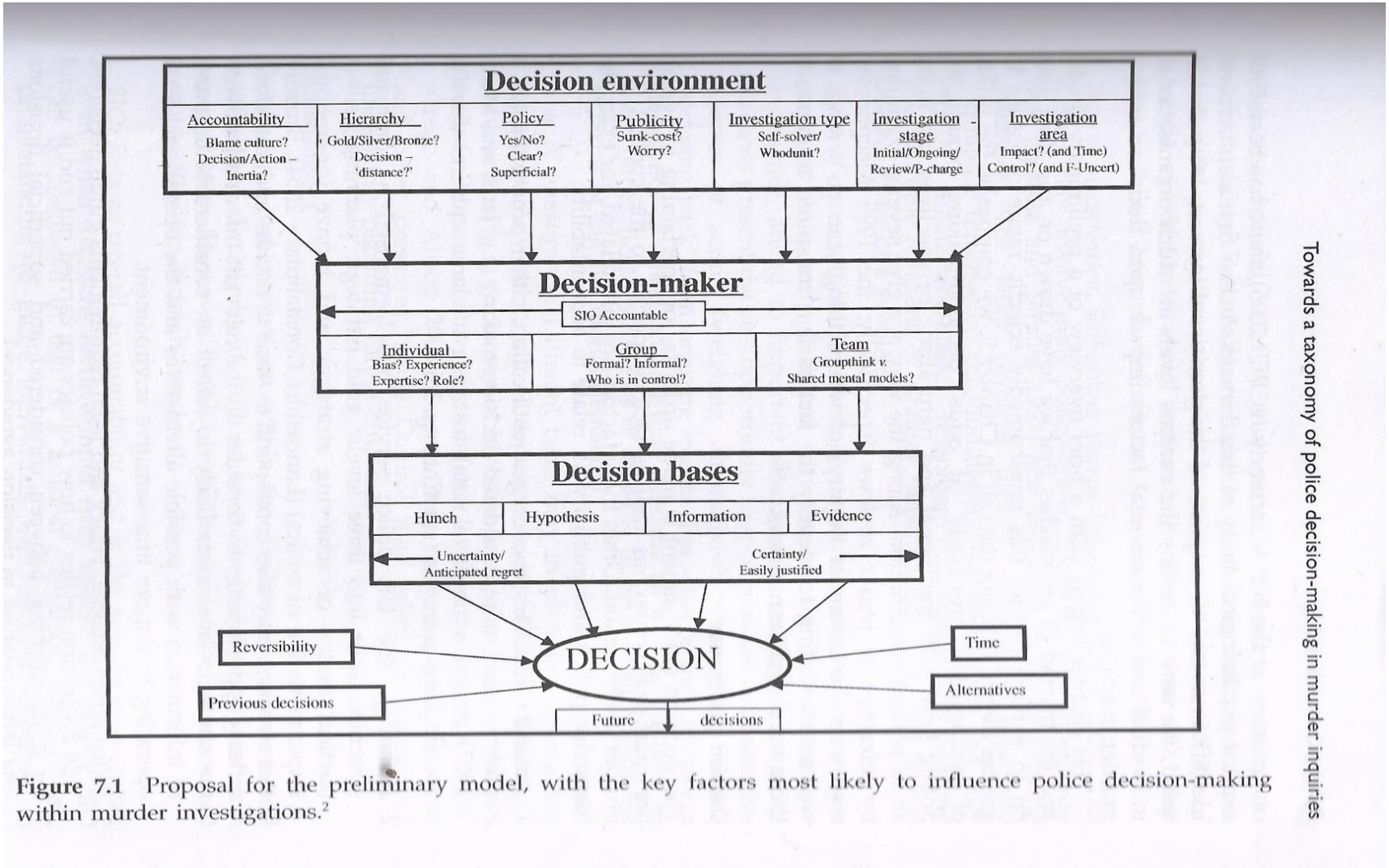


Figure 7.1 Proposal for the preliminary model, with the key factors most likely to influence police decision-making within murder investigations.[2]

Appendix 4: Call Data Issues

While the police incident dataset provided rich data to allow in-depth analysis there are some caveats as well as data quality issues, detailed below:

- It was not feasible for F1 to provide the 'outcome' of the incidents (e.g., no suspect identified, caution given, or arrest made) due to the complexity and time constraints involved in retrieving this information from police systems. Therefore, analysis could not be conducted regarding which incidents should be prioritised using incident outcome data. A recommendation for F1 could be to include the outcome in the initial incident record allowing for all the data to be extracted to inform analysis. This would allow the force to accurately assess any correlation between specific grading, actions, and positive/negative outcomes, which would be beneficial in determining which incidents should be prioritised.
- The resources used for each incident (e.g., patrol vehicle, foot patrol) were only documented from October 2016 and were only documented in 78% of all incidents in 2017 and 2018. Therefore only 2017 and 2018 resource data has been utilised. Incidents with no resource documented may indicate that either the incident was referred to another agency or the Call-Handler (CH) did not add the resources used to the incident due to human error. Incidents with numerous resources may include some resources which were utilised, but not necessarily deployed. A further recommendation, therefore, would be to ensure staff record this information to identify the resources used for specific types of incidents. This would enable comparisons between incident types and mean resource intensive incidents could be identified.
- The mental health (MH) qualifier is used 'to endorse an incident involving a person who has or appears to be suffering from a mental disorder or mental impairment including learning difficulties' (NPIA, 2011:31). The decision to add a MH qualifier is the decision of individual call handlers, therefore it is important to acknowledge the possibility that this qualifier could either be used incorrectly or inconsistently among CHs. The new recording system introduced in late [redacted] allows call handlers to quickly access information regarding previous incidents which may, if documented, help inform decisions regarding any previous mental health concerns.
- For information in relation to how the data was cleansed please see Appendix 6.

Appendix 5: List of NICL and examples

Codes used by F1 (From the National Incident Category List)		
Category	**Description**	**What's Included**
Administration	Complaint Against Police	Complaints against police or reports of dissatisfaction with service.
	Lost/Found Property/Found Person	Found stolen vehicles; vehicles reported stolen but were in fact 'lost' i.e. parked somewhere else; found people, i.e. anyone who has previously been reported missing.
	Police-Generated Resource Activity	Incidents/information relating to activities generated by the police. This is mostly used as an opening code for any transfer of incidents from other forces or law enforcement agencies. Also used to task incidents from a main incident, which may or may not need resourcing.
	Pre-Planned Event	Major events such as football, pop concerts, school fetes, lawful shoots, lamping, etc.
	Contact Record	When calls have been resolved by giving general, nonspecific advice, e.g., opening times/location of nearest police station.
Anti-Social Behaviour (ASB)	Personal	Incidents perceived by either the caller or call handler to be deliberately targeted at, or having an impact on, an individual or group rather than the community at large, e.g., neighbour disputes.
	Nuisance	An act, condition, thing, person causes trouble, annoyance, inconvenience, offence or suffering to the local community in general rather than to individual victims, e.g., gangs of youths in a park drinking causing a nuisance.

	Environmental	The interface between people and places. Incidents where individuals and groups have an impact on their surroundings and spoil it for others wishing to use and enjoy those surroundings, e.g., drugs paraphernalia being left on a park, other littering.
Public Safety and Welfare (PSW)	Abandoned Call to Emergency Services	Calls made deliberately then abandoned without speech; calls 'pocket dialled' by mistake.
	Absconder/AWOL/Wanted Persons/Police and Court Orders/Bail	Any incident which falls short of a notifiable crime that involves a breach or check of any police/court order or breach of bail.
	Alarm	Reports of an activation of an automatic alarm system which is linked to a monitoring station.
	Animals/Wildlife	Wildlife, pets or domesticated animals, e.g., dog locked in unventilated car.
	Civil Disputes	Disputes, misunderstandings and breakdowns in communications between private individuals and/or organisations in respect of differences about legal rights and interests.
	Concern for Safety/Collapse/Illness/Injury	Concern for a person's welfare or well-being (not missing); person found collapse or ill or suffering from illness or is trapped. Also *includes those who appear to be drunk and incapable.*
	Domestic Incident	Incidents of a domestic nature, e.g., verbal argument or civil issue, which do not amount to a notifiable crime.
	Firearms	Incidents and non-notifiable crimes involving firearms, imitation firearms and BB guns, as well as firearms licensing offences that are not notifiable crimes.
	Hoax Calls	False calls made to emergency services where the information passed is believed to be, or known to be, false

		and is given with the intent of misusing that emergency service
	Immigration	Any incident, which falls short of a notifiable crime that concerns immigration, asylum issues, etc.
	Industrial Incident/Accident	Incidents/accidents occurring at industrial sites, e.g., factories, workshops, offices, building sites.
	Licensing	All licensing matters and incidents which fall short of notifiable crimes relating to licensing/licensed premises (pubs, clubs, off licences, theatres, cinemas, etc).
	Missing Person	A person is classed as missing if their whereabouts are unknown whatever the circumstances of disappearance. A person is considered missing until located and their wellbeing established.
	Missing: No Apparent Risk	As above but is usual activity for the missing person and no risk associated with the disappearance or non-appearance.
	Natural Disaster	Any incident, including a potential incident that results or could result from an effect of natural forces, e.g., floods, strong winds, lightning strikes, etc.
	Protest/Demonstration	Spontaneous or pre-planned events where there is no notifiable crime, e.g., protest marches; strikes/industrial action etc.
	Sudden Death	Deaths that weren't expected or that were initially treated as suspicious and were subsequently found not to be.
	Suspicious Circumstances/Insecure Premises or Vehicles	A report that a person is acting in a suspicious manner; a vehicle is being driven in a suspicious manner; something has happened to arouse suspicion, but no person/vehicle has been seen/involved; insecure vehicles.

	Suspicious Package or Object	Package or object seen in suspicious circumstances or in a location that causes concern, e.g., white powder, unexploded munitions, abandoned bags, etc.
Transport	RTC – Death/Injury	Death or injury caused to a person as a result of the incident. Also includes single vehicle incidents where no collision takes place, e.g., motorcyclist loses control and crashes with no other vehicle being involved.
	RTC – Damage Only	Damage to property other than the vehicle, e.g., another vehicle, hedges, fences, etc. Also includes incidents in car parks and roads on private land.
	Highway Disruption	Any occurrence that causes, or has the potential to cause, disruption to any road user, e.g., breakdowns or sports events on or near the highway.
	Road Related Offence	Reports of drink/drug driving and other offences such as no driving licence, no MOT/tax/insurance, etc., whether confirmed or unconfirmed.
	Rail/Air/Marine	Any incident or activity which is not road related but involves the transport system.
Other	Crime-Related Incident Other	These are calls for service involving a crime; however, another force or agency take primacy.

Appendix 6 – Information relating to the data cleansing of F1 call data

- ‘Crime-Related Incidents’ are calls for service involving a crime, however F1 will not create a crime report as another force or agency take primacy. Such incidents have, therefore been categorised as ‘other’ as opposed to ‘crime’.
- Data includes reports that resulted in an incident log being created only and does not include abandoned calls or calls that were dealt with without creating an incident.
- ‘Police Generated Resource Activity’ is mostly used as an opening code for any transfer of incidents from other forces or law enforcement agencies. Although the opening code should be amended by the operator, this is not always the case. In such circumstances the closing code will determine the incident type. This code is also used to task incidents from a main incident, which may or may not need resourcing.
- There are slight variations in the grading of incidents due to the introduction of a new recording system. ‘Managed Contact’ was introduced in [redacted] to replace ‘Non-Attendance’ as it better described the work that was undertaken in relation to those offences. ‘Non-Urgent’ was introduced in [redacted] as an additional category allowing the deployment of officers. Prior to this ‘Priority’ and ‘Scheduled Appointment’ were used, however there was no classification for incidents that required an attendance that did not require an urgent deployment.
- F1 began to implement changes to their crime recording procedures after recommendations by HMICFRS in [redacted] who identified that incident records were not correctly reflecting the reported crime. There were some occasions where crimes were created without an incident and where incidents were closed as a crime where there was subsequent evidence a crime wasn’t committed. Such cases could have an impact on the percentage of incidents classified as ‘Crime’. However, it is also the case that incidents closed as a ‘Crime’ were subsequently not recorded on the crime recording system which will have no impact on the findings in relation to the percentage of incidents

that are crime related. On most occasions an incident that was closed as a crime would have had at least one crime created from it on the crime system.

- There were occasions when calls for service from a neighbouring force were diverted to F1 where they did not have the capacity to answer the calls. In some cases, the incident type has not been provided, therefore in order to observe both forces anonymity these will be classified with an Opening Code of 'Other' (n=2,375). Incidents types recorded using historic codes (n=959) are also classified as 'Other'.
- Although F1 are moving to an increased digital reporting platform, there was little uptake on this service during the data collection period. The online crime reporting 'Single Online Home' (see section 3.5) went live at the end of February [redacted] replacing an existing online crime reporting facility which was hosted on the previous version of the force website. It is unclear when this facility was introduced, however according to F1 it was not particularly accessible and as a result did not attract that many reports. Online reporting, including reports from emails, SMS texts, social media and other mobile devices, only accounted for 0.6% of all calls for service (n=5,213).
- Analysis has been conducted on the time and day the incident was reported and not necessarily when it occurred as the project is interested in police demand, and the initial call to 999/101 informs the resulting demand placed on the police.
- A number of 'Incident Grade Names' were recorded as 'Police Generated', as opposed to the forces' response grades, with calls received from a number of sources (n=36,115). These have been assessed as being operator errors as each incident has to be risk assessed using the THRIVE methodology and the operators grading rationale should be recorded in the log. The percentage of incidents graded as 'Police Generated' are consistent across all years and will be documented as 'Other'.
- Grades can change during the life of the incident, and it is possible that the grading provided in the data may be different to the initial grade chosen by

the operator who took the call. Any changes in grading cannot be identified and therefore analysis has been conducted on the provided grades.

- ‘Domestic Incident’ refers to incidents which don’t amount to a notifiable crime.

Appendix 7: Preliminary page of the survey

Introduction and Informed Consent

Purpose of the study: This study seeks to increase the understanding of the decision-making process within control rooms, in particular the use of decision-making models and any additional factors that underpin call takers/controllers decision-making. This study is part of a wider PhD project looking at the management of demand within forces in relation to calls for assistance from the public.

Procedure: You are being asked to participate in an online survey lasting approximately 15 minutes. The survey will consist of a number of questions about decision-making tools used in the Force Control Room, as well as additional factors that influence your decision making. You do not have to answer any questions that you don't wish to.

Voluntary Nature of the Research and Anonymity: Your participation in this research is entirely voluntary and you may refuse to answer any of the questions or end the survey at any point. You may also withdraw your research data up to two weeks after the survey completion date. Every effort will be made to ensure you (and your Force) remain anonymous. The data will be accessible only to the researcher and research supervisor. Your data will be kept in a secure location and stored as encrypted files.

Statement of Consent

I have read the information above and understand the purpose of the research and my part in it. The purpose and nature of the study has been explained to me in writing and I have had the opportunity to ask questions about the study. I understand that I can withdraw permission to use data from the survey within two weeks after completion, in which case the material will be deleted. I grant permission for the data generated from this survey, including direct quotations, to be used in the researcher's publication. I consent to participate in this study, and I understand that I can withdraw from the study, without any penalty or consequences. I confirm I am over the age of 18 years.

By clicking NEXT you are indicating that you have read the description of the study, detailed in the participant information sheet, and that you agree to the terms as described. By clicking NEXT you are giving your consent to participate. The following page will take you to the start of the survey.

Appendix 8: Interview Schedule

Semi-structured interviews were conducted with nine themes identified from the survey data. The themes differed slightly dependent on the job role of the interviewees. A sample of the questions asked are shown below:

Communication with Caller

How difficult is it to make decision when you receive a call from someone but it's quite ambiguous and they are providing you with very little information?
How difficult is it to deal with abusive calls?
Does the emotional state of the caller influence how you would grade a call?

Time Pressures

Do you at times have to rush calls due to time pressures?

Organisational Culture

How important is it to be aware of legislation and policies when making decisions?
Is there an issue with call handlers passing the call onto the dispatchers and the dispatchers changing the grading?
Are there times when you have to deal with calls from people because the officers haven't called them back?

Risk Assessment

How effective do you think THRIVE is at identifying vulnerability?
Do you use THRIVE alongside the national decision model?
Are you given appropriate training in how to use THRIVE?
Does THRIVE help you prioritise incidents?

External Pressures

When deciding on whether to deploy do you consider external pressures, e.g how the public
or media will react?
Organisational Changes

And as a dispatcher do you consider the available resources?

Personal Characteristics

How easy is it to control your emotions when you are having to deal with difficult calls?

Decision Making Theories

Do you think that more experienced members of staff tend to use their intuition more?

Other

Do you feel your force are having to deal with more mental health incidents?
Has your force seen an increase in trying to deal with issues over the phone rather than having to deploy?
Are there any times that you are concerned about the consequences of making the wrong decision?

Appendix 9– Accompanying email regarding interview

Good morning,
Thank you for completing the recent survey on decision making within Force Control Rooms. I am contacting you as you mentioned that you would be happy to discuss this important topic further. Can you let me know when you would be free in the next couple of weeks to take part in a short interview, and whether you are happy for this to be conducted via MS Teams, Skype or a telephone call? I have attached a participant information sheet for you to read and if you are happy to proceed, I will send you a consent form.

Thanks in advance

Elaine Duncan
Nottingham Trent University
PhD Research Student

Appendix 10: Participant Information Sheet - Interviews

PROJECT TITLE

Understanding Decision-Making Within Force Control Rooms

My name is Elaine Duncan and I am a PhD student at Nottingham Trent University. Thank you for considering participating in this research project. Before deciding whether you wish to be interviewed, I have compiled some information below regarding the purpose of the research and what your participation will involve. I would be grateful if you would take the time to read the following information carefully before making your decision. Please don't hesitate to contact me if you have any questions or concerns.

Funding of the Project

This research project is funded by a Nottingham Trent University Vice Chancellors' PhD studentship

What is the purpose of the study?

Call-handlers are the first point of contact between the public and the police, therefore their role in managing demand is paramount. Call-handlers/Dispatchers play an important and challenging role in policing, often making decisions in high pressured environments. Many decisions made can have a significant effect on the lives of others.

This study seeks to increase the understanding of the decision-making process within control rooms, in particular the use of decision-making models and any additional factors that underpin call handler's/dispatcher's decision-making. This study is part of a wider PhD project looking at the management of demand within forces in relation to calls for assistance from the public.

Why have I been invited to participate?

You have been invited to participate as you are currently employed within a Force Control Room. Your views and opinions on current decision-making models, as well as other factors that influence your decision making will help to inform this project. You will be asked to give your own personal/professional opinion.

Do I have to participate?

No, taking part in the study is completely voluntary. The information regarding the purpose of the study will allow you to decide if you wish to take part. The names of people who have participated in the study will not be shared with managers. If you agree, you will be asked to sign a separate consent form. You are free to withdraw your data from the study within 2 weeks of the interview if you wish, with no explanation.

What if I change my mind after I have taken part?

If you wish to withdraw your consent after you have completed the interview you will have two weeks to do so with no explanation required. You can do this by contacting me on that email at the bottom of this form You will be asked to come up with your own 'unique identifier'. If you wish to withdraw your data from the study, you will need to quote this identifier to allow me to identify your responses. Please note that submitting a withdrawal request by email will compromise your identity.

What would taking part involve?

Interviews will last no longer than 45 minutes and, due to the current situation with COVID-19, will be conducted via either Skype/MS Teams, whatever is your preference. You can choose whether to use the camera or audio only. I would ask that you find somewhere private to do the interview so that you are not overheard. I will contact you by email to arrange a date and time that is convenient for you. The interview will be carried out by myself and will follow a semi-structured format. I would like your permission to record the interview on either Skype or MS Teams to ensure the data you provide is accurately documented. You will be asked to answer several questions during the interview, but you are under no obligation to answer any questions that you don't wish to. There are no other requirements associated with participating.

What type of information are you looking for?

The interviewer will ask you about your opinion on current decision-making tools used within the Force Control Room. They will also ask you about additional factors that influence your decision making.

What questions will be asked at the interview?

A full list of questions will be emailed to you prior to the interview giving you the opportunity to read through them. You can let me know if there are any questions you don't want to answer, and these will be omitted from the interview. If you are unsure about any of the questions you can contact me, prior to the interview, to discuss.

What are the possible disadvantages of taking part in the project?

It is not expected that participating in the project will result in any disadvantages.

What are the possible benefits of taking part in the project?

Whilst there are no direct benefits for people participating in this project, it is hoped the information retrieved from the study will help to improve decision-making in Force Control Rooms.

What will happen to the information I provide during the interview?

The recording of your interview will be transcribed and analysed. This information will then be incorporated into the findings and conclusions of the research and published in my thesis and may be used for further research. You will not be named in any publication but selected (anonymised) quotations may be used in my final report and other academic work. Quotes will be anonymised, but I cannot guarantee full confidentiality. Non-anonymised data will be destroyed after I have graduated from my PhD. If you would like a copy of the results, please refer to the contact details below.

Will I be able to be identified if I take part, and will the data be confidential?

Every effort will be made to ensure you (and your force) cannot be identified at any stage of the project. Any data collected from the online interview will be stored within Nottingham Trent University data store as this has added layers of security and protection and is designed to store confidential information. All files will be encrypted, and password

protected, with access restricted to the researcher and supervisors. The data will be stored in line with General Data Protection Regulation (GDPR).

Has the study been reviewed by anyone?

The study has been subject to ethical approval by the University's School of Social Sciences Research Ethics Committee. It has been designed with reference to the British Criminological Society's code of ethics.

Who can I contact about the project?

Researcher: elaine.duncan2018@my.ntu.ac.uk**Supervisor:** Dr Becky Thompson becky.thompson@ntu.ac.uk

Appendix 11: Interviews- Informed Consent Form

Project Title: Understanding Decision-Making Within Force Control Rooms

Purpose of the study: This study seeks to increase the understanding of the decision-making process within control rooms, in particular the use of decision-making models and any additional factors that underpin call handler's decision-making. This study is part of a wider PhD project looking at the management of demand within forces in relation to calls for assistance from the public.

Procedure: You are being asked to participate in a semi-structured interview lasting approximately 45 minutes via Skype or MS Teams, of which will be agreed with the force. The interview will consist of a number of questions about decision-making tools used in the Force Control Room, as well as additional factors that influence your decision making. The interview will be recorded with your consent. Please tell the interviewer if you do not wish to answer any of the questions put to you.

Voluntary Nature of the Research and Anonymity: Your participation in this research is entirely voluntary and you may refuse to answer any of the questions or end the interview at any point. You may also withdraw your data up to two weeks after the interview date. Every effort will be made to ensure you (and your Force) remain anonymous. The data will be accessible only to the researcher and research supervisor. Your data will be kept in a secure location and stored as encrypted files.

Statement of Consent

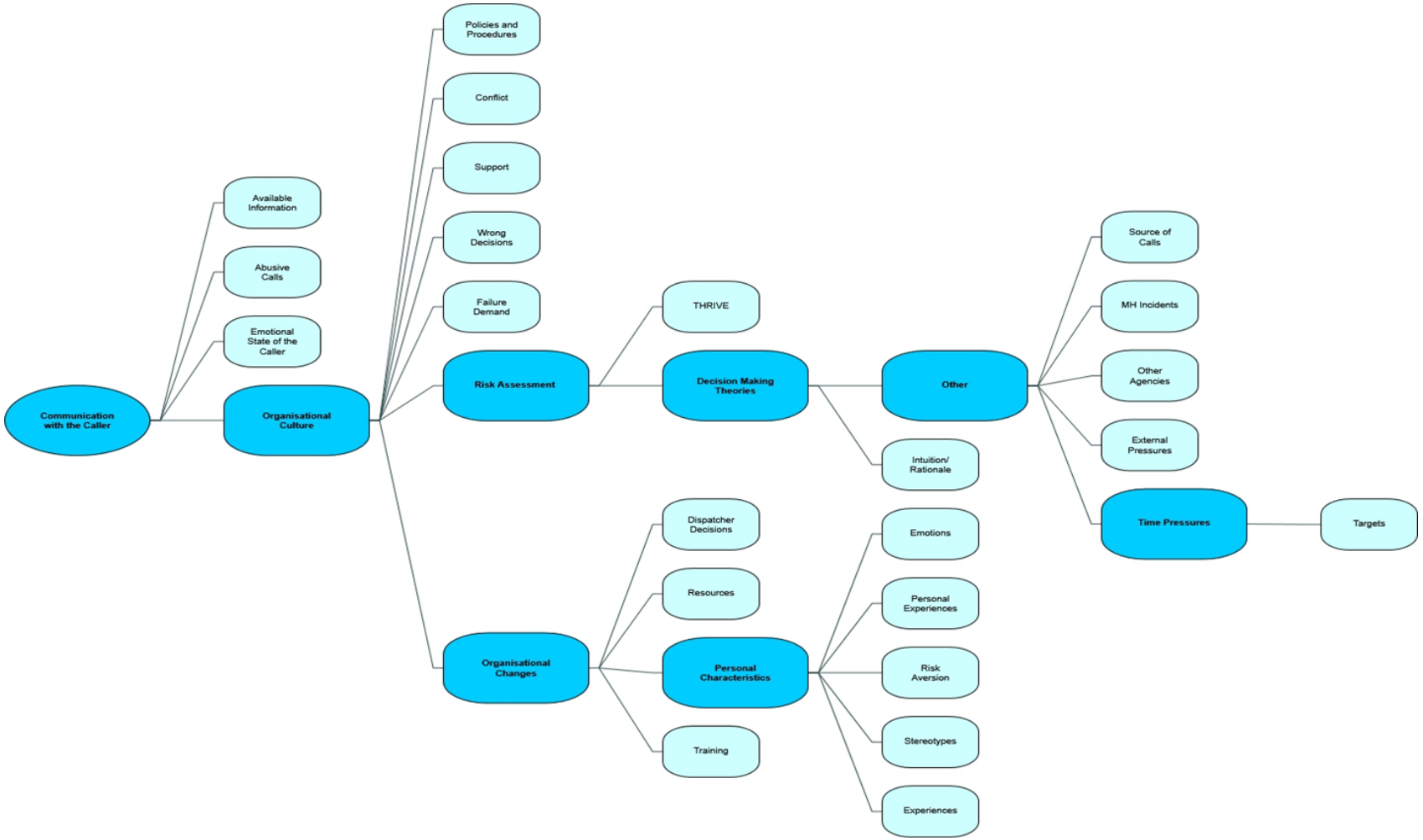
I have read the information above and understand the purpose of the research and my part in it. The purpose and nature of the study has been explained to me in writing and I have had the opportunity to ask questions about the study. I understand that I can withdraw permission to use data from the interview within two weeks after completion, in which case the material will be deleted. I grant permission for the data generated from this interview, including direct quotations, to be used in the researcher's publication. I consent to participate in this study, and I understand that I can withdraw from the study, without any penalty or consequences. I confirm I am over the age of 16 years.

Name of Participant ……..Date……
(Please Print)
Name of Researcher ……..Date……
(Please Print)
Signature of Researcher……Date……

By submitting this form, you are indicating that you have read the description of the study, detailed in the participant information sheet, and that you agree to the terms as described.

Thank you for considering participating in this research proje

Appendix 12: Thematic Maps – Interview Data - Thematic Map of Overarching and Initial Themes



Appendix 13: Ethical clearance for data collection

Message sent on behalf of the College Research Ethics Committee (CREC)

Dear Elaine

Thank you for the recent submission of your application (No.2019/159) to the College Research Ethics Committee (CREC) on 25/07/2019 requesting ethical clearance for the project entitled: *Building evidence to support police response to incidents.*

We are pleased to inform you that the reviewers were happy to confirm that in their judgement there were no outstanding ethical concerns that required further discussion or exploration prior to data collection and they are satisfied that your application meets with their ethical approval.

We would like to wish you well in the completion of your project.

Sent on behalf of
CREC

Annabel Cali
Research and REF Administrator
Research Office
Nottingham Trent University
Arkwright Room B113
Tel: +44 115 848 8157
E-mail: annabel.cali@ntu.ac.uk

Appendix 14: Ethical clearance for surveys and interviews

Message sent on behalf of the Chair of the Schools of Business, Law and Social Sciences Research Ethics Committee

Dear Elaine

Thank you for the recent resubmission of your application (no. 2020/289) to the Schools of Business, Law and Social Sciences Research Ethics Committee (BLSS REC) on 10 November 2020 requesting ethical clearance for the project entitled: *Understanding Decision-Making Within Force Control Rooms*

Following resubmission, we are pleased to inform you that the reviewers were happy to confirm that in their judgement there were no outstanding ethical concerns that required further discussion or exploration prior to data collection and they are pleased to confirm that your application has met with favourable ethical opinion.

The favourable ethical opinion is valid until **30 September 2021.** Should your project extend beyond this time then an application for an extension would need to be submitted to the BLSS REC.

Please note, your project has been granted a favourable ethical opinion based on the information provided in your application. However, should any of the information change at any point during your study or should you wish to engage participants to undertake further research, then you are required to resubmit your application to BLSS REC for further consideration.

We would like to wish you well in the completion of your project.

Sent on behalf of
Chair BLSS REC

Annabel Cali
Research and REF Administrator
Research Operations
Nottingham Trent University
Arkwright Room B113
Tel: +44 115 848 8157

Appendix 15: Survey - Participation Information Sheet

PROJECT TITLE

Understanding Decision-Making Within Force Control Rooms

My name is Elaine Duncan and I am a PhD student at Nottingham Trent University. Thank you for considering participating in this research project. Before deciding on whether you wish to take part in this survey, I have compiled some information below regarding the purpose of the research and what your participation will involve. I would be grateful if you would take the time to read the following information carefully before making your decision. Please don't hesitate to contact me if you have any questions or concerns.

Funding of the Project

This research project is funded by a Nottingham Trent University Vice Chancellors' PhD studentship.

What is the purpose of the study?

Call-handlers are the first point of contact between the public and the police, therefore their role in managing demand is paramount. Call-handlers play an important role in policing, often making decisions in high pressured environments. These decisions can have a significant effect on the lives of others.

This study seeks to increase the understanding of the decision-making process within control rooms, in particular the use of decision-making models and any additional factors that underpin call handler's decision-making. This study is part of a wider PhD project looking at the management of demand within forces in relation to calls for assistance from the public.

Why have I been invited to participate?

You have been invited to participate as you are currently employed within a Force Control Room. Your views and opinions on current decision-making models used in Force Control Rooms, as well as other factors that influence your decision making will help to inform this project. You will be asked to give your own personal/professional opinion.

Do I have to participate?

No, taking part in the study is completely voluntary. The information regarding the purpose of the study will allow you to decide if you wish to take part. The names of people who have participated in the study will not be shared with managers. If you agree, you will be asked to give your consent on the next page. You are free to withdraw your data from the study if you wish, with no explanation.

What if I change my mind after I have taken part?

If you wish to withdraw your consent after you have completed the survey you will have two weeks (from the date of completion) to do so with no explanation required. To withdraw your data, you may contact me using the email provided at the bottom of this form. If you wish to withdraw your data from the study, you will need to quote this

identifier to allow me to identify your responses. Please note that submitting a withdrawal request by email will compromise your identify.

What would taking part involve?

You will be asked to answer several questions via an online survey. You do not have to answer any questions that you don't wish to. There will also be an option to add additional comments at the end of the survey if you would like to. There are no other requirements associated with participating. The survey will take around 20 minutes to complete.

What type of information are you looking for?

The survey will ask you about your opinion on current decision-making tools used within the Force Control Room. It will also ask you about additional factors that influence your decision making.

What are the possible disadvantages of taking part in the project?

It is not expected that participating in the project will result in any disadvantages.

What are the possible benefits of taking part in the project?

Whilst there are no direct benefits for people participating in this project, it is hoped that the information retrieved from the study will help to improve our understanding of decision-making in Force Control Rooms.

Will I be able to be identified if I take part, and will the data be confidential?

The survey will not ask for any personal information (such as name or address etc.). Every effort will be made to ensure you (and your force) cannot be identified at any stage of the project. Any data collected from the online survey will be stored within Nottingham Trent University data store as this has added layers of security and protection and is designed to store confidential information. All files will be encrypted, and password protected, with access restricted to the researcher and supervisors. The data will be stored in line with General Data Protection Regulation (GDPR).

What happens with the results of the research project?

The results of the project will be published in a thesis and may be used for further research. You will not be named in any publication but selected (anonymised) quotations may be used in my final report and other academic work. Quotes will be anonymised, but I cannot guarantee full confidentiality. Non-anonymised data will be destroyed after I have graduated from my PhD. If you would like a copy of the results, please refer to the contact details below.

Has the study been reviewed by anyone?

The study has been subject to ethical approval by the University's School of Social Sciences Research Ethics Committee. It has been designed with reference to the British Criminological Society's code of ethics.

Who can I contact about the project?

Researcher: Elaine Duncan. Email: elaine.duncan2018@my.ntu.ac.uk

Supervisor: Dr Becky Thompson. Email: becky.thompson@ntu.ac.uk

Appendix 16: Survey Accompanying email

(Please see attached email and participant information sheet)

I am a PhD student at Nottingham Trent University and am contacting you to ask if you would be interested in taking part in my research project which is looking at decision - making processes within Force Control Rooms (FCR). Please see attached an information sheet which provides information on the project including the purpose of the study, the reason you have been asked to participate, what will happen with the data you provide, and how you can withdraw your consent after completion. Although the project is looking at how call-handlers make decisions, I am interested in views from all staff within the FCR. Participation is completely voluntary with all responses remaining anonymous, and your employer will be unable to see who has or hasn't participated.

If you would like to participate, I encourage you to read the information sheet and then click on the link below which will contain further information regarding providing consent.

Understanding Decision-Making in Police Force Control Rooms (onlinesurveys.ac.uk)

Thanks

Elaine Duncan
Nottingham Trent University
PhD Research Student

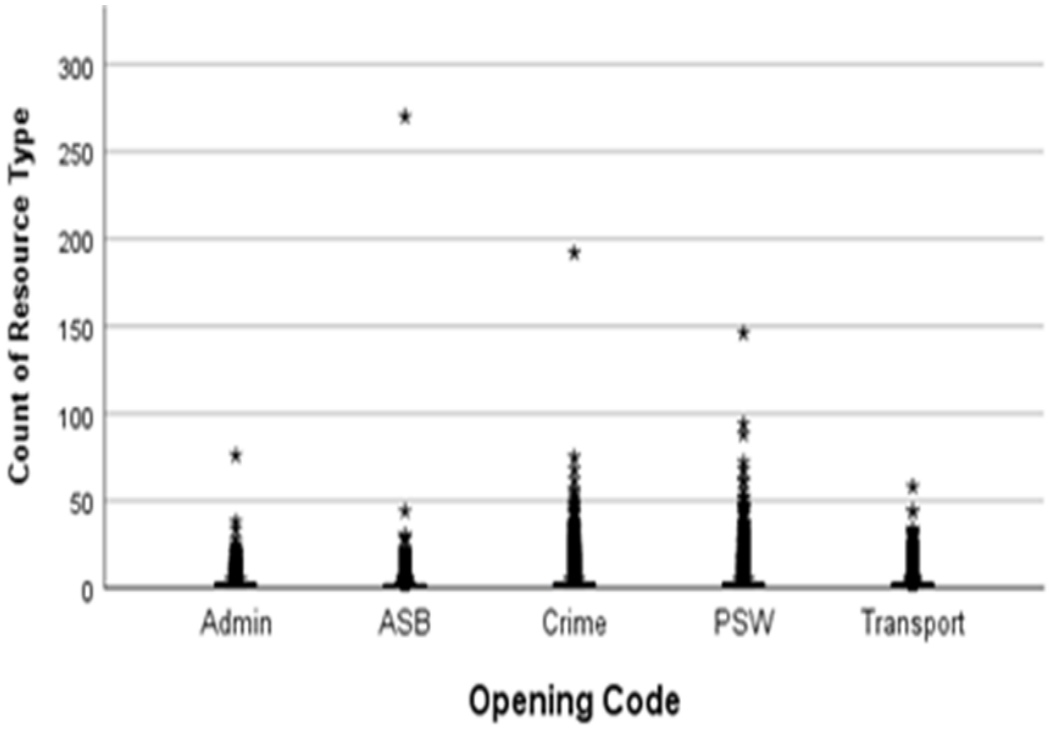
Appendix 17: New NSIR categories

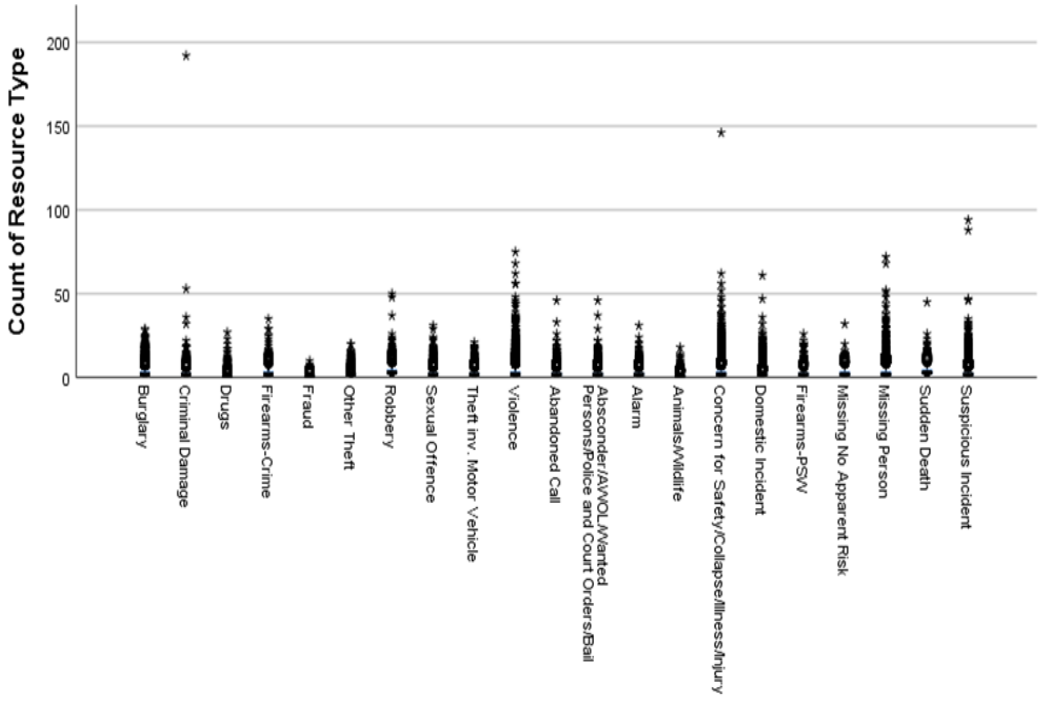
	New Categories
CRIME	
Bomb Threat Burglary Criminal Damage Drugs Firearms - Crime Fraud Kidnapping Other Crime Robbery Sexual Offence Theft from Motor Vehicle Theft of Motor Vehicle Theft- Other Violence	Burglary Criminal Damage Other Crime - includes Bomb Threat/Drugs/Fraud/Kidnapping/Firearms Sexual Offence Theft/Robbery - includes Theft from Motor Vehicle/Theft of Motor Vehicle/ Theft-Other/Robbery Violence
Additional information	All 'Theft' categories were grouped together, with the additional of 'Robbery' which only accounted for 1.5% of the 'Crimed' category. All incident types grouped as 'Other' each accounted for less than 5% of the 'Crimed' category.
PSW	
Absconder/AWOL/Wanted Persons/Police and Court Orders/Bail Abandoned Call to Emergency Services Alarm Alarm - Audible Animals/Wildlife Civil Dispute Concern for Safety Domestic Incident Firearms Hoax Call Immigration Industrial Incident/Accident Licensing Missing No Apparent Risk Missing Person Natural Disaster Protest/Demonstration Sudden Death	Abandoned Call to Emergency Services Concern for Safety Domestic Incident Missing Person - includes Missing Person and Missing Person-No apparent risk Suspicious Incident - includes Suspicious Circumstances/Insecure Premises/Vehicles and Suspicious Package/Object Other - Includes Absconder/AWOL/Wanted Persons/Police and Court Orders/Bail; Alarm; Alarm – Audible; Animals/Wildlife; Civil Dispute; Firearms; Hoax Call; Immigration; Licensing; Natural Disaster; Protest/Demonstration and Sudden Death

Suspicious Circumstances/Insecure Premises/Vehicles Suspicious Package/Object	
Additional Information	Incidents involving suspicious activities were grouped together Incidents involving missing persons were grouped together 'Other' includes incident types that equated to less than 5% of all 'PSW' incidents

NB. The following NSIR categories did not feature in the closing codes for MH incidents: CRIME: Bomb Threat; Kidnapping; Theft from Motor Vehicle. PSW: Alarm- Audible; Immigration; Industrial Incident/Accident; Licensing; Natural Disaster and Protest/Demonstration

Appendix 18: Boxplot – F1 Incident type and sub-types





Appendix 19: Challenges faced by FCR staff when making decisions

		Responses		Percent of Cases
		N	Percent	
Main Challenges[a]	Information from Caller	26	15.6%	26.5%
	Resources	24	14.4%	24.5%
	Time Pressures	16	9.6%	16.3%
	Fast Pace-Pressured Environment	16	9.6%	16.3%
	Conflict	12	7.2%	12.2%
	Grading	12	7.2%	12.2%
	Competing Demands	8	4.8%	8.2%
	Policies and Procedures	8	4.8%	8.2%
	Public Expectations	6	3.6%	6.1%
	Staffing	6	3.6%	6.1%
	Public Safety	4	2.4%	4.1%
	Training	4	2.4%	4.1%
	Legislation and Powers	3	1.8%	3.1%
	Support	3	1.8%	3.1%
	Abuse	3	1.8%	3.1%
	THRIVE	3	1.8%	3.1%
	Lack of Confidence	3	1.8%	3.1%
	Public Confidence	2	1.2%	2.0%
	Mental Health	2	1.2%	2.0%
	Change in Risk	2	1.2%	2.0%
	NDM	2	1.2%	2.0%
	Expectations	1	0.6%	1.0%
	Risk Aversion	1	0.6%	1.0%
Total		167	100.0%	170.4%