An Exploratory Study of the Relational Ties Between the Nigerian National Health Policy and Patient Safety

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Copyright Statement

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Signature:

Date: October 25, 2023

Dedication

I dedicate this thesis first to God and to my greatest intercessor, the Blessed Virgin Mary, and to

My Director of Studies
(My Mentor and Leader)
Professor Linda Gibson

My Second Supervisor
(My Intellect challenger)
Dr Kevin Love

My Spiritual Director
(A Priest, Friend, and Brother)
Rev. Fr. Ezekiel Ade Owoeye (RIP)

You all pushed, encouraged, and challenged my inner abilities to achieve this goal.

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Abstract

The global perspective that national health policies (NHP) are highly influential in achieving safer healthcare services in every nation often comes under scrutiny, especially in sub-Saharan African countries, based on the limited availability of studies that could provide insight into the magnitude of healthcare problems before solutions can be suggested. As a response to the need for further studies in the field of patient safety (PS), this research critically explored the role of the Nigerian National Health Policy (NNHP) in achieving positive patient outcomes in clinical practice in Nigeria.

The study goal is achieved through an ethnographic research approach while fulfilling the research process by applying the methodological framework of Actor-network theory (ANT) as an interpretive qualitative research method. The twin methods of observation and semi-structured interviews were conducted among policy administrators and clinicians in Abuja, Nigeria, at the Federal Ministry of Health (FMoH) and in four acute care settings. An actor-network was established and interpreted through Bruno Latour's four moments of translation.

The interpretation of the actor-network revealed the instability of patient safety (PS) in the network because of constant interference by mediators (that which changes and detracts the actant from following the pathway of the relational ties, such as the nature of the national health policy, political influences, health financing and policy mobility that were isolated as the main detractors) and intermediaries (something that transports meaning without transformation such as the presence of other national policies related to health matters and locally developed clinical practice policies). All these accounted for the identified disconnect between the national health policy and clinical practice.

Recommendations include suggestions for establishing clinical governance leadership, improving policy processes, and evaluating PS health policies in practice.

List of Terms and Abbreviations

ANT- Actor-network theory

AMAC- Abuja Municipal Area Council

AHRQ- Agency for Healthcare Research and Quality

AIDS- Acquired Immune Deficiency Syndrome

APPS- African Partnership for Patient Safety

CDC- Centers for Disease Control and Prevention

DHSC- Department of Health and Social Care

DoS- Director of Studies

FCT- Federal Capital Territory

FEC- Federal Executive Council

FMoH- Federal Ministry of Health

HDI- Human Development Index

HHS- US Department of Health and Human Services

HIV- Human Immunodeficiency Virus

HP- Health Policy

HPRSD- Health Planning Research & Statistics Department

ICU- Intensive Care Unit (ICU)

IDUs Injecting Drug Users

IM- Immutable Mobiles

IPC- Infection Prevention and Control

JCAHO- Joint Commission on Accreditation of Healthcare Organisation

LGAs- Local Government Areas

MDGs- Millennium Development Goals

NHP- National Health Policy

NICE- National Institute for Health and Care Excellence

NIH- National Institute for Health

NNHP- Nigerian National Health Policy

NHS- National Health Service

NTU- Nottingham Trent University

OECD- Organisation for Economic Co-operation and Development

OPD- Out- Patient Department

PH- Public Health

PS- Patient Safety

PPD- Policy and Planning Division

PSR- patient safety research

RCA- Root Cause Analysis

SAMHSA- Substance Abuse and Mental Health Services Administration

SSA- Sub-Sahara Africa

SCIE- Social Care Institute for Excellence

SDGs- Sustainable Development Goals

TB- Tuberculosis

TWG- Technical Working Group

UNDP- United Nations Development Programme

WHO- World Health Organisation

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Chapter 1: Introduction to the Research

1.1 Introduction

In this chapter, the conception of the research idea is established by discussing the evidence that describes the research gap. Subsequently, the research process is presented in the summary of each of the chapters. However, the discussion of these key elements is preceded by stating the research goals and objectives, because they significantly set the foundation for the research process.

The Aim of the Research:

This study aims to understand how the 2016 Nigerian National Health Policies (NNHP) might interact to improve or militate against patient safety in health care delivery in Nigerian clinical institutions.

The Objectives of the Research:

- To evaluate the 2016 Nigerian national health policy documents
- To determine the policy translation to clinical practice
- To identify, analyse, and discuss significant actant networks in the relational activities between policy and practice in Nigerian clinical settings.

1.2 Background to the Research

Two reasons have motivated the need for this work. Firstly, identifying the knowledge gap in patient safety (PS) and patient safety research (PSR), especially in developing countries (WHO, 2009). Secondly, observing some of the pointers to factors affecting PS became apparent within personal work experience through medical outreach projects in Nigeria from 2014 to 2016.

Achieving PS in hospitals is an important global public health research discipline. The science of PS has received remarkable attention over two decades because it is identified as a global health issue affecting countries at all levels of development (WHO, 2016a). PS has been described as the absence of preventable harm to a patient during the process of healthcare (WHO, 2016b). The concern for patient harm resulting from medical errors became formally acknowledged following the release of the popular report “To Err is Human: Building a Safer Health System” (Kohn et al., 1999, p. x). After the release of this report, there has been an

emphasis on the realisation that, despite all the known power of modern medical practice to cure and ameliorate illness, hospitals are not safe places for healing (Emanuel et al., 2008). Indeed, avoidable harm caused by the process of health care itself (Runciman et al., 2007; WHO, 2016b) is one of the top four or five public health problems in the developed world based on the record of 10,000 deaths per day in acute settings.

On the other hand, there is little evidence about the burden of unsafe care in developing countries where there may be a greater risk of patient harm due to several limitations, such as lack of infrastructure, technology, and resources (Donaldson, 2008). Moreover, as PS has received increased attention over the last decade in low-and middle-income countries, there is a challenge going forward in classifying PS events and identifying quality improvement opportunities (Powell et al., 2011).

International statistics do provide insights into the Nigerian population demographics, suggesting adverse events in African countries. In fact, the data from the African Millennium development goals for Nigeria shows that there are still 61 deaths per 1000 live births, which is far from the set goal of reducing the rate to 30.3 per 100 live births by 2015 (UNDP, 2015a). In addition, the country is still experiencing up to 350 maternal mortality rates per every 100,000 live births, against the set goals of 250 per 100,000 live births by 2015 (*ibid*). Other examples relate to the 2016 assessment of human security and human development in Nigeria by the United Nations Development Programme (UNDP), which was prompted by the realisation that human security analysis and human development are inseparable. Indeed, where human development focuses on increasing citizens' options, opportunities and access to public services (such as health care) and goods, and its emphasis on what people can achieve, human security seeks to reduce risk, dangers and threats to human development (including health care safety), evaluates the degree of confidence that people have in public services and goods, and stress what can be lost when human development is inhibited (UNDP, 2015b). Human development is therefore measured by the Human Development Index (HDI), which measures a country's average achievements in three dimensions of human development (*ibid*). First, it measures a long and healthy life; second, knowledge, and third, a decent standard of living (ibid). However, the HDI assessment for Nigeria ranked low, with a score of human development index of 0.514, positioning the country at 152 out of 188 countries. The relevance of this to the need for this current study relates to some of the data drawn from the health sector of the human development indicators. For instance, the life expectancy at birth is 52.8, the under-five mortality rate per 1000 live births is 117.4, the adult mortality rate for females per 1000 people is 325, and the adult mortality rate for males

per 1000 people is 357, etc. (UNDP, 2015a). This is consistent with many aspects of the data produced from the African Millennium development goals for Nigeria, as highlighted above (UNDP, 2015b).

As of 2022, given the most current HDI for Nigeria (UNDP, 2023), this situation has not changed, as shown below in Fig.1.

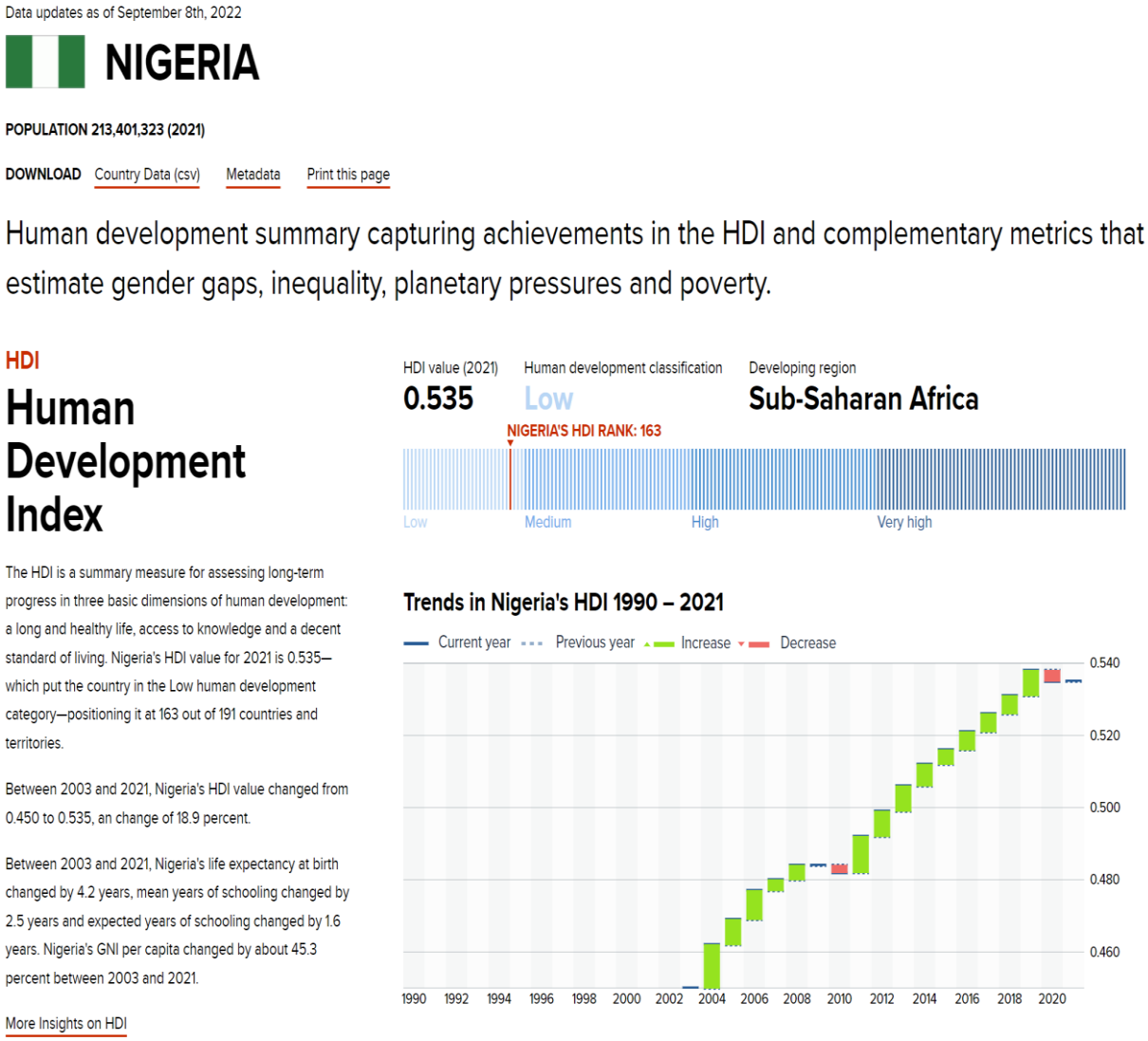

Figure 1 : Human Development Index for Nigeria 1990 to 2021 (UNDP, 2023)

Meanwhile, there is a global agreement on the belief that human development is connected to human safety because it lays the foundation for implementing any kind of developmental project, which in turn influences the well-being of populations (UNDP, 2015a).

Further, a study of perspectives in PS also comes from the gap noted in a study on the classification of mistakes in patient care in Nigeria (Iyayi et al., 2013). That study found that there is limited literature on PS errors because of wide variations in how different health professionals within the study institution classified errors in patient care. Indeed, this identification of limited information on PS errors in the available studies emphasises the need for further studies to understand better the magnitude of the problems to provide the basis for establishing appropriate safe practices in many Sub-Saharan and transitioning countries, including Nigeria (Iyayi et al., 2013; WHO, 2009; WHO, 2016a).

The second motivation for this study comes from the current researcher's personal work experience as a cardiac intensive care nurse in a Nigerian diaspora medical team. The team had to develop some practice guidelines for the surgical procedures carried out daily in the intensive care unit, such as guidelines for the administration of Inotropic medications (medications used to treat patients with heart problems) (Cleveland Clinic, 2023), removal of pacing wires, and management of chest tubes and arterial lines, etc. This is because none was in existence, and no national guidelines were provided for these specialised clinical practices. Arguably, this gap could be because the surgical interventions provided are newly emerging specialist surgical procedures in the country. However, some other observed occurrences suggest that the lack of policy-guided practices might have a wider scope than seen during this clinical engagement. For example, although handwashing basins are available with running water, and despite practitioners' demonstration of the awareness of the principles (WHO, 2016c) of hand washing, most were not using the basic 5 or 10 steps techniques (CDC, 2016; WHO, 2016c), and some were not doing hand washing at all. This example signifies the potential for patient harm through exposure to risks for infection during daily patient care.

Considering these motivations for the study of PS in Nigeria, this research establishes the grounds for exploring the status of the national health policy in Nigerian health governance and how it impacts PS in clinical practice. This is important because of the knowledge that "Good rules- good policy- promotes good health" (Frank, 2011, p.3).

1.3 Global Patient Safety Perspectives

Nevertheless, the motivation to study PS is not limited to understanding the peculiarities within Nigerian health systems only. A wider knowledge of the science of PS is important to this current study for it to be a part of global voices for safer healthcare. The study considers global PS perspectives, which have been foundational to building the ontological and

epistemological grounds for this project. Some outstanding global perspectives include the financial consequences of medical errors, the impact of the demands for safe practices on healthcare workers, the global public health burden of medical errors, and the wider socio-political and economic implications (WHO, 2021). In America, through the analysis of medical claims data, the cost of avoidable medical errors came to $17.1 billion in 2008 (Bos et al., 2011). In fact, a multistate retrospective study from 2009 to 2012 in the US determined the impact of all-cause inpatient harm has negative financial outcomes for hospital finances and negative patients' clinical outcomes (Adler et al., 2018). The study reports the mean total cost of hospitalisation at $6498 for patients with no harm, $10,224 for patients with temporary harm, and $16,021 for patients with harm (ibid). According to WHO (2017a), about 15% of hospital expenditure in Europe can be associated with treating safety accidents, while poor care has led to hospitalisation, litigation costs, nosocomial infections, lost income, disability, and medical expenses incurred by some countries can be up to $6 billion and $29 billion per year. Therefore, improving the quality of care and healthcare services are the strategies suggested for reducing the financial costs of medical errors (WHO, 2018). In addition, the ethical considerations where the doctor versus patient relationships in relation to an error is concerned (Mason & Laurie, 2013), especially the wide disclosure gap when there is an adverse event (Hannawa et al., 2016), are often related to the psychological difficulties experienced by the providers who think this might challenge their professional pride and obligation not to harm the patient (*ibid*). The point is that there are vast implications for unsafe healthcare nationally or globally that require that all public health and clinical practitioners should be aware of and be part of the movement developing solutions to reduce the impact of PS errors at all levels of care and everywhere in the world.

1.4 The Significance of Patient Safety Research in Nigerian Health Systems.

The identified research gaps create an awareness that several areas of healthcare delivery in PS governance and practice can potentially influence patients' outcomes positively or negatively. PS research gaps are identified at global and individual country levels and classified according to the most pressing needs. For example, Becker's Clinical Leadership & Infection Control (2016) in the US identified three information gaps that hinder PS, which are: the need for more research to produce information on how contextual factors affect the implementation of patient safety practices; the need for clear intelligence on previous hospitals' experience using specific PS implementation strategies; and the need for improved techniques for measuring adverse events. In Nigeria, the study on the classification of mistakes in patient care in the country found that there is limited literature on patient safety

errors because of wide variations in how different health professionals within the study institution classified errors in patient care (Iyayi et al., 2013). Whereas at the global level, WHO (2009) produced six ranked research gaps for countries at various levels of development (see Fig 2.). This has led to strong advocacy for applied and evaluative research that would lead to the development of local cost-effective solutions. In the list of the identified research priority areas, the significant research gap for this project is associated with the number 2 ranking related to the lack of appropriate knowledge and transfer under the categories ascribed to transitional countries (*ibid*). Although there is no obvious policy concept in this priority area, the need to assess the health policy process in relation to the lack of appropriate knowledge and transfer comes from the role of health policy in all strategic plans or solutions for PS improvement (WHO, 2007).

Developing countries	Countries in transition	Developed countries
Strong emphasis on applied and evaluative research leading to the development of local cost-effective solutions		
1. Counterfeit & substandard drugs	Inadequate competencies & skills	Lack of communication & coordination (including coordination across organizations, discontinuty & handovers
2. Inadequate competencies & skills	Lack of appropriate knowledge & transfer	Latent organizational failures
3. Maternal & newborn care	Lack of communication & coordination (including coordination across organizations, discontinuty & handovers	Poor safety culture & blame-oriented processes
4. Health care-associated infections	Health care-associated infections	Inadequate safety indicators
5. Unsafe injection practices	Maternal and newborn care	Adverse drug events due to drugs & medication errors
6. Unsafe blood practices	Adverse events due to drugs & medication errors	Care of the frail & elderly

Global Priorities for Patient Safety Research. Geneva, World Health Organization, 2009 (http://whqlibdoc.who.int/publications/2009/9789241598620_eng.pdf).

Figure 2 : Linking Research Gap to Research Priority No 2. (Six ranked research priorities)

Moreover, the most extensive PS research, covering Africa and the Eastern Mediterranean in 2011, found that the harmful PS incidents were related to the training and supervision of clinical staff, the availability and implementation of protocols/clinical guidelines and policies,

and communication and reporting (WHO, 2011). Given these gaps, it is believed that PS could have better and measurable results when it is part of [a strong] national health policy (WHO, 2014). Interestingly, current literature suggests a substantial number of research, articles, conference contributions, and a number of PS awareness programmes are taking place around the country. To this effect, information on PS is emerging from various perspectives in Nigeria, such as the Quality in Health Care Workshop in 2012, which focused on improving healthcare quality in Nigeria (Society for Quality in Health Care in Nigeria, 2012). Some other examples of newly emerging PS knowledge are from studies such as those assessing PS culture amongst healthcare workers in the South-West area of Oyo State in Nigeria (Abel et al., 2023), the role of law in balancing accountability with a no-blame approach (Akinpelu & Akintola, 2023), and the safety of pyronaridine-artesunate versus artemether-lumefantrine in the treatment of uncomplicated malaria in children in Nigeria (Falade et al., 2023). However, despite this, the position that there is a need for more work to be done in the field of PSR in Nigeria remains unchanged (Bates et al., 2009; Powell et al., 2011; WHO, 2016a; WHO, 2021).

Certainly, PS research in Nigeria, like many other developing and transitional countries, needs to do more by filling the knowledge gaps in PS science. Conversely, there is a noticeable visibility of PSR in Nigeria, as noted in a basic search for the term "Patient safety research in Nigeria", in Library OneSearch. The search generated 1,356 studies, with rich coverage of many of the focus areas in clinical PS science, like PS culture and medication safety from pharmaceutical disciplines, child and maternal health care studies, HIV/TB, COVID-19, Epidemiological themes, primary health care services, etc. However, none of these studies are focused on PS governance in seeking for the role of the NNHP in legislating PS in clinical practice in Nigerian hospitals. This constitutes a significant research gap that this current study aims to fill. This study thus focuses on understanding the relational ties between the Nigerian National Health Policy (NNHP) and PS. This work is also intended to look at perspectives that could potentially accelerate measures that would action the envisioned benefit by the WHO (2014) when they identify that most countries in the African Region lack national policies on safe healthcare practices but can benefit from a number of coordinated efforts to ensure that every patient receives safe health care, every time and everywhere (WHO, 2016c). The most crucial to this research work is based on developing national patient safety policies in African hospitals, which is one of the key areas identified by the sub-division of the PS department of WHO – the African Partnerships for Patient Safety (ibid).

Therefore, to join the PS research community, the goal of the study to generate new knowledge that is beneficial nationally and internationally in PS science was achieved through a methodological process where secondary and primary sources of data were rigorously analysed using the analytic framework of actor-network theory (ANT) to answer pertinent research questions. Generated data from secondary sources and responses to the following interview questions have been instrumental to the development of the research discussions that fulfil the goals of this current study:

- What are the responsibilities of health policies in Nigerian healthcare service provision?
- How do the Nigerian national health policies translate to clinical practice in Nigerian hospitals?
- What are the impacts of health policies on clinical practitioners in Nigerian hospitals? How would you consider health policies in relation to patient safety practices in Nigerian hospitals?
- What are your views on patient safety?
- How can national health systems in Nigeria develop horizontal and vertical approaches to strengthen policy development, implementation, and evaluation to address the need for best practices in achieving PS?

1.5 An Overview of the Research Process

The entire research process is covered in eight chapters.

In **Chapter 1**, the significance of PS research was established through a definitive identification of the research gap where previous work has not been completed in the area of health policy in relation to PS. How this study fills the research gap is demonstrated while presenting the research approach employed in realising the study goals.

In **Chapter 2,** an extensive literature review of the two concepts of the study, that is, Patient Safety and Health Policy, is presented. In addition, the role of a National Health Policy (NHP) and its eventual translation to clinical guidelines at the hospital level is addressed.

Chapter 3 is where the theoretical perspective that establishes the ontological and epistemological backgrounds of the study concepts is achieved. Generating this knowledge base is critical to understanding the principles of the methodological process of ANT.

In **Chapter 4**, the justification for pursuing a qualitative research approach is established while successfully locating the tradition of ANT within the discipline of social sciences. A comprehensive discussion of the methodological approach of ANT exposes a possible framework by which the collected data is analysed. This chapter fully explains the research skills in the ethnographic approach, demonstrating the fieldwork activities that took place in Nigeria, where observations and interviews were conducted. The research design was presented in this chapter.

Chapter 5 covers the data analysis of the three research methods employed in this study. This includes document analysis of the NNHP document, the observation notes, and the transcribed interview responses. An actor-network was developed by analysing the data within which mediators and intermediaries define the actor nature of the NNHP in relation to PS. This prepared the development of the research findings in the next chapter.

In **Chapter 6**, the analysed data obtained in Chapter 5 is interpreted into a meaningful and logical account of the research findings establishing the qualifying standard(s) of a health policy document as a network element with strong properties of irreversibility, and effects which transcend time and place, in other words establishing the exploration of translations that create the possibility of the NNHP in transmitting immutable mobiles (IM) (IMs are entities that lead to achieving the identification of materials that are more durable than others that hold their relational patterns for longer). Although the NNHP document was accorded the status of an IM, it became clear that it is a policy document without mobility, especially since it does not play any outstanding role in influencing the agency of PS in clinical practice. The findings identified the NNHP as an actor without agency.

Chapter 7 discusses the research findings by elucidating on the activities of the mediators that shaped the nature of the NNHP in the actor-network. It unpacks the relational ties between NHP and PS in two health systems by examining how a NHP is legislatively conferred to the responsible executors of the policy, especially in the area of PS and how this is executed in clinical practice. These examples are set up as a comparison to demonstrate the categorical obligation that becomes a benchmark for understanding how the NNHP failed in its role to direct actions on PS in clinical practice. The intention is to establish and discuss the agency of the NNHP and its immutability and, subsequently, to interrogate and translate the activities of the mediators and the intermediaries as they relate to the role of the NNHP where PS is concerned in Nigerian clinical practice.

In **Chapter 8**, the research conclusion and recommendations are presented. The recommendations involve a two-part approach where one part addresses the emergence of the impact of the mediators, especially relating to issues that prevent the legislation of the PS Act within the NNHP. The second part is original to this research in that three levels of actionable plans are recommended to ensure that the desired changes to the status of the NNHP in empowering PS governance in practice are achieved.

Conclusion

In this Chapter, successful documentation of the motivating factors in the need to examine the status of PS in Nigeria with a focus on the role that the NNHP plays especially in clinical practice is achieved. This initiates the identification of the research gap which significantly identifies general population health status that enlightens on the possible status of PS in the country. Additionally, it points to the limited studies on the core areas of PSR in Nigeria. The achievement of establishing a research gap legitimises progressing into the study fully. Therefore, in Chapter Two, the study will start by establishing an understanding of the relational activities between the study concepts: PS and HP through a literature review.

Chapter 2: Literature Review

2.1 Introduction

Long-standing guidance in the care of patients in healthcare institutions is rooted in the principle of safety. Frontline healthcare professionals engage with these principles during their training and are often required to take an oath to represent their commitment to their professional duties. In the Oath of Hippocrates of Kos for Physicians, the commitment to practice safely is reflected in the statement, "*I will prescribe regimen for the good of my patients according to my ability and my judgment and never do harm to anyone*" (U.S. National Library of Medicine, 2012) and this depicts that no clinician would act in a way that would harm a patient. Similarly, the 1893 Nightingale's pledge for nurses, safe practising is reflected in the statement, "*I will abstain from whatever is deleterious and mischievous and will not take or knowingly administer any harmful drug*" (The Truth About Nursing, 2018). However, there are critics of oath-taking who believe it only encourages self-importance and fuels paternalism (Sridharan et al., 2001), perhaps due to the position that oaths are neither a universal endeavour nor a legal obligation believed to be incapable of guaranteeing morality (*ibid*). Nonetheless, a positive acceptance of this action is often witnessed when newly qualified doctors freely declare their intentions to act ethically and professionally (*ibid*), which is also a common practice in the inception programmes in Nursing training. However, the expectation of oath-taking in creating the consciousness of maintaining practice safety has not prevented practice errors over the years. Despite the knowledge that healthcare workers are rooted in safe practices right from their training and throughout their careers, in contemporary times, we are still recording high rates of PS errors (Runciman et al., 2007).

Apart from having safety awareness embedded into healthcare training, the same principle is emphasised in healthcare governance and health systems management. The concern and the clamouring for safer hospitals have existed for several decades. In 1863, in the hospital safety review by Nightingale, she stressed, "*It may seem a strange principle to enunciate as the very first requirement in a hospital that it should do the sick no harm*" (Nightingale, 1863, p. iii). In recent years healthcare safety issues causing harm to service users have come into the limelight. In 1999, the concern for patient harm resulting from medical errors became formally acknowledged following the release of the popular report "*To Err is Human: Building a Safer Health System*" (Kohn et al., 1999, p. x). Following this report, the realisation that despite all the known power of modern medical practice to cure and ameliorate illness, hospitals are still not safe places for healing (Emmanuel et al., 2008) such

that avoidable harm caused by the process of health care itself (Runciman et al., 2007) is now a major global concern (WHO, 2017). This has made the need to pay attention to PS at all levels of society a matter of high importance. Today, the awareness of these issues has warranted the establishment of a growing body of knowledge where efforts are focused on understanding the concepts of PS and its independent, interdependent, and interrelated perspectives. These efforts have been generating several PS strategies globally to reduce the incidents of clinical errors.

This current literature review will critically discuss the concepts of the study, which are PS and Health Policy, to establish the relational ties between health policy and PS and to identify the importance of this to delivering safer patient care.

2.2 What is Patient Safety?

Over the last two decades, the term "Patient Safety" became the forefront of clinical practice discourse, and much effort has gone into developing this concept into a health research focus. The aim is to identify and understand the triggers of PS errors and proffer solutions to minimise fatal patient outcomes to the barest minimum in all health service provisions. PS is identified as a global issue affecting countries at all levels of development (WHO, 2012), and it has been described as the absence of preventable harm to a patient during the process of health care (WHO, 2018). Recently, it has gotten a comprehensive definition that portrays the extensive work that has gone into this discourse in the last two decades. A recent PS definition states it is "a framework of organised activities that creates cultures, processes, procedures, behaviour, technologies and environments in health care that consistently and sustainably lower risks, reduce the occurrence of avoidable harm, make errors less likely and reduce the impact of harm when it does occur" (WHO, 2021, p. v). Indeed, this detailed definition has emerged, given the burden of unsafe care that explains the magnitude and scale of medical errors (WHO, 2017). First, the 2011 research on PS in transitional countries identified clinical procedures and activities most likely to lead to adverse outcomes as therapeutic errors (34%), diagnostic errors (19%), surgical mistakes (18%), surgical errors related to obstetrics (9%), neonatal procedures (8%) and non-surgical procedures (5%) or were caused by drug-related incidents (4%), fractures (2%), anaesthesia (0.5%), and falls (0.5%). Evidence shows that around 1 in 10 patients on hospital admission experience harm, of which at least 50% is preventable. Further, 42.7 million adverse events occur globally of the estimated 421 million patients' hospitalisation worldwide, of which 60% of all these adverse events resulting in deaths happen in low- and middle-income countries (WHO, 2017).

Further, the economic impact is explained in two ways: one is that 15% of hospital expenditure wastage is due to safety failures in high-income countries and the indirect costs in loss of productivity in the population (ibid). The concern for patient harm continues to be high on the global agenda, especially as the world faces new challenges, from sustainable environmental problems to the pandemic and issues of national insecurities (ibid).

The above-stated and other evidence have produced significant knowledge, which can be appreciated in the layers of interventions that emerged over the years in the effort to understand the causes of clinical errors causing patient harm and what can be done to minimise or eliminate them. To appreciate the many perspectives on the science of PS, it is useful to briefly review the progression of the discipline's discourse.

2.2.1 Historical Advancement of PS Initiatives

Earlier in the introduction to this Chapter, the awareness and presence of safety principles in health care professional training and clinical practice were discussed, and the formal/contemporary establishment of the science of PS in 1999, was highlighted. The background to the advancement in PS initiatives will now follow. Consequently, Global leadership in PS initiatives kick-started in 2004 with WHO's World Alliance for Patient Safety, promoted through the Global Patient Safety Challenges starting with the Clean Care is Safer Care in 2005. Others such as the Safe Surgery Saves Lives in 2008, the Medication Without Harm in 2017, Patients for Patient Safety, Taxonomy for Patient Safety, Patient Safety Research, Patient Safety Solutions, Reporting and Learning, Patient Safety Curriculum, African Partnerships for Patient Safety, Global Patient Safety Network, Global Ministerial Summits on Patient Safety, World Health Assembly Resolution on Patient Safety, Global Patient Safety collaborative, World Patient Safety Day, Publication of Patient Safety Normative Guidance and Tools, African Patient Safety Initiative and the current WHO Flagship Initiative "A Decade of Patient Safety 2021-2030" (WHO, 2005; 2009; 2016; 2017; 2019; 2021) have all instituted many clinical programmes, all aimed at addressing safer care for all patients globally.

The response to addressing these challenges has required strategic planning through global collaborative programmes led mainly by the WHO, in partnership with prominent international Governmental and Non-Governmental agencies such as the Ministries of Health of Member States, the Organisation for Economic Co-operation and Development (OECD), The Agency for Healthcare Research and Quality (AHRQ), Centers for Disease Control and Prevention (CDC), National Health Service (NHS) and others. The scope of PS error

solutions developed spans Health Governance, Clinical Management, and Education and Research (WHO, 2011). Each area is broad and extensive; however, the focus is often on PS errors occurring within the acute clinical settings, leaving relatively little knowledge about harm outside the hospital (Jha et al., 2010). There is also a concern about the applicability of these solutions in every institution. Jha et al. (2010) identified significant consequences of unsafe care and its underlying causes by examining the 23 focus areas on PS errors. Their findings suggest that harm from medical care is widespread and likely imposes a substantial burden on the world's population, but most evidence about safety comes from developed nations. Nonetheless, there is growing epidemiological evidence of poor clinical outcomes due to unsafe medical care in developing and transitional countries (ibid). However, the data on structural and process factors contributing to unsafe medical care is almost exclusively from many developed nations (ibid). They concluded that some solutions are readily apparent, but significant gaps in knowledge need to be filled before more comprehensive solutions can be developed, particularly for transitional and developing countries (OECD, 2018). This concern is very relevant in this research because the study takes a holistic approach to addressing the totality of the Nigerian health systems in the lack of visibility of PS in the national health policy. Nevertheless, the above-highlighted initiatives are a response to addressing the causes of major adverse events in hospitals and other healthcare facilities such as nursing homes (AHRQ, 2009). The establishment of these initiatives became possible, given the effort to understand the nature of the various PS occurrences because these are often classified based on the types of problems observed in an institution. Some of these classifications are discussed next.

2.2.2 **Patient Safety Classifications**

PS is studied based on focused categories such as the Joint Commission on Accreditation of Healthcare Organisations' (JCAHO) PS event taxonomy, which identifies the causes, types, impacts, and domains of PS events (Chang et al., 2004) (see Fig. 3).

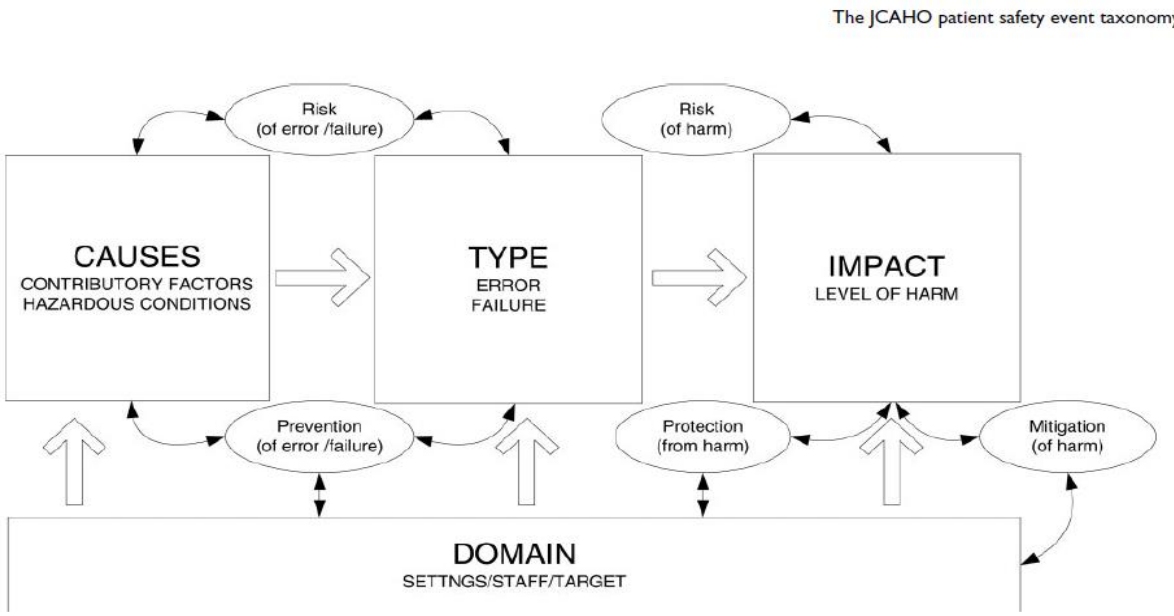

Figure 3: PS Classification by JCAHO.

Similarly, the WHO describes its PS classifications as initiatives consisting of seven broad divisions, including Assessment and Research, Reporting and Learning, High 5's, Safe Childbirth, Patient Safety Priority Solutions, Safe Surgery, Safe Primary Healthcare and Related Technical Areas (WHO, 2018b) (See Fig. 4.). Although these categories provide insight into possible PS occurrences, apart from the WHO classification, the taxonomies, especially those developed within institutions, are sometimes not transferable from one place to another or from one institution to another because the classifications are generated based on an assessment of the institution (WHO, 2017). Nevertheless, the classifications by WHO appear to cover key areas of health systems, with strong reference items for clinical services (WHO, 2018).

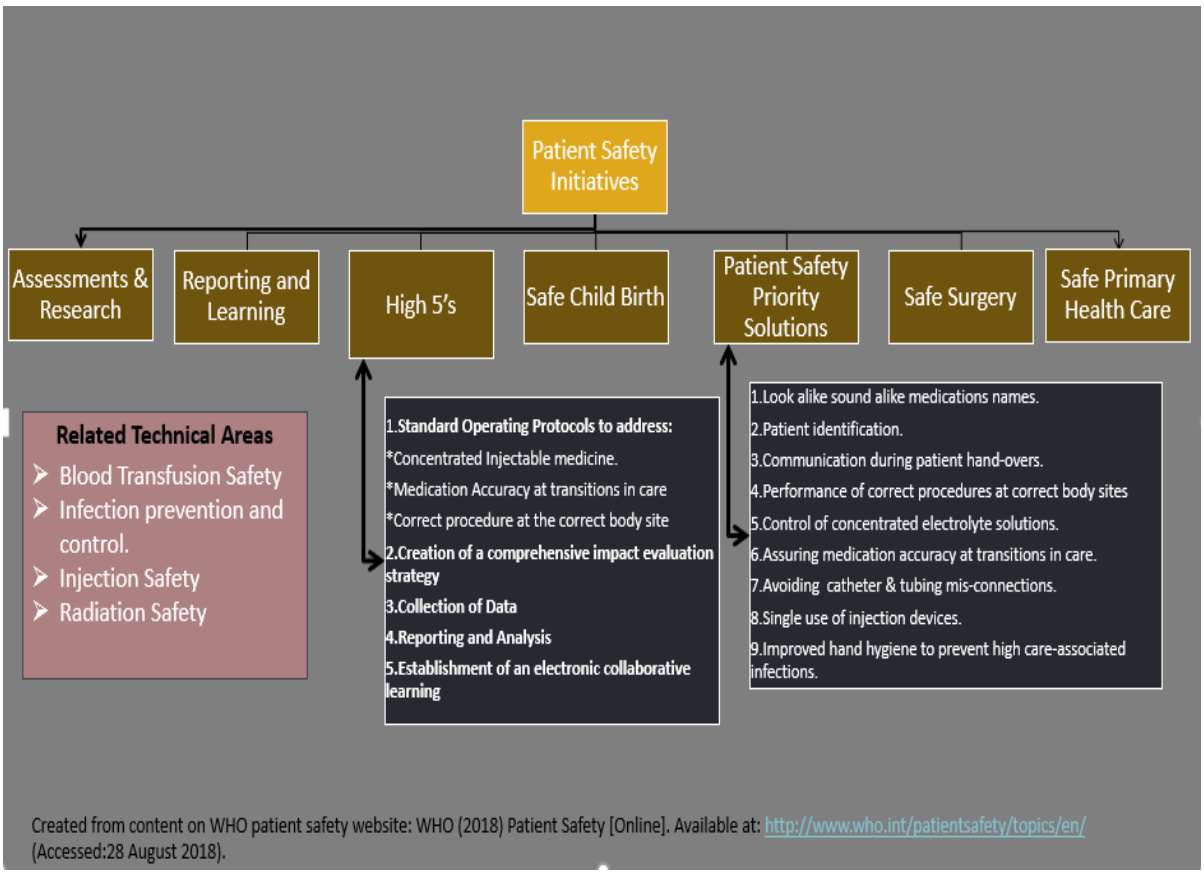

Figure 4 : Patient Safety Classification Developed from WHO Taxonomies.

Nevertheless, it is evident that the JCAHO taxonomy is interrelated with the WHO PS classifications when it comes to investigating a medical error/adverse event. This assertion is based on what is observed in the process of naming an occurrence and proceeding to investigate the incident. For example, an incident is named "drug error" when a patient receives a wrong medication with the potential to cause harm or with an occurrence of an actual adverse effect. This would be noted in the WHO classifications of different areas where a medical or practice error can occur. When it comes to investigating the incident, the JCAHO taxonomies become apparent in that questions are asked to fully identify how the incident happened. Even so, the perception of PS is not very different across the board, especially visible through the account of the PS emergence in the 20th century (WHO, 2021). Earlier in the century, untoward events or complications from health care services received by a patient may cause momentary public concern. Still, they aroused little concern amongst doctors and health care leaders because these events were essentially seen as the inevitable cost of doing business in a pressurised, fast-moving environment of modern healthcare facilities that are even given the heroic status of saving lives (ibid). However, studies in the 1990s began to view care safety differently through a new approach. It is at this point that terms used to describe safety failures emerged, such as medical error, incident adverse event, serious

untoward incident, never event, near miss and close call (ibid). These terms have been widely adopted and used by policymakers, researchers, clinicians, patient groups, and the media (ibid). This awareness is also responsible for the emergence of quality improvement (QI) in the health industry.

2.2.3 Quality Improvement: A Patient Safety Tool

The background of quality improvement (QI) approaches and methods in healthcare dates back three decades and originates from production industries that use quality control models in their work (Jones et al., 2021). 'Quality' in healthcare does not have a universal definition, but there is an outstanding commitment from healthcare systems globally to the people using and funding their services to monitor and continuously improve the quality of care they provide (ibid). This explains why there are various definitions of Quality Improvement (QI) globally, but always with the central idea that quality care is critical in any healthcare institution. The National Health Service England (NHSE) (2023) attempts to provide a shared single view of quality through the components of its approach to achieving high-quality, personalised and equitable care for all, now and in the future when people work in systems delivered safely, effectively, provided as a positive experience by being caring, responsive and person-centred. Quality is also expected to be well-led, sustainable, and equitable (ibid). These expectations for quality in healthcare are the background to the need for QI. Jones et al. (2021) define QI as "giving the people closest to issues affecting care quality the time, permission, skills, and resources they need to solve them. It involves a systemic and coordinated approach to solving a problem using specific methods and tools with the aim of bringing about a measurable improvement" (Jones et al., 2021, p. 3). The principles that underlie QI include the identification of the quality issue, understanding the problem from various sources of information, with particular emphasis on using and interpreting data, developing a theory of change, identifying and testing potential solutions, using data to measure the impact of each test and redesigning the solutions to the problem, and implementing the solution and ensuring that the interpretation is sustained as part of standard practice (ibid). The application of these principles can only achieve successful implementation of the designed solution if the right conditions for improvement are available such as the backing of senior leaders, supportive and engaged colleagues and patients, and access to appropriate resources and skills (Greenhill, 2023). At the forefront of achieving these principles is the application of benchmarking in clinical practice. Briefly highlighting what benchmarking implies as one of the major criteria for evaluating QI in various clinical practices, including the use of health-related policies and standards of

practice/guidelines/protocols, reference is made to Hughes' (2008) definition and typology of benchmarking. It is defined as the continual and collaborative discipline of measuring and comparing the results of key work processes with those of the best performers in evaluating organisational performance (ibid). The two ways of doing benchmarking are: first, *internal benchmarking* is used to identify best practices within an organisation, to compare best practices within the organisation and, second, to compare current practices over time (ibid). However, this usually does not represent best practices, thus there is a need for external benchmarking (ibid). External benchmarking involves using comparative data (such as those obtained from archives of national organisations) between organisations to judge performance and identify improvements that have proven to be successful in other organisations (ibid). Hughes (2008) opines that QI methods in the past few decades have emphasised the importance of identifying a process with less-than-ideal outcomes, measuring the key performance attributes, using careful analysis to devise a new approach, integrating the redesigned approach with the process, and reassessing performance to determine if the change in process is successful (ibid). The need for constant reassessment or evaluation of interventions remains a product of the complexity of healthcare systems because they are built on multifaceted networks of care processes and pathways (Jones et al., 2021). Meanwhile, the quality of care delivered by the system depends to a large extent on how well the complex network functions and the quality of teamwork of the people who provide and manage care (Greenhill, 2023; Jones et al., 2021). For example, the forecast of the impact of artificial intelligence (AI) on quality improvement is expected to be greatly positive in terms of improved diagnoses with better patient outcomes, but there is also the fear that this type of development would create more complexities because of the problems that come with technology such as challenges with data privacy, algorithm bias and transparency (Greenhill, 2023). Nevertheless, sound planning for the expected challenges, such as ensuring ethical and responsible use of AI in healthcare, could still achieve the expected QI in PS practice (ibid). Besides, QI professionals, allied health practitioners and even patients are very much aware that in every process or pathway that works well, there is another that causes delay, wasted effort, frustration or even harm. Nevertheless, the goal of QI is always to provide high-quality care to patients and improve the health of all populations (Jones et al., 2021). Moreover, the knowledge that, if QI is done well, it can deliver sustained improvements, not only in the quality, experience, productivity, and outcomes of care, but also in the lives of the people working in health, is one of major encouragement for PS researchers and QI professionals globally (ibid). More enthusiasm comes from many great outcomes of QI in recent times, as reported from many areas of patients' healthcare service experience (ibid). Some of the

examples include the improvement of patients' access to their general practitioners/primary care physicians, streamlining the management of hospital outpatient clinics, reducing falls in care homes, or tackling variations between providers in the way processes and activities are delivered (ibid). Moreover, despite the positive results of many of the QI tools, they are continuously being evaluated to improve their effectiveness and onward improvement of PS. The 5 years retrospective study done by Liu et al. (2023) in a children's hospital is an example of this progress sustainability strategy. The study evaluated the incidence and the characteristics of medication errors, with the goal of optimising a computerised physician order entry (CPOE) system in the reduction of error incidence. The CPOE is a part of the electronic medication administration record (eMAR) which is a part of the patient's electronic health record (EHR) (Definitive Healthcare, 2022). The CPOE is a digital process that healthcare providers use to input patient information related to treatment instructions, including laboratory orders, radiology orders, and medications (ibid). It receives information from the electronic health record (EHR) through the eMAR (ibid). The research evaluated over 2 million prescriptions via the CPOE and found 255 errors (221 near misses and only 4 errors were considered significant) covering the types of medications with the highest errors (antibiotics and antiviral medications), the route of administration (oral followed by intravenous), the stage of medication error (physician ordering with higher numbers of junior doctors), where the error is occurring most (paediatrics wards). Although there were some differences in each year of the study, there was a statistically significant decrease in errors per 100,000 prescriptions across different years after optimizing the CPOE system. The study established that continuous application of the CPOE optimization programme (that is, the extensive use of the CPOE) can effectively reduce medication errors (Liu et al., 2023). However, they identified the need to incorporate paediatric-specific decision-making and support tools and error prevention measures into the CPOE system (ibid). Another tool that has recorded quality improvement is the Paediatric Early Warning System Improvement Programme, known as the PUMA programme. Allen et al. (2022) addressed their concern about the paediatric mortality rates in the UK, which are among the highest in Europe, in their implementation research which is actually very complex and detailed and designed with implementation research principles in mind. However, the research process itself is not being evaluated but rather the success of the study in their application of a quality improvement tool. Therefore, the identified contributing factor to these untoward events is the problem of clinically missed deterioration of this group of patients. The researchers designed a quality improvement tool – the PUMA and administered it in two general hospitals (without an intensive care unit) and two tertiary hospitals (with intensive care units on site). The PUMA

standard is an evidence-based and theoretically informed propositional model of a paediatric early warning system organised around the seven functions of an afferent paediatric early warning system. The programme provides a framework and resources to support local teams in assessing their paediatric early warning systems, identify areas for improvement, and decide locally how these would be addressed. The research outcome recorded that all study sites assessed their paediatric early warning systems and identified areas of improvement. They were able to apply appropriate changes as needed. More importantly, there was a decline in adverse events rate trend in three sites, while one site recorded a significant decline attributed to system-wide support for organisational change.

Since there are significant testimonies of the positive impact of QI tools, especially in the use of technology, the importance of understanding QI is relevant to both caregivers and those receiving the services because everyone's effort counts to increase the potential to create a healthcare service capable of preventing needless deaths, needless pain or suffering, helplessness in those served or those serving others, unwanted waiting times and waste, while including everyone in these benefits (Jones et al., 2021). The position that sharing information about medical errors is essential for effective PS outcomes is now mainstream in organisational culture change (ibid). Therefore, the need for transparency and learning remains urgent because the more information is shared, the better lessons can be learned and shared throughout the healthcare industry (Greenhill, 2023; Jones et al., 2021).

Subsequently, in the pursuit of QI, there are perspectives central to all that needs to be known about PS, including PS culture, health financing, PS legislated practice, and the new field of PS science. These PS perspectives are discussed next, given their importance to this current research in providing great insight into the importance of the knowledge required to determine the main goal and the objectives of this project.

2.2.3.1 Perspectives Central to the Discourse of Patient Safety

Many perspectives play a significant role in understanding the concepts of PS. Available literature often covers descriptions of its concepts similar to those described by Emanuel et al. (2008). They extracted the concepts of PS through a simple question-and-answer format. They asked: Why does the field of PS exist? It exists due to the high prevalence of avoidable adverse events; What is its nature? This is its essential focus of action: the microsystem; How does PS work? It works through its high-reliability design, use of safety sciences, and methods for causing change, including cultural change. And who are its practitioners?

Healthcare practitioners include all healthcare workers, patients, and advocates. Other pieces of literature (AHRQ, 2009; The Joint Commission, 2023b; WHO, 2021; PSNet, 2019a, and others) have a similar presentation of the concepts of PS from where this study draws on prominent perspectives considered to be central to the study of PS. The discourse about **PS culture** often covers popular underlying causes of medical errors. At the same time, **health financing, PS legislated practice criteria** (clinical practice policies, guidelines/protocols) emerge as the predominant discourse regarding PS solutions and initiatives, and the new **field of PS science** that constitutes the basis for the sustainability of PS solutions and agendas (through education, research, and knowledge transfer).

2.2.3.2 Patient Safety Culture

The healthcare industry realised that improving the culture of safety within healthcare is an essential component of preventing or reducing errors and improving overall healthcare quality (PSNet, 2019a). The idea of patient safety culture came into the healthcare industry in the 1990s when thinking began to change in response to several kinds of new information about medical errors (Emanuel et al., 2008). First, medical injury was acknowledged as occurring far more often than previously realised, with most of these injuries deemed preventable (ibid). Secondly, errors were now considered in two ways: active error, where a practitioner's encounter with a patient or equipment results in harm, or latent errors, as a result of defects in the design of systems, organisations, management, training, and equipment that lead a practitioner to make mistakes (ibid). This awareness incentivised the way risks in healthcare delivery are perceived and managed. Certain developments, especially Quality improvement (QI) and risk management that emerged as disciplines within healthcare, with an emphasis on health services delivery research and measurement, have produced a readiness for looking at what might be learned and adapted from other high-risk industries and complex organisations (ibid).

As part of the initial response to developing solutions, the WHO established the World Alliance for PS (WHO, 2008). However, despite this, there continues to be significant challenges to implementing PS policies and practices. Following this, another approach emerged where a fundamental requirement for adopting any new approach to improving patient safety culture is an obligation for clear articulation of the solution's premises and manifestations (Emanuel et al., 2008). The same standards have been in place for determining the adequacy of the application of models that enable change at the emergence of safety culture as a model of change within the discipline of PS (ibid).

This progression has motivated the modelling of PS improvement plans after the safety models used by *High Reliability Organisations*. According to Patient Safety Network, high reliability organisations are those institutions that operate in complex, high-hazard domains for long periods without serious accidents or catastrophic failures (PSNet, 2019b). Consequently, critical assumptions in healthcare were rewritten by PS thinking, involving understanding why people make errors that lead to adverse events (Emanuel et al., 2008). This is shifted from a single cause, legalistic framework to a system engineering design framework, and, in so doing, it changed forever the way people think about healthcare delivery (ibid). With this progression, the advent of a patient safety culture calls for achieving high standards of patient well-being, while healthcare delivery organisations must adopt a culture of safety.

The Agency for Healthcare Research and Quality defines PS culture as "*the extent to which an organisation's culture supports and promotes PS. It refers to the values, beliefs, and norms that are shared by healthcare practitioners and other staff throughout the organisation that influence their actions and behaviours*" (AHRQ, 2022). There are key elements to safety culture which are a transparent approach, leading by example, policies, and a just culture (SonderCare, 2023; Emergency Care Research Institute (ECRI), 2019). These elements are safety influencers across three domains of systems: that which affects therapeutic action, the people who work in healthcare, and the people who receive it or who are stakeholders in making it available (Emanuel et al., 2008).

Nonetheless, since the introduction of the approach of the culture of safety to health care delivery, it has been realised that it is fundamentally a local problem because there are wide variations in the perception of safety culture within a single organisation (PSNet, 2019). As such, the perception of safety culture might be high in one unit within a hospital and low in another unit or high among management and low among frontline workers (ibid). These variations likely contribute to the mixed record of interventions intended to improve safety climate and reduce errors (ibid). Many determinants of safety culture depend on interprofessional relationships and other local circumstances, and thus changing safety culture occurs at a microsystem level (ibid). As a result, safety culture improvement often needs to emphasize incremental changes to providers' everyday behaviour (ibid). ECRI (2019) opines that organisations bound to succeed in seeing results from its operative culture of safety would often have leaders who embrace, prioritise, and are committed to the culture of safety. As such, in a culture of safety, the expected outcomes are centred on better performances influenced by a number of practices.

2.2.3.2.1 Patient Safety Practices Influenced by a Culture of Change

Like many disciplines, healthcare as an industry also possesses an active and significant transitional process that is ongoing. Medicine and clinical practice transitioned into a service industry era in the mid-20th century because of the influence of systems thinking, which originates from industrial engineering and is applied in production lines and service industries (Emanuel et al., 2008). The managed era emerged following the public demand for accountability due to uncontrollable health care costs and increased evidence of poor quality (ibid). This influenced considering and establishing industrial human-factors engineering concepts in health care (ibid). These phases of change have been influenced by the identification of factors that increase the risk of harm to patients, staff, and organisations (Farokhzadian et al., 2018). The commonly identified factors are a lack of resources, poor staff professional competence and empowerment, unfavourable work conditions, and an unsafe environment (ibid). Therefore, in the managed era, an important change in tackling medical errors brought about the initiation of thinking of health care delivery in terms of systems, where the need for transparency and learning remains urgent. This is because, the more information is shared, the better lessons can be learned and shared throughout the healthcare industry (Emanuel et al., 2008).

2.2.3.2.2 Systems Thinking

What existed previously in the earlier phases of medical history was a different form of systems thinking, which focused on the biologic systems within the individual patient rather than on care and interactions between individuals in the environment of care (Emanuel et al., 2008). This phase progressed to the scientific era, which is believed to have contributed to the uptake of systems thinking by clinicians, given the successes achieved by physiological systems thinking (ibid). Onwards, leaders in health care have argued that errors could be reduced by redesigning systems and processes using *human factors principles,* where, for example, achieving a reduction in mistakes includes standardisation, simplification, and the use of constraints (ibid). A constraint is that which would possess a *forcing function* which is a design feature that makes error impossible, for example, the use of incompatible connectors that prevent connecting an anaesthetic gas to the oxygen port of an anaesthetic machine (ibid). Another significant progress in preventing error through systems thinking is the application of engineering design concepts to health care in relation to tools and technology, such as using better intravenous pumps, computerised charting, and electronic prescribing systems. Further, systems thinking also progressed in relation to organisations and people in relation to

problems of implementation as a result of dysfunctional relationships between clinicians and other workers. This brought the realisation to health care that they needed to mirror some of the developments in aviation in which a focus on teamwork complemented attention to refinements of mechanical systems. Therefore, training in teamwork became a foundational building block for the field of PS (Emanuel et al., 2008). (Emanuel et al., 2008). These changes cumulatively project the discipline of PS as one that rejects the concept of health care delivery as an exclusive dominion of the medical profession over the patient-physician relationship (ibid). The new standards are more inclusive and demanding because they embrace patient-centred care and the biomedical model and focus on multidisciplinary teamwork and families while including the technical and administrative aspects of health care delivery in a complex system (ibid). For example, there were good outcomes from including pharmacists in a multidisciplinary ward round (ibid). There are external entities that also contribute to achieving the growth of systems thinking, including regulators, taxpayers, insurance administrators, economic policymakers, and technology suppliers, who often influence and shape incentives and demands within the healthcare organisation (ibid). With this, demand is placed for health care to be an open, not closed, system, resulting in thinking of policy as a system feature (ibid). One such approach is the outstanding need to limit the culture of blame within health care.

2.2.3.2.3 The Practice of Limiting Blame

The practice of limiting blame was necessitated by the realisation that adverse events often occur because of system breakdowns, not simply because of individual ineptitude (Emanuel et al., 2008; Zangaro et al., 2023). The traditional approach assumed that well-trained, conscientious practitioners do not make mistakes, error was equated with incompetence, and punishment was regarded as both appropriate and effective in motivating individuals to be more careful (ibid). The use of this kind of blame had a toxic effect, as it became apparent that practitioners rarely revealed mistakes, and patients and supervisors were frequently kept in the dark (ibid). This caused low reporting, which made learning from errors nearly impossible (ibid). Worst still, legal counsel often supported and encouraged this approach in order to minimise the risk of malpractice litigation (ibid). This mindset lent a wary, antagonistic backdrop to the therapeutic interaction while it also created a locked-in paralysis for all concerned when failure did occur (ibid). The 2022 guilty verdict pronounced on RaDonda Vaught, a former nurse who was found guilty of criminally negligent homicide and abuse of an impaired adult when a medication error resulted in a patient's death in 2017, changed the approach of many healthcare organisations when they released a public statement

against the criminalisation of medical errors based on the impact it could have on the disclosure of errors and near-miss events (Zangaro et al., 2023).

The culture of individual blame, still dominant and traditional in health care, undoubtedly impairs the advancement of safety culture (PSNet, 2019a). However, while "no blame" is the appropriate stance for many errors, certain errors do seem blameworthy and demand accountability (ibid). In an effort to reconcile both needs for no blame and appropriate accountability, the concept of *just culture* is now widely used. A just culture is focused on identifying and addressing systems issues that lead individuals to engage in unsafe behaviour while maintaining individual accountability by establishing zero tolerance for reckless behaviour (Zangaro et al., 2023; PSNet, 2019a). It distinguishes between human error (e.g., slips), at-risk behaviour (e.g., taking shortcuts), and reckless behaviour (e.g., ignoring required safety steps), in contrast to an overarching *no-blame* approach still favoured by some. In a just culture, the response to an error or near miss is predicated on the type of behaviour associated with the error and not the event's severity. For example, reckless behaviour, such as refusing to perform a *time-out* (a process where all the operating team review that it is the correct patient, correct surgery, and the correct surgical site before commencing the procedure (Freundlich et al., 2020)) would merit punitive action, even if patients were not harmed.

Nevertheless, many support the position that healthcare organisations have a huge responsibility in improving their organisational safety culture, especially in resolving the problem of staff retention stemming from poor occupational conditions, such as workload, work patterns and the work environment, and burnout of the workforce (Zangaro et al., 2023). The study by Etezad *et al.* (2023) is a good example of the need for this call to action in improving PS culture. Their study focused on investigating the distress, burnout, and level of well-being among community pharmacy professionals post-COVID-19 pandemic and its association with their staff retention, as well as patient safety outcomes. The results were achieved through a broad survey of a cross-sectional study where 722 responses from community pharmacy professionals across Canadian provinces were obtained. Given the significant adjustment required during the COVID-19 pandemic, Canadian pharmacists were required to take on extended roles in the preparation, preparedness and response within their pharmacy practice while still maintaining their regular responsibilities of managing medical and drug supplies, providing coverage, and ensuring patient-orientated safe use medical/drug products. They also provided extended services in disease prevention and infection control than was typical before the pandemic. These extended roles are attributed to the significant

increase in the number of patients accessing pharmacist care, especially since the pharmacist's unique position and service location mean they are the most accessible frontline essential health care workers in every community. Although this change in the scope of the pharmacists' roles has brought positive outcomes in the Canadian health systems, 1 in 4 pharmacists reported that their work environment was not conducive to providing quality and safe clinical care. The study findings show that 85% of community pharmacists reported worsened mental health during the COVID-19 pandemic. At the same time, it is perceived that regulatory monitoring focus is on licensed pharmacists rather than pharmacies as institutions. These researchers, therefore, emphasised the importance of prioritising the mental health and well-being of community pharmacy professionals while pointing out the systemic factors predicting the well-being and turnover intention of community pharmacists, as well as PS culture within their pharmacy.

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Likewise, it falls on healthcare organisations to build workplace professionalism to achieve high reliability through the commitment of the clinicians, executive boards, executive leaders, and middle managers of these organisations (Emanuel et al., 2008). To achieve this, a blame-free culture is required, an environment of incentivising learning by fully (upwards) disclosing information about mistakes, failures, and near misses; providing support to clinicians involved in inherently risky work and disclosing all relevant facts to injured parties (Zangaro et al., 2023; Emanuel et al., 2008).

Besides, it has been realised that the development of systems thinking has brought transformations in approaches that were remarkably well rooted in the essential ethical underpinnings of clinical practice, that is, the central medical professional imperative to, *above all, do no harm* (ibid). This progress strengthened the value of non-malfeasance, where the matter of justice, human rights, or the fiduciary obligations intrinsic to the unequal power structure of the provider/patient relationship is achieved (ibid). In addition, system thinking challenged organisational responsibility in attaining system-wide transparency, which should coexist with fundamental professionalism because these standards require honesty and disclosure of material facts to patients (ibid). Therefore, the interrelated elements of system thinking are the key terms that define PS culture: organisational culture and safety culture (Australian Commission on Safety and Quality in Health Care, 2023).

It is, therefore, important to consider how all of these approaches materialise in the actual practice of error prevention in clinical settings. This section considers the error prevention tools applied in PS clinical management and error intervention.

2.2.3.2.4 Patient Safety Error Prevention Tools

Many tools used to examine healthcare incidents have originated from the industrial disciplines (Sye, 2023). The need to understand industrial injuries in the early 1900s became the driving force to design an assessment tool to help understand how these injuries are happening (ibid). A good number of these tools are used in the healthcare system in many ways to improve the quality of care and ensure PS (Lachman, 2021). The **Plan-Do-Check-**

Act (PDCA) cycle was developed by Walter Shewhart and used as an evaluation tool of theoretically influenced interventions for patient safety quality improvement (PSQI) (ibid). The PDCA formed the basis for the modern-day **root cause analysis (RCA)** (Sye, 2023). The RCA continued to evolve as other supporting frameworks emerged, such as **the fishbone diagram,** also known as **the cause-and-effect diagram,** introduced in the 1950s by Kaoru Ishikawa (ibid). The fishbone diagram is used to identify the potential causes of a problem by categorizing them into different groups in a representation of the skeleton of a fish, with the head representing the problem and the causes branching out like fishbones (ibid).

RCA is one of the most important milestones in the transformation of the way in which medical errors are reviewed (Stecker, 2007). The concept of RCA was pioneered by Sakichi Toyoda, who was the founder of Toyota Industries (ibid), as part of the innovations of understanding industrial injuries. RCA has been adopted in healthcare, and it is a structured method used to analyse serious adverse events, not only by asking the question of 'whats' and 'hows' but also by asking the 'whys' (Stecker, 2007) because the central principle of RCA is to identify underlying problems that increase the likelihood of errors while avoiding the trap of focusing on blaming mistakes by individuals (PSNet, 2019c). To achieve the goals of RCA, there are multiple layers of frameworks built on safety theories that are the working parts of RCA. The Swiss Cheese Model developed by Reason (1990) is founded on the *Active and Latent Failures theory*. Reason (1990) believes that accidents occurring in complex organisations are caused by a breakdown or absence of safety barriers across four levels within a socio-technical system. The four levels are namely Unsafe Acts, Preconditions for Unsafe Acts, Supervisory Factors, and Organisational Influences. Therefore, the Active Failures are associated with the Unsafe Acts, while the Latent Failures are linked to the organisational influences. These ideas are typically shown in diagrams showing individual slices of cheese, and absent or failed barriers are represented as holes through each slice of the cheese. Therefore, when holes across each slice line up, this indicates a window of opportunity for an incident or PS harm to occur. The Swiss Cheese Model is used to guide RCAs and safety efforts across a variety of industries, including healthcare, but other frameworks also define how the Swiss Cheese Model is applied. An example of the framework that defines the holes in the cheese and their relationships is the Human Factor Analysis and Classification System (HFACS) (Wiegmann et al., 2022; Stecker, 2007). The HFACS is considered a scientific discipline concerned with the understanding of interactions among humans and other elements of a system. It applies theory, principles, data, and other methods to design in order to increase the opportunities for human well-being and overall

system performance (Stecker, 2007). In the application of this framework, situations are categorised as Human Factor Engineering (HFE) root causes and contributing factors related to interactions between humans and their environment, including barriers, policies and procedures, communication, training, fatigue/stress, and equipment, or Non-Human Factor Engineering (non-HFE) root cause factors such as patient's behaviour or cause of disease which are much more difficult if not impossible to modify (ibid). It is an important outcome when RCA identifies a non-HFE as a primary root cause, as it substantially lowers the likelihood that any actions can be identified to prevent the event from occurring in the future (ibid). The overall intention of RCA and any of its frameworks, such as the Swiss Cheese Model and its associated tools, is to help safety professionals identify holes in each level of the system that could or already lead to adverse events so they can be addressed and mitigated before causing harm in the future (Wiegmann et al., 2022).

Despite the complex analytical structure of RCA and its achievements, the effectiveness of RCA and some of its analytical frameworks are questioned. RCA's potential value continues to be under-realised, and organisations continue to display forgetfulness in terms of the items that need to be investigated and the correct application of appropriate measures to correct and prevent errors from happening in the future (Peerally et al., 2017). They identified several challenges facing the usage of RCA in healthcare. This starts with *the term root cause,* which constitutes and promotes a flawed reductionist view because results are often presented in a linear way rather than the intended identification of the latent and active factors contributing to the genesis of a particular adverse event (ibid). Furthermore, *the quality of RCA investigations* comes under scrutiny, given that the requirement for multidisciplinary investigators, including especially risk management specialists and clinical leads expected to work over a specific period of time, are often not met. Another concern is the issue of *political hijack* when organisational pressure produces the quest to complete an investigation on time and produce a report, which risks goal displacement, where the report is seen as the end product rather than the beginning of a learning cycle (ibid). Other concerns include poorly designed or implemented risk controls, poorly functioning feedback loops, disaggregated analysis focused on single organisations and incidents, confusion about blame, and the problem of many hands (ibid). Nevertheless, RCA can succeed when, in the first place, organisations provide ways by which employees are easily adapted to change by ensuring a commitment to change by management, who must ensure the provision of required resources such as well-designed training programmes that are end user friendly in the form of a feedback loop for modification once a new system is in use (Stecker, 2007).

Secondly, it is crucial to involve the professionalisation of incident investigations by ensuring that those conducting them get specialist training in underlying theories, ergonomics, human factors, and hands-on experience in analytical methods (Peerally et al., 2017).

Summarily, the outcomes of PS study led to the collective knowledge that medical errors do not just happen in isolation, but there are numerous underlying and interrelated factors responsible for these situations. Some of the responsibilities for such occurrences are allotted to clinicians, while a substantial amount of the responsibilities remains with the governance of healthcare systems. To this effect, suggestions for improvement are geared towards PS knowledge acquisition and transfer and improvement of health systems, especially through financing all it needs to function adequately (ibid). Through this solution direction, the concepts of PS science and universal health coverage appear constantly in the discourse of improving PS service delivery.

2.2.3.3 The Field of Patient Safety Science

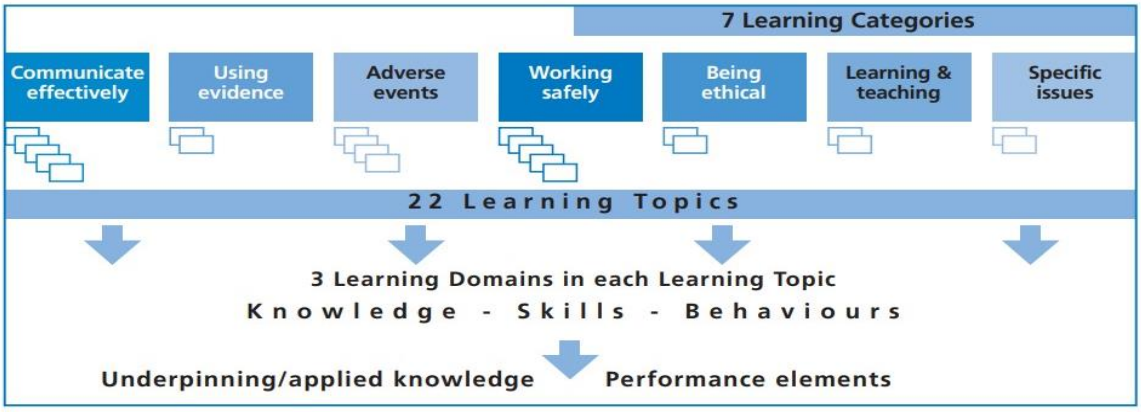
The science of PS has become a lens by which information about what is significant in the cause of medical errors and adverse events is understood. The importance of PS science is rapidly taking a lead in the strategy of sustainability of PS knowledge and practice.

"Patient Safety Science (PSS) is using deep understanding, skills and experience to transform Patient Safety Incident Response and Investigation into an effective and meaningful experience for all" (Patient Safety Science, 2023). Vincent (2013) notes that biomedicine assumes that effective interventions are preceded by a solid understanding of the underlying problem, therefore potential interventions are extensively tested in large, properly resourced trials. In contrast, PS has relied heavily on local enthusiasm and the willingness of committed clinicians to find time to understand and improve their systems. PS now needs to adopt a thorough scientific approach for analysing underlying problems, developing, and testing interventions, and more effectively using scientific knowledge in improvement programmes. This goal will require stronger collaboration with scientific disciplines other than medicine, in addition to the creation of centres of research and improvement that combine them. In the last two decades, institutions have actually taken steps to achieve this goal. For example, Wu and Busch (2019) discussed the emergence of the inclusion of PS modules into health professions educational programmes. They identified limited education on PS in schools of health professions, including medicine, nursing, pharmacy, and dentistry, as one of the outstanding gaps in PS knowledge. This has called for the health professions schools and training

programmes to refocus their goals away from mere acquisition of knowledge and facts instead, pieces of training and education programmes on PS should be designed for new concepts, attitudes, behaviour, and skills, and they should provide opportunities for trainees to implement them in practice. In their assessment of the PS education status, they found that some countries already embraced this idea and have included the PS curriculum in their medical undergraduate training. For example, at Johns Hopkins University, USA, a 10-hour curriculum was instituted for first-year medical students, which has shown improvements in knowledge and attitudes, including future commitment to PS. In the UK, a 5-hour curriculum for senior medical students on understanding errors in healthcare was shown to have improved knowledge. Meanwhile, other countries are aiming to include the PS curriculum in their health professions education, such as the efforts being explored by Germany in 2016. Meanwhile, Vincent (2013) put forward a proposal for building PS education with an approach based on coordinated scientific research on PS that would require many facets, including the need for improvement of *measurement* in PS research in clearly defining and measuring specific types of harm using record reviews and clinical and administrative databases. Additionally, observational studies are required to provide a more direct assessment of error and harm along the entire patient pathway. Secondly, the identification of poor adherence to procedures by healthcare professionals that is often influenced by human behaviour and other multiple factors requires an understanding of the underlying reasons that influence these behaviours. Third, behavioural studies using safety-related techniques, usable procedures, and psychological procedures such as mental rehearsals are techniques required at all levels, even more importantly at leadership and executive levels, because they are critical to safety. Fourth, decision-making support is crucial, as it is broadly held to be a potentially powerful means of improving both safety and efficiency. There is the potential for safety to be degraded due to poor decision-making. This is why a clear distinction must be made between when human judgment is required and when decision-making is a better option, such as relying on algorithms and computers. However, this can be influenced partly by context, but it should be designed by what is already known about the strengths and limitations of human judgement and decision-making. Sixth, the available knowledge through theoretical perspectives, contextual influences on large-scale change and the theories of change underlying the interventions that are developed are key tools to understanding the reasons why some interventions succeed, and others do not, especially since complex organisational interventions evolve and change over time (ibid). These criteria echo the rhetoric about any approach to ensuring PS outcomes are achievable.

The leadership of WHO (2011b) published the curriculum guide designed for healthcare educational institutions in 2011 to implement patient safety learning for students prior to becoming qualified professionals. Institutions have the flexibility to adapt the curriculum to suit their health professions programme. The curriculum guide is a comprehensive programme for the implementation of PS education in healthcare educational institutions worldwide which comprises two parts, *Part A- The teacher's guide and Part B- A comprehensive ready-to-teach, topic-based PS programme that can be implemented either as a whole or on a per topic basis.*

"The curriculum guide covers 11 topics, including 16 of a total of 22 learning topics that were selected from the evidence-based Australian Patient Safety Education Framework (APSEF)" (WHO, 2011, p.25).



Source: *National Patient Safety Education Framework*, Commonwealth of Australia, 2005 [1].

Figure 5 : The APSEF (Structure of the Australian Patient Safety Education Framework)

The WHO curriculum guide consists of 11 topics, including infection control; which was an addition because this was not on the APSEF. The 11 topics in the curriculum guide are **i)** What is patient safety? **ii)** Why applying human factors is important for patient safety, **iii)** Understanding systems and the effect of complexity on patient care, **iv)** Being an effective team player, **v)** Learning from errors to prevent harm, **vi)** Understanding and managing clinical risk, **vii)** Using quality improvement methods to improve care, **viii)** Engaging with patients and care, **ix)** Infection prevention and control, **x)** Patient safety and invasive procedures, and **xi)** Improving medication safety.

The WHO also adopted the Canadian Safety Competencies Framework for practical skills as part of the curriculum guide. This is similar to the APSEF, but it provides an interprofessional, practical framework that identifies knowledge, skills, and attitudes required by all healthcare professionals. The topics in the framework are divided into six domains, namely, *Domain 1*: Contribute to a culture of patient safety, *Domain 2*: Work in Teams for patient safety, *Domain 3*: Communicate effectively for patient safety, Domain 4: Manage Safety Risks, *Domain 5*: Optimise Human and Environmental Factors, and *Domain 6*: Recognise, Respond to and Disclose Adverse Events.

This curriculum guide is being adopted by health professions training programmes, healthcare institutions, and professional development learning programmes, however, there is still a huge gap in the uptake of the curriculum guide despite the evidence that analysing PS as a science, frontline providers will provide a higher quality of patient-centred care in their hospital units (Agency for Healthcare Research and Quality, 2018). The numerous added advantages of producing healthcare students for safe practice, enhancement of PS as a theme throughout all healthcare professional curriculum, further development of capacity for PS educators in healthcare professional education and many others (WHO, 2011) is being lost when the curriculum is not widely incorporated into health professions training programme. Nevertheless, the availability of the curriculum is the hope that there is a point of reference for PSS education over time.

2.2.3.3.1 Health financing as a PS solution

Health financing in PS is highly significant in the discourse of Universal Health Coverage (UHC). Health financing is an essential function of health systems that can ensure progress toward universal health coverage through the improvement of service coverage and financial protection (WHO, 2023). The importance of health financing is in the realisation that millions of people are unable to access healthcare due to cost, while many others receive poor quality care when they pay out of pocket (ibid).

Global Burden of Disease Health Financing Collaborator Network (GBDHFCN) (2017) extensively studies global health financing trends in 184 countries from 1999 to 2014. The study covered extensive parameters from examining how the sources of funds used, types of services purchased, and development assistance for health disbursed change with economic development. Without labouring the details of the study outcome, the overall statement of the finding has enough details which is relevant to important aspects of this research. The

summary of the findings states that-

> Health spending remains desperate, with low-income and lower-middle-income countries increasing spending in absolute terms the least and relying heavily on out-of-pocket spending and development assistance. Moreover, tremendous variation shows that neither time nor economic development guarantee adequate prepaid health resources, which are vital for the pursuit of universal health coverage (GBDHFCN, 2017, p. 1981).

As of 2023, the issue of inadequate health financing is still very much on the global health agenda. The WHO (2023b) remains concerned because the current data is not showing remarkable improvement. In the year 2000, the UHC service coverage index was at 45, but as of 2019, it increased to 68, an estimated 2 million people are dealing with catastrophic or impoverishing health spending, inequalities in health service provision in-country persist, and COVID-19 caused health service disruptions up to 92% in 2021 and 84% in 2022. To return to the vision of achieving UHC so that people have access to the full range of quality health services they need, when and where they need them, without financial hardship (ibid), the WHO has suggested that Primary Health Care (PHC) approach should be used to reorientate health systems (ibid). This approach is suggested because 90% of essential UHC interventions can be delivered through a PHC approach, with a potential gain of saving 60 million lives and increasing average global life expectancy by 3.7 years.

The concern to improve UHC is also implicated in the delivery of PS in clinical settings. Singh (2022) advised health leaders to take advantage of the lessons learnt from the COVID-19 pandemic from the accelerated improvements in the quality of healthcare services delivered at the time, especially in PS and IPC. Service delivery was made stronger through intensified health worker training and additional resource allocations (ibid). The benefits were evident, for example, in the increased awareness of and adherence to PS and IPC guidelines and protocols, the upholding of the 5 moments of hand hygiene to the ‘Know-Check-Ask’ protocol for safe medication administration (ibid). As much as these improvements are critically important for patients and healthcare workers, they are much more significantly important to accelerate progress towards UHC, not only about coverage and accessibility but also through quality care (ibid).

In summary, the discussions, thus far, demonstrate far-reaching perspectives on the concepts of PS, which clearly establishes the multidisciplinary nature of PS in any community. The study of PS is not limited to the boundaries of clinical practice or health sciences, and this is the reason it is being studied in relation to health governance. In respect of this, the concepts

of health policy are discussed next.

2.3 The Concept of Health Policy

2.3.1 Introduction: Policy, Public Policy, and Health Policy

According to Robert et al. (2018), the term ‘policy’ has a wide range of meanings that enable politicians and parties to present their intended actions as policies to be pursued, and they defend past actions as policies to be extended. Therefore, they describe policy as general statements of intention, past or present actions in specific areas, or a set of standing rules to guide actions. Likewise, Jenkins (1978) states that the term ‘policy’ connotes broad meanings but defines policy as a set of interrelated decisions taken by a political actor or group of actors concerning the selection of goals and the means of achieving them within a specified situation where these decisions should, in principle, be within the power of these actors to achieve. De Leeuw et al. (2011) define policy as “the expressed intent of government to allocate resources and capacities to resolve an expressly identified issue within a certain timeframe” (De Leeuw et al., 2014, p. 2). This definition is preferred by these scholars because the policy concept is often not defined at all or simply considered the law or a plan in many health literatures (ibid). Michael’s (2016) review of Dye’s work, which assessed the influence of political and economic variables on a number of policy areas in the American states, attests to the relationships between politics, policy, and society, which is also peculiar to other countries. The study focuses on five areas of policy, including education, welfare, highways, tax/revenue policy, and public regulatory policy. In the study, the five areas are analysed for the impact of economic development and political variables such as party and electoral systems from an Estonian systems approach. The assumptions generated state that economic development is the principal input variable shaping the character of state political systems and the kinds of policy outcomes encountered in state politics. The view that the level of economic development of a locality, city, region, or nation is an important determinant of its capacity to act on the problems that it faces strongly supports the outcome of Dye’s study (ibid). Still, some believe that the qualitative approach of the study is a limitation to wider potential findings, notwithstanding the importance of this work cannot be undermined as gained recognition because many perspectives on politics and policy leverage on these ideas to establish their arguments.

In another perspective, Exworthy (2008) states that the term ‘policy’ is so widely used that it often obscures meaning, making the attempt at definitional clarity misleading. Likewise, the policy process is often presented as straightforward and a rational process from formulation to

implementation, whereas in between this continuum, intentions and actions are often hard to distinguish. Nevertheless, scholarly perspectives believe that it is better to try and understand the concept of policy itself in terms of context (the environment within which interventions are considered), content (the object of policy and policy analysis - that is, technical or institutional policies), process (in its attribute to draw attention to the course of action over time) and power (that which draws attention to the interplay of interests in negotiation and compromise) (Walt, 1994; Janovsky and Cassells, 1996; Wildavsky, 1979 cited in Exworthy, 2008, p.319). On this premise, consideration is given to the nature of policy and how it relates to health.

Buse et al. (2012) discussed sequentially the links between policy, public policy, and health policy. As previously stated, *policy* is defined in many ways, but the core idea (Buse et al., 2012) is that it is a decision taken by those responsible for a given policy area, such as in health, the environment, education, or trade (ibid). These are decisions that can be made at any level of governance, in the public or private sectors and within different organisations (ibid). Further, in terms of *public policy*, these are government policies or those of their agencies which can be identified from the tone of the statement, or the formal positions presented. Such statements can be couched in terms that suggest the accomplishment of a particular purpose or goal, for example, charges on cars to reduce congestion, or it may refer to a government activity in a sector such as an economic policy or a specific proposal when the policy states a projected achievement in statement like, as from next year, the students must be represented on university boards. Some other terms that might be used would describe government policies as a programme. For instance, a school health programme may include different policies, e.g., preventing children from starting school before they are immunised, providing school meals at reduced cost etc., in the school curriculum are all programmes embodying policy for school children. Within all these perspectives, Buse et al. conclude that public policies may not arise from a single decision but could consist of bundles of decisions that lead to a broad course of action over time. This conclusion is significantly driven amongst others by the consideration of the alternative 2001 definition of public policy by Thomas Dye which states that public policy can also be what the government choose to do or not to do (Robert et al., 2018). Buse et al. (2012) identify that this definition contrasts with others, consequently implying that government policy decisions or actions may or may not be intended, defined, or even recognised as policy in a formal document or statement. Finally, they define health policy as decisions or actions that may cover public and private policies about health that affect the set of institutions, organisations, services and funding

arrangements of the health and healthcare system. However, because health is influenced by determinants outside the health system, health policy analysts are also interested in the actions and intended actions of organisations external to the health system, which have an impact on health, such as the food or tobacco industries or pharmacy (ibid). What remains important is to keep in mind that, while health policy conceptually can be distinguished from other areas of public policy, it is highly interconnected with a wide range of social and economic policies. In fact, there are health dimensions in virtually all policy areas: among others, national security, immigration, environment, housing, transportation, and Labour policy (Robert et al., 2018). Because politics is a crucial dimension of all attempts to frame health policy, however, politics is very country-specific therefore, it is impossible to explore the intricacies of the healthcare politics of other countries (ibid). This position is clearly illustrated in the consideration of health law alongside health policy in Nigeria (Iyioha, 2015). These disciplinary areas were described as a novel field in Nigeria because they are evolving, uncharted, and innovatory disciplines, especially when studied in the context of legal, ethical, sociocultural, and ontological lenses. Iyioha (2015) observed that the subjects of health law and health policy are not traditionally taught in Nigerian law faculties. Consequently, it is not surprising that health law and health policy in Nigeria are neither uncomplicated nor coherent. Nevertheless, this is not only peculiar to Nigeria, as health law and policy are described as Atheoretical and lacking systemic analysis in North America (ibid). But the incoherence and complex nature of health law and policy are attributed to several legal and non-legal fields with which they interact. In the Nigerian context, the field spans a wide aspect of the field of Law, including relevant health and health-related legislation, which implies that health governance in the country draws significantly on common law rules, for example, the law of negligence and statutory law such as the principles contained in the Nigerian National Health Act, the National Health Insurance Scheme Act, the Medical and Dental Practitioners Act, the Code of Medical Ethics of The Nigerian Medical and Dental Council. Consequently, the value of these details can be shared from the opinion that the increasing complexity of modern society dramatically intensifies the decision-makers' need for information, based on the realisation that policy decisions combine sophisticated technical knowledge with complex social and political realities (Fischer et al., 2007).

2.3.2 Health Policy

Socioeconomic and political activities have increasingly and significantly impacted the healthcare industries in ways that warrant constant review of management decisions at local, national, and international levels of health governance. These changes influence the policy

field in healthcare, which has always been a controversial policy area, but lately, it has become a major issue in all developed nations (Robert et al., 2018). Societal changes, including ageing populations, the proliferation of new medical technologies and increased public expectations and demands, among other factors, have elevated health care to the top of the political agenda (ibid). Subsequently, political leaders face heightened pressure to meet rising public demands for expanded service, which conflict directly with the need to constrain healthcare costs and manage scarce societal resources (ibid). Thus, despite major differences among countries regarding how healthcare is funded, provided, and governed, all governments share in these contemporary challenges in healthcare governance, although some seem to be coping significantly better than others (ibid). As these issues are universal, inquiries are often centred on investigating how governments are dealing with these issues, what policies are developed to challenge the issues, are the policies effective, and if not, what approaches or what are the alternatives to address the policy failure. Robert et al. (2018) addressed these challenge questions firstly by discussing the nature of policy as it relates to the healthcare industry.

2.3.3 Health care as public policy

Organisations, such as medical associations and nursing societies, often make decisions that affect many individuals as well as the health care system. While their decisions might indeed have a bearing on what the government ultimately do, they are not binding by force of law. The government has the legitimate authority to make decisions that are binding and carried out in the name of the entire population (Robert et al., 2018). Hence policy in healthcare is distinguished between health policy, health care policy, and health care politics (ibid). *Health policies* are those paths of action proposed or taken by governments that affect the health of their populations. while health policy and health politics overlap with economic, social welfare, employment, and housing policy, among other areas (ibid). Health policy, then, is a broad term encompassing any action that has health implications. On the other hand, *health care **policy*** is a narrower term that refers to those courses of action taken by governments that deal with the financing, provision, or governance of health policy (ibid). While *health care **politics*** refers to the interactions of political actors and institutions in the healthcare arena (ibid). Therefore, it will be argued that the health of a population can be as dependent on health policies as on prescribed health care policy (ibid).

Health policy, as mentioned earlier, covers a wide range of issues in health care, public health, and biotechnology (Gostin, 1995), where the goal is to promote the health of individuals and

the community (*ibid*). The significance is that the development of these policies is a complex process. Often, policies are seen as rules, regulations and guidelines made by the government to operate, finance and shape health care delivery which covers a range of areas, such as public health, preventive health care, chronic illness and disability, and long-term care and mental health (Pever et al., 2016). Gostin (1995) considers that there is official government policymaking that is a legally binding or persuasive force in law. As such, it can be said that the formal development of health policy is the primary responsibility of the executive, legislative and judiciary branches of the government at all levels (*ibid*). Thus, a national patient safety policy is a formal government statement that defines priorities and parameters for action in response to a country's needs, available resources and political considerations that is developed in close consultation with stakeholders, including communities (WHO, 2014).

Furthermore, these complexities associated with the process of developing health policy guidance have evolved over the years as a result of changes in healthcare service delivery itself. Greenfield et al. (2017) state that, in the last 50 years, there have been extraordinary changes in healthcare, including sophisticated developments in knowledge, technologies, science, industry, economic, educational, and managerial skills. This has produced large-scale complex organisations such as tertiary teaching hospitals, which involves an extraordinary diversity of services (*ibid*). These changes touch on a number of levels of interactions, evident in how they are increasingly driving the standardisation and customisation of the micro-elements of care in ways previously not possible (*ibid*). The changes have driven tighter governance due to the need to achieve improved safety and quality of care (*ibid*).

Indeed, developing modern health policy poses complex legal, ethical, and social questions (Gostin, 1995). Despite the recognition of these complexities, the WHO (2017b) maintains that clear policies, organisational leadership capacity, data to drive safety improvements, skilled healthcare professionals, and effective involvement of patients in their care are all needed to ensure sustainable and significant improvements in the safety of health care.

2.3.4 The Legislation of Health Policy

The healthcare sector is the most regulated, especially in developed countries (Robert et al., 2018). Governments apply regulatory powers through policies where healthcare governance incorporates all three types of public policies (ibid). Firstly, regulatory policies are rules that restrict the actions of groups or individuals by regulating their conduct with sanctions backed by a government authority; as such, through extensive programmes such as fee schedules,

licensing requirements, approval of drugs and other constraints on medical practice, the health care sector is regulated (ibid). Secondly, distributive policies regulate the management of public goods and services that benefit all individuals; however, these goods and services are unlikely to be produced by the voluntary action of the individual due to a lack of resources (ibid). Significantly, public goods can translate differently in various societies because it depends on how broadly government responsibility is involved (ibid). Therefore, distributive policies tend to provide benefits to specific segments of society (ibid). While considerable public services provision is carried out by the government, which often go unnoticed until scarcity forces compromise to be made as to who gets a public good and who is to be excluded (ibid). In terms of the health care sector, distributive policies are common in countries that operate national health services, such as the UK, but also present to some extent in all countries through medical training, the funding of health care research, the provision of public health services and health promotion activities (ibid). Thirdly, redistributive policies differ from those mentioned earlier in that they are controversial in principle because these are policies deliberately delivered by governments to alter the distribution of income, wealth, or property among groups in society (ibid). Nonetheless, reallocating resources through progressive taxes and other mechanisms is a standard in egalitarian societies (ibid). Therefore, when it comes to the application of redistributive health care policies, it is based on the notions of need and entitlement (ibid). It comprises government efforts to shift resources from healthy to non-healthy citizens. This is often influenced by the societal conception of equality (ibid). This type of policy operates in the health care sector through the use of general revenues to provide services to those who lack resources, such as the means-tested social insurance schemes for the poor and programmes that redistribute societal resources from general revenues to the elderly, children, or the indigent (ibid). An example in the Nigerian health system is the launch of the National Health Insurance Scheme (NHIS), now changed to the National Health Insurance Authority (NHIA) in 2022. The insurance scheme was originally established in 1999 under Decree 35 of the 1999 constitution but did not become operational until June 2005 (Ipinnimo et al., 2022). The establishment was driven by the mandate from the United Nations (UN) for all member countries to ensure Universal Health Coverage (UHC) for all their citizens to specifically fulfil sustainable development goal 3 to address the need for equitable access to health care services across the country (ibid). The Nigerian government has since pursued ensuring the enrolment of citizens to achieve UHC for Nigerians by 2015 (Ipinnimo et al., 2022; NHIA, 2023). However, the achievement of the NHIA seems to echo the position that whatever way policies are administered, some individuals will benefit, and some will lose (Hill and Hupe, 2009). This is evident in the

information that less than 5% of the over 200 million Nigerian population have benefitted from this scheme (Ipinnimo et al., 2022). Nevertheless, healthcare delivery is regulated through policies and guidelines because many will benefit and because the regulations are important to ensure quality of care and PS. This view opens up discussions around the idea of translation of policy into practice.

2.3.5 The link between policy and practice

Office of Disease Prevention and Health Promotion (ODPHP) (n.d.) states that evidence-based health policies can help prevent disease and promote health because of the conviction that establishing informed policies is key to improving health nationwide. There are examples of these benefits, such as the smoke-free policies, which help in the prevention of smoking initiation and increase in smoking cessation (ibid). Even so, Greer et al. (2017) state that the clinical world has struggled and continues to struggle with the need to develop simple tools that would both explain and facilitate the movement of evidence into practice. An apparent solution was found in the idea of Knowledge Translation, a dynamic and repetitive process that includes the synthesis, dissemination, exchange, and ethically sound application of knowledge to improve health, provide more effective health services and products, and strengthen the healthcare system (ibid). It may well work for the implementation of protocols for biomedical interventions, which has led to a clinical implementation of science championed by journals with similar names (ibid). Nevertheless, the complex and dynamic social world, where so many actors try to shape policy and practice to serve their unique interests, does not necessarily lend itself to the reductionist worldview (ibid). Many factors indicate the need for policy influence on practice. First, the advent of modern concepts of negligence that emphasise litigation to deter substandard behaviour and individual accountability for procedures and actions causally linked to adverse events became embedded in both medicine and law (Exworthy, 2008). This aided the credibility of clinical practice as more methods for accountability were established (ibid). An outstanding strategy is the establishment of the three-phase approach of the scientific method of determining efficacy and safety of new medical therapies, including phase 1 clinical trials to assess safety; phase 2 clinical trials to ascertain efficacy; and phase 3 trials to compare it with another standard intervention (ibid). The achievements of these scientific means of achieving accountability have gained the medical profession and clinical practice new levels of respect in society (ibid).

2.3.6 Implication of Health Policy in Clinical Guidelines

According to Gonzales et al. (2012), the translation of evidence into practice; policy and public health improvements refers to the widespread dissemination and adoption of interventions that can have a significant effect on health. The responsibility for evidence transfers to practice falls on researchers trained in implementation and dissemination sciences (IDS) (ibid). Gonzales et al. (2012) present all the interrelated concepts that transpire between evidence and practice and the actors that collaboratively shape the reach, relevance, uptake, and diffusion of interventions by relating the definitions of the core ideas. The definitions by the National Institute of Health (NIH) describe implementation as using strategies to adopt and integrate evidence-based health interventions and change practice patterns within specific facilities and dissemination as the targeted distribution of information and intervention materials to a specific public health or clinical practice audience (Gonzales et al., 2012). It may involve publication in professional journals, postal distribution to relevant groups, incorporation with continuing medical education/continuing professional development programmes, educational initiatives focusing specifically on guidelines and the use of lay and medical media (Partridge, 2003). It is the working pattern of IDS research to assess and promote changes between health services such as specific treatments, tests, or behavioural strategies, and delivery systems, including hospitals, clinics or policy-based organisations and communities such as groups of people, physicians, patients with diabetes, hospital administrators or policymakers. Still, scientific knowledge and innovation cannot directly move from their source to the clinical settings but rather have to diffuse through a wide range of conduits before arriving in the public domain, health policy and associated health delivery mechanisms will often be useful in this transfer (Prior et al., 2014).

Clinical guidelines are described as systematic statements that may offer concise instructions on which diagnostic or screening tests to order, how to provide medical or surgical services, how long patients should stay in the hospital or other details of clinical practice (Woolf et al., 1999). The use of guidelines has evolved from determining their usefulness to developing and utilising them in healthcare settings (ibid). The implementation of clinical guidelines is intended to turn changes in attitude and knowledge into changes in medical practice (Partridge, 2003).

Consequently, clinicians, policymakers, and taxpayers see them as a tool for making care more consistent and efficient and for closing the gap between what clinicians do and what scientific evidence supports (Woolf et al., 1999). They have become instrumental to everyday

clinical decisions at the bedside, rules of operation at hospitals and clinics, and health spending by governments and insurers are being influenced by practice guidelines (ibid). However, they are only one of the options for improving the quality of care. Nonetheless, rigorously developed, evidence-based clinical guidelines are known to minimise potential harm (ibid).

Clinical guidelines have increasingly become part of clinical practice in many healthcare institutions globally (ibid). This has been influenced by the issues healthcare institutions face, such as the rising healthcare cost as a result of; increased demand for clinical services, the need for technologies that do not come cheap, and the ageing population in some countries (ibid). Second, there are variations in service delivery among providers, hospitals, and geographical regions (ibid). Some of these variations are attributed to inappropriate care relating to either overuse or underuse of services, and lastly, the intrinsic desire of healthcare professionals to offer and of patients to receive the best care possible.

Panteli et al. (2019) highlight various levels at which guidelines are developed. Guidelines can be developed at national, regional and/or local levels (ibid). In most cases, professional associations are involved in the endeavour, especially in the few countries that have a central agency developing clinical guidelines in collaboration with professional associations. However, many countries identify with having multiple levels of clinical guideline development with regional and local bodies as well as several professional organisations contributing to the centrally coordinated process (ibid). Some countries do not have central coordination of the guideline development process at all instead, professional associations or medical officers/providers develop the guidelines. The countries that have well-established guideline development processes and experience in dissemination include Belgium, England, France, Germany, and the Netherlands (ibid). In whatever level of development that the guideline was maintained, they are believed to be beneficial overall to the well-being of patients.

It is believed that the use of clinical guidelines has a wide range of benefits, including those enjoyed by the patients, the healthcare professionals, the financial benefits, the healthcare institution itself and a host of others (Woolf et al., 1999). The main benefit of having guidelines is to improve patient care quality (ibid). Other benefits, according to Woolf et al. (1999), include the general benefit that guidelines have a strong potential to reduce morbidity and mortality and improve the quality of life for some conditions. This is achieved when guidelines improve the consistency of care. For example, Woolf et al. referred to the global

studies that identified that frequencies with which procedures are performed vary dramatically among doctors, specialities, and geographical regions, even after control for case mix is established. However, since the use of guidelines became mainstream, inconsistencies in healthcare service delivery have improved, especially because of other benefits patients gain from being aware that service guidelines are available to service users. The clinical guidelines that offer consumer versions published in magazines, news reports, and via the Internet have informed patients about what their clinicians should be doing, the benefits and harms of available options, and statements regarding the probability or magnitude of potential outcomes. Therefore, patients are empowered to make more informed healthcare choices and consider their personal needs and preferences in selecting the best option. Another benefit is the financial gain; given that when clinical guidelines are developed with attention to the public good, they can promote distributive justice and advocate better delivery of services to those in need. In addition, cash-limited healthcare systems guidelines can positively influence the efficiency of healthcare by freeing up resources needed for other healthcare services, resulting in a more equitable distribution of such resources. Other benefits are identified in favour of patients, who, in turn, influence public policy when they have the opportunity to share their opinions during the process of policy formation. Moreover, practice guidelines have been instrumental in identifying under-recognised health problems, clinical services, preventive interventions, neglected patient populations, and high-risk groups. There are also positive impacts of clinical guidelines on healthcare professionals who are able to improve the quality of their clinical decisions. They stand out in offering explicit recommendations for clinicians who are uncertain about how to proceed and overturn the actions of doctors accustomed to outdated practices. They are known to improve the consistency of care and provide authoritative recommendations that reassure practitioners about the appropriateness of their treatment policies. Finally, guidelines based on scientific evidence clarify which interventions are of proven benefit, and they document the quality of the supporting data. They alert clinicians to interventions unsupported by good science, reinforce the importance and methods of practical appraisal, and call attention to ineffective, dangerous, and wasteful practices.

Nonetheless, Panteli et al. (2019) refer to a 2011 study that shows inconsistency in the report on the evaluation of the effectiveness of the use of guidelines; while some studies have measured the significant effects of outcome, many are unclear or do not show effects of treatment according to the guideline recommendations. There is even more limited evidence on the scope of cost-effectiveness of using guidelines, but this is exceedingly difficult to

justify given the disparities in practice guideline development across countries and contexts (ibid). The limited information from evaluating the patients' outcomes as an effect of guideline recommendations implies that valuable information that would have been useful to redesigning and improving guidelines are not available such as identifying attributes that influence patients' outcome when treatment should have been administered by the guideline recommendations. Nonetheless, there are barriers identified to possibly affect the efficacy of clinical guidelines. Partridge (2003) identified six barriers to physician adherence to guidelines, including lack of awareness, lack of familiarity, lack of agreement, lack of self-efficacy, lack of outcome expectancy, the inertia of previous practice, and external or practice-related barriers.

2.4 Summary

Given the significance of inevitable changes that would continuously require policy changes and improvements, the WHO (2014) emphasises that national patient safety policy is the directive that will serve to provide clear alignment and harmonisation of patient safety activities, monitoring and evaluation of progress, future planning, and resource mobilisation.

These perspectives are widely agreed among practitioners and scholars that policies are particularly important in guiding service provision in various sectors. However, there is a great awareness of the complexities and the challenges encountered by policymakers at every stage of the policy process. Notwithstanding, there remain huge responsibilities and expectations for positive outcomes from the policymakers (ibid), especially since components of PS have been expressed by thought leaders and models have been presented, but in the awareness that a single rendition that can help a thorough adoption of PS throughout health care is not available (Emanuel et al., 2008). Notwithstanding, Berry (2006) opines that quality is everyone's responsibility, but top management has more leverage toward continuous improvement of quality. Given this position, leaders and top management have more responsibility for system change, and they need profound knowledge to benefit from the power of policy, which can put an upper limit on quality (ibid). Further, leadership must do away with policies that demoralise employees, use fear, institute quotas, or foster competition, as this will restrict quality (ibid). For example, Allen et al. (2023) responded to the policy concern of ensuring sufficient nurses are available to care for patients as part of the efforts to prevent adverse events from occurring due to staff shortages through their research which examined nurses' use of professional judgement in nurse staffing systems in England and in Wales. Though the study contributed new knowledge by providing information on how

clinical nurses and nurse managers use professional judgement in staffing systems in England and Wales, and the weight of the contribution of professional judgement to operational decision-making in mitigating risks in the fluctuations in staffing needs, there were challenges. The leadership considered efficiency, safety, and hard evidence to be given considerable weight in decision-making, causing the nurses difficulty in articulating their professional judgement for workforce planning. Opportunities for a stronger workforce are lost when leadership do not place value on the contributions of their workforce, especially when such contributions have been proven to be valid. Moreover, since QI is often determined in the boardroom, it can only gain a strong foothold when the aim is clearly defined, people are trained and educated to do the job well and are provided with the right tools and equipment while providing opportunities to work collaboratively to plan, implement, and measure processes to accomplish the aim (ibid). Therefore, it is essential to design the future system around a clear shared identity, allowing the future system to emerge in a parallel process with employee involvement in learning to optimise individual contribution and the system learning to optimise performance and profit by becoming a complex-adaptive system that is committed to continuous improvement in all parts of the organisation (ibid). Above all, the good advice to healthcare institutions is to use health policy to prevent disease and improve health (ODPHP, n.d.).

Finally, before concluding this chapter, a significant task is to state the research gap which sets the opportunity to begin the study itself. Therefore, drawing on the preliminary introduction of the study from Chapter One and the extensive analysis of the two concepts of the study, that is, PS and HP in Chapter Two, the research gap is established as briefly stated below.

The Research Gap

The engagement with secondary data in the various literature reviewed establishes the concern about the limited amounts of studies in the area of PSR originating from developing countries such as Nigeria. However, the study introduction and the literature review identified secondary data in HDI and global PS information that suggest that PS outcomes in Nigeria are significantly impacted. Nevertheless, the specific research that questions various aspects of PS and the role of the NNHP health policy in clinical practice is non-existent.

Considering this research gap, this research establishes the grounds for exploring the status of the national health policy in Nigerian health governance and how it impacts PS in clinical practice.

Conclusion

In this Chapter, a review of the research concepts was achieved which spans discussions on the important aspects of PS and HP. The work successfully linked the significance of HP in PS and subsequently the legislative power of policy in clinical practice. In addition, the overall evaluation of the secondary data encountered so far has been instrumental in clearly identifying the research gap.

Therefore, to progress in this study, in the next Chapter the exploration of the theoretical perspectives in the knowledge development in the study of PS and HP is carried out.

Chapter 3: Theoretical Concepts

3.1 Introduction

This research is a qualitative study that follows an empirical approach. Although empirical research is based on observed and measured phenomena and derives knowledge from actual experience rather than from theory or belief (LaSalle University, 2023), this chapter considers other sources of knowledge in the studies of the two central concepts of this research: PS and Health Policy.

The consideration for a critical review of the theoretical perspectives of this current research's concepts is based on the role that theories play in seeking new knowledge. Theories that gain recognition in a discipline shape the field help define the scope of practice, and influence the training and socialisation of its professionals (National Institute for Health/Behavioral & Social Science Research, no date; Rural Health Information Hub (RHIH), 2018). This is evident in healthcare, as scholars in the field commonly identify with the notion that no single theory or conceptual framework dominates research or practice (National Cancer Institute, 2005). For example, in the last two decades, health promotion and education have identified dozens of theories and used them in health behavioural research (National Institute for Health/Behavioral & Social Science Research, no date).

Nevertheless, central elements of four of the most widely-used theoretical models of behaviour are used: the health belief model, the transtheoretical model stages of change, social cognitive theory, and the social-ecological model (National Institute for Health/Behavioral & Social Science Research, no date; RHIH, 2018). Consequently, the application of theory in health research and practice has great benefits. Evidence suggests that interventions developed with explicit theoretical foundations are more effective than those lacking a theoretical base and that some strategies that combine multiple theories and concepts have larger effects (National Institute for Health/Behavioral & Social Science Research, no date). However, the wide and often bewildering range of theories, each with its own strengths and limitations, and the lack of one ‘theory of everything’ might deter safety researchers less familiar with the theory from using it (Lachman, 2021). Lachman (2021) provides four suggestions to researchers to address this identified limitation, which include the following advice: **i)** engage in interdisciplinary collaboration with researchers from fields such as psychology, sociology and management sciences so that they can generate insights and understanding in the PS field, as this can also bring more theoretical perspectives useful

to the improvements desired, **ii)** preliminary work can guide which theory to select in the evaluation of PSP because over time there has been the integration of factors from individual theories into broader conceptual frameworks, which represent useful approaches to the initial exploration of an implementation problem and guide the selection of more specific theories to understand specific causes and potential solutions, **iii)** using available toolkits to guide the application of theories to understand the implementation problems and guide the development of better targeted interventions, such as those for the theory of planned behaviour or a sociological model, the normalisation process theory, **iv)** embrace the idea of cross-pollination of ideas from wider bodies of knowledge and experience by drawing on theories from implementation research and beyond. This approach is believed to assist the practitioner in appreciating the diversity and overlaps in the use of theory in their practice.

3.2 Theories in Healthcare

Various theories potentially relevant to patient safety practice involve different disciplines, from anthropology, psychology, sociology, behavioural economics, and management sciences (Lachman, 2021). Likewise, health behaviour and health promotion theories draw upon various disciplines, such as psychology, sociology, anthropology, consumer behaviour, and marketing (National Cancer Institute, 2005). Notwithstanding, theories are frequently based upon similar notions but are expressed differently according to their intra- or inter-disciplinary origins.

In a study, a total of 128 constructs explaining behaviour from 33 psychological theories were summarised into 12 domains that could be used in implementation research (Lachman, 2021). To illustrate the latter case, the following terms from different disciplines describe similar ways of modelling interventions and theorising about them: the ‘logic model’, ‘treatment theory’, ‘programme theory’, and ‘theories of change’ (ibid). These latter theories are particularly useful approaches for understanding the effects of complex safety programmes, bearing in mind that healthcare researchers interchangeably use theory and models to mean the same thing. Thus, whereas models may draw on a number of theories to help understand a particular problem in a specific setting or context, they are not always as specific as theory (National Cancer Institute, 2005). Nevertheless, theories and models help explain behaviour, as well as suggest how to develop more effective ways to influence and change behaviour (National Institute for Health/Behavioral & Social Science Research, no date).

With this in mind, some of the theories mentioned are briefly explained below, as presented by Lachman (2021):

- *A logic model* describes how an intervention is understood or intended to produce particular results. It proposes a chain of events over time in cause-effect patterns in which the dependent variable (event) at an earlier stage becomes the independent variable (cause event) for the next stage. It is often based on explicit or implicit theories of behaviour change.
- *Treatment theory* describes the process through which an intervention is expected to have its effects on a specific target population in the case of PSPs, providers, or organisations. This theory is not a protocol that requires extremely specific prescribed actions. Instead, it is a set of principles that are imagined to change the situation. These principles might be enacted in several diverse ways, but they would all achieve the same functions and intermediate objectives in a chain of events which leads ultimately to improved patient outcomes.
- In the field of programme evaluation, *programme theory* is defined as the conceptual basis of the programme. Here, comprehensive evaluations address the theory by carefully defining the components of the programme and their relationships and then examining the implementation of these components and how they mediate outcomes. Meanwhile, experimental designs use theory in the sense that the evaluation is designed as a prospective test of a hypothesis. In contrast, in theory-informed programme evaluation, the programme theory is either a prospective model of how the components lead to the intended results or a retrospective explanation of how or why the programme progressed as it did.
- *A theory of change* is usually used to describe how those responsible for implementation understand an intervention to work. It may be explicit or may exist as a theory in a sense of being unspoken assumptions or beliefs. However, it is believed to function by identifying plans for change and how and why those plans are likely to work and indicate the assumptions and principles that allow outcomes to be attributed to activities. This is different from an explanation derived from empirical research about possible influences on outcomes.

These types of theories focus on the intervention and conceptualise it as a chain of events, often in a linear sequence, which leads through successive intermediate changes (including changes in provider and organisational behaviour) to final results (clinical or cost outcomes). Other variants, often relevant to combined or multifaceted safety interventions, view the

implementation as a number of interacting components with a synergistic and system effect (Lachman, 2021).

Based on this general account, it is apparent how these various approaches to theory overlap and emphasise similar ideas. There is also considerable overlap between safety and implementation research theories, respectively. For example, human error theories propose that errors have different causal characteristics, including violations, slips, and lapses. These are potentially relevant to safety and more general evidence-based practice implementation. Lapses can contribute to the erroneous co-prescribing of two drugs which may interact and harm a patient, or the failure to consider prescribing an effective drug. Both are concerned with understanding and changing clinical behaviour. Both behaviours should preferably be evidenced-based so that following them reliably reduces the probability of morbidity or mortality.

Therefore, the selection of an appropriate theory is informed by objectives. For example, an organisational rather than individual-level theory may be most relevant when studying change at an organisational level.

What has been evident throughout the literature is the use of similar theories in various disciplines in healthcare, from public health to clinical practice, though it must be noted that theories in the field of PS science are interchangeably used as models or frameworks (Holden & Carayon, 2021).

3.3 Patient Safety Theories

The value and uses of theory in research aiming to develop and evaluate patient safety practices are embedded in the aim of achieving PS through Quality Improvement (QI) (Lachman, 2021), where human behaviour at every level in an organisation tops the chart of the attributes that are targeted in the improvement strategies for achieving safety in healthcare (Holden & Carayon, 2021). However, there is a wide range of interventions to change clinician and organisational behaviour, even though this is challenging (Foy et al., 2011).

The challenge is that improvement interventions are not always effective across various categories all of the time because many factors can influence the effects of patient safety practices (Lachman, 2021). These factors include contextual features such as the characteristics of selected providers, clinical settings, or clinical behaviours, as well as the characteristics of the intervention itself (ibid). Although, in principle, it is possible to explore

and explain variations in effectiveness across studies by examining these characteristics, in practice this is difficult to achieve for two reasons: i) the characteristics of context and interventions are rarely described in appropriate detail or consistently to do a meaningful comparison, and ii) many studies of interventions aimed at promoting safety at the moment only categorise features of interventions, targeted practices, and contexts on a superficial basis (ibid). This type of classification system is quite descriptive, with no theoretical explanations for how it is developed (ibid).

Therefore, theoretical models provide a basis or vocabulary with which to describe the features of targeted behaviours, contexts, and interventions (ibid). Such words can enable the identification of the features that systematically influence the effectiveness of interventions and, therefore, help build an accrued understanding of what works and how (ibid). Generalisation through theory potentially offers a more efficient and appropriate method of generality than study replication in many possible settings. Decision-makers need to be able to generalise in some meaningful way, otherwise they lack the information to choose what PS practices are likely to be effective in their own settings (ibid). However, the use of theory has not been common in safety research, as evident in the review of 235 implementation studies where only 53 were found to use theory in any way, and only 14 were explicitly theory-based. Likewise, most reports of patient safety practice evaluations reported a lack of theoretical models underpinning the intervention, including the five most popularly evaluated patient safety practice areas (i. the checklist for catheter-related bloodstream infection prevention, ii. the universal protocol for preventing wrong site, wrong person surgery, iii. computerised order-entry/decision-support system, iv. medication reconciliation, and v. interventions to prevent in-facility falls).

This then raises the question of how theory guides safety research. Many patient safety practices are complex, for they often have a number of interacting components, address more than one behaviour, target more than one organisational level or group, require flexibility in design and implementation, and can result in variable outcomes. Within this framework, theory can be applied at various stages to explain clinical and organisational behaviour, inform patient safety practice selection and development, and understand patient safety practice effects, thereby developing a generalisable body of knowledge.

The theoretical knowledge that informs patient safety science is mostly theories from the fields of occupational health safety and behavioural sciences. However, in recent times, models drawing on establishing work within human factors, ergonomics, and socio-

technological systems theory are visible in PSR (Waterson, 2014). Human factors and ergonomics, with the addition of socio-technical systems, represent one of the unifying strands in the emerging field of research on PS (Carayon et al., 2006). The most recognised theoretical model that emerged is the Systems Engineering Initiative for Patient Safety (SEIPS)(ibid). This model deals with patient safety risks that can emerge from work system factors, including the technology and tools being used by medical professionals, the particular way in which work is organised and allocated, situational and individual factors, as well as the degree to which work tasks match or mismatch with other elements (ibid), (see Fig. 6).

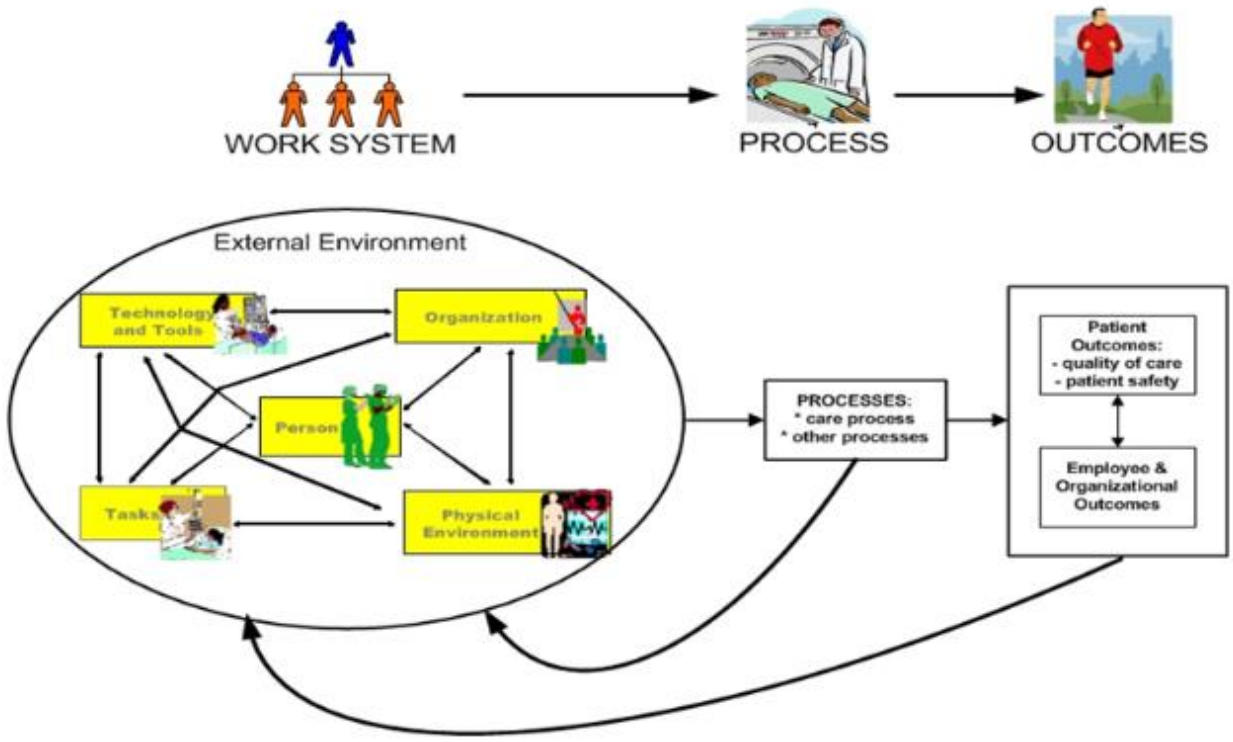


Figure 6 : SEIPS

The first version of SEIPS was developed in 2006 to study and improve healthcare (Holden & Carayon, 2021). Since then, various versions of the SEIPS have been developed and used by academics and practitioners however, users found it too complicated and clamoured for a simpler version to be produced for easier application (ibid). In response to this request, seven simple SEIPS tools were developed that anyone can use (ibid). The updated model is labelled SEIPS 101 (see Fig. 7) and diagrammatically simplified for the users to understand the flow of events. In this model, work systems are represented in a square showing the connection

boxes of person-centred systems, an interconnected set of factors with people in the centre. The triangle demonstrates work processes, with a flow from left to right, the end result being the work outcome represented as a circle. The arrows represent causal feedback loops; however, several details are omitted solely for the purpose of simplicity for which this was produced (Holden & Carayon, 2021).

Holden and Carayon, who are the pioneers of SEIPS 101, encouraged academics and practitioners to use this tool as a theoretical or practical framework to guide their projects (ibid), and they explained each of the simplified seven SEIPS tools.

Tool 1, labelled *PETT scan,* is a checklist and documentation tool to ensure that all necessary aspects of the work system, such as the people, environment, tools, and tasks, are included. It is primarily used to describe the interacting parts of the entire sociotechnical system, especially when attempting to simply depict a complex system. It is flexible and can be used for activities such as project planning to know which factors to consider, intervention design to know which factors to address, intervention implementation to anticipate how changes affect all work system factors, etc.

Tool 2 is known as the *People map,* where the various people involved in a work system are represented and how they interact in practice, not merely how they are represented on the organisational chart. This shows different tasks, roles, and activities performed by people or a group of people.

Tool 3 is known as the *tasks and tools matrices* which lists and describes key tasks along dimensions of who, why, how often, how, and when each task is performed, and it documents key artefacts, instruments or technologies in the system and their uses, purpose, frequency of use, accessibility and estimated or measured usability. It can organise tasks and tools, e.g., by frequency, criticality, or timeline.

Tool 4 is the *outcome matrix* that has the primary function of proactively or reactively identifying the relevant outcomes to consider, especially when there is a need to comprehensively document multiple outcomes and their measures in an organisation.

Tool 5 is the *journey map* used to depict a process over time and how work conditions and outcomes change during the process. It is usually used to identify problems that will need to be addressed when redesigning a process or system.

Tool 6 is the *interaction diagram* used to show the relevant subset of work systems factors whose interactions are meaningful, often with the intent to select the aspects of a system to address during design.

Tool 7 is the *system story* intended to frame a story about how work systems, processes, and outcomes are related. This is often needed to make a persuasive argument to an audience.

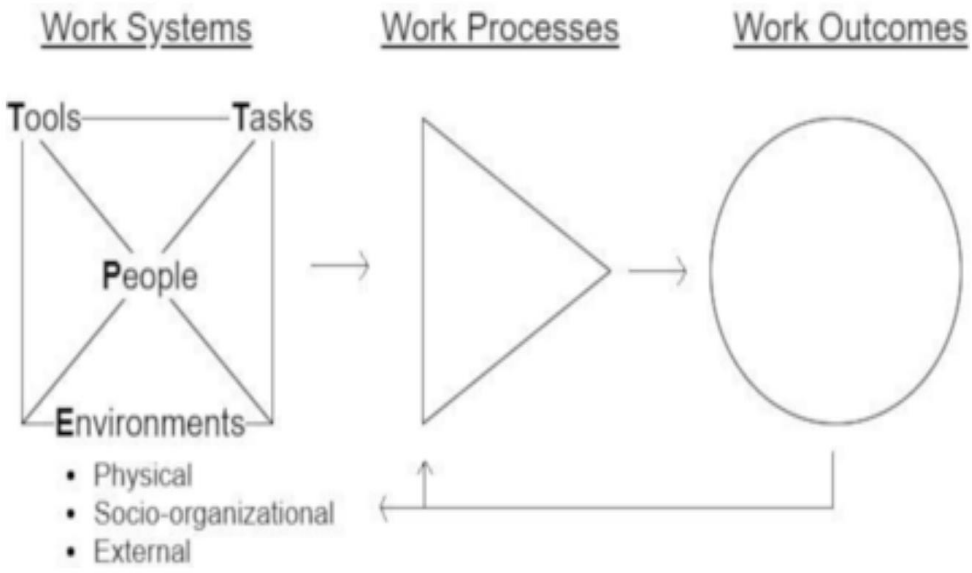


Figure 7: SEIPS 101

The whole point of the SEIPS theoretical framework is to assess PS and design systems that produce safe patient care (Carayon et al., 2006).

The SEIPS goal is no different from the angle of translating QI into action in a process that aims to continually improve the outcomes for patients and their relatives when engaging with healthcare. QI is the responsibility of all who engage in healthcare, and it also has many theories that underpin its activities (Lachman, 2021). One such is the theory of the System of profound knowledge developed by W. Edwards Deming. This theory underpins four

components of QI: 1) the systems we work in, 2) variation in the system, 3) the psychology of how people think and behave, and 4) the theory of knowledge (ibid). Deming's theory of profound knowledge presents a universal knowledge of organisations by clearly defining quality and, when organisations apply the knowledge of the concepts of this theory, they can increase productivity (Berry, 2006).

It can be concluded that the potential role of theory in PS and PSR is to a.) explain clinical and organisational behaviour because it is important to diagnose the causes of adherence or non-adherence to recommended practice before intervening, especially that human error theories, identify that slips and lapses may lead to the wrong execution of an intended sequence of action, which has informed better equipment design, for example, alarms within anaesthetic machines (Lachman, 2021), b.) the selection and development of patient safety practise identifies knowledge about which factors influence behaviour which informs the selection of active ingredients to incorporate within interventions (ibid). Having a theoretical basis alone is an insufficient justification for choosing a PS practice in routine healthcare practice: there are many examples from medicine where widely promulgated clinical interventions based upon theory and partial evidence turned out to be ineffective or harmful, and c.) theory can be used to help evaluate the process of implementation, whether the patient safety practises worked as hypothesised or did so by an alternative means and identify unintended consequences (ibid). Meanwhile, evaluating QI implementations that are theoretically informed has been indicated to require more attention and improvement. Although there are many QI techniques in healthcare developed by a number of pioneers, including W. Edwards Deming, Don Berwick, Joseph Juran and Kaoru Ishikawa, the choice of any of the techniques is likely going to depend on the nature of the problem being addressed and its context since there is no evidence to suggest one is better than the other (Jones et al., 2021). Even though the use of these QI techniques has not been widely used in healthcare, it is observed to be active in few large healthcare institutions. This, perhaps, is accountable for the limited evidence base for their effectiveness. Nonetheless, the increasing levels of research in the field could improve the evidence base for the effectiveness of these techniques and their improvement over time (ibid). For example, Loo et al. (2023) was concerned about the dangers of the inconsistencies found in over 500 complex clinical trial documents that they reviewed. These inconsistencies showed a gap in PS that could lead to potential site implementation errors and may compromise participant's safety (ibid). The suggestion to address the gap is to establish a centralised team of clinical specialists to review trial documents in advance, to enhance PS during clinical trials (ibid). Moreover, where

research control tests are used, they should ideally be accompanied by parallel process evaluations that assess the intended and unintended changes in processes that may affect outcomes (Lachman, 2021).

Despite the rigorous articulation of theories in achieving safety in PS practices, there is a significant need for improving the evaluation of PSP effectiveness because the description of the theoretical basis for chosen intervention components is often lacking, whereas it is expected that an explicit logic model for why this PSP should work is provided (AHRQ, 2022). As this is not happening in isolation, the AHRQ suggests it is also important to delineate and, where possible, measure contextual factors that influence PSP effectiveness. To address this, there are four groups of contextual factors thought to be important and in need of study: external factors (e.g., regulatory requirements, the presence of public reporting or pay-for-performance), organisational characteristics (e.g., size, complexity, and financial status), teamwork, leadership and patient safety culture, and management and implementation (e.g., training resources, internal organisation incentives) (ibid). A long-term goal in the field of PS is to develop some form of shared, theory-informed taxonomy with which to describe the key elements of these contextual factors and PSPs (ibid).

After establishing how knowledge in PSR and PSP is achieved through the application of several different theories, building knowledge in understanding the concepts of HP will now be equally examined.

3.4 Theories of Health Policy

In reference to Buse et al. (2012), health policy is an offshoot of public policy, and it is studied within the health industry and from a multidisciplinary perspective because the health sector is influenced by the actions of other industries. However, in the first place, the adequacy of the public policy theory is in its formulation, diffusion, implementation, and evaluation, and it must be sensitive not only to policy analysis literature but to concepts of political science and organisational or bureaucratic environments (Jenkins, 1978). Consequently, HP has multiple theories that are applied in its research (ibid). Breton and De Leeuw (2011) state that there is a difference between *policy theories* and *theories of the policy process.* The term policy theory is used to describe the set of assumptions and values adopted by policy-makers involving the use of policy analyses to examine the consistency and effectiveness of such policy theories (ibid). The field of policy analysis aims to predict the most valuable approaches to solving social problems or evaluate the ability of existing policies to do so, typically focusing exclusively on matters of economic efficiency or social

well-being. Policy analysts assess policy alternatives on the basis of the cost savings they will promote and the social good they will foster, such as higher college graduation rates, lower teenage pregnancy rates, or lower incarceration rates. Meanwhile, scholars of the policy process have helped illuminate, among other things, whether adopting such alternatives is politically feasible and, if not, the circumstances under which it might be (Mettler and Sorelle, 2014). At the same time, theories of the policy process formulate intentions on the conditions under which certain policy phenomena are observed and impact policy outcomes, for example, preferences for some types of interventions, inclusion, or exclusion of certain stakeholders, etc. (Breton and De Leeuw, 2011). Basically, theories of the policy process look at parameters that determine policy theories (ibid). Therefore, the theoretical perspectives in the field of policy process have evolved from the notion that policy process follows clearly distinguishable steps from problem identification through alternative specification to resource allocation and implementation because it fails to address the dynamics of multiple, interacting, iterative and incremental cycles of action at many different levels of mutual and reciprocal action at the same time (ibid). Alternatively, many theoretical frameworks emerged that are designed to appropriately assess policy process and are important for policy development (Breton and De Leeuw, 2011; Schito, 2022), including the Multiple-Streams Theory by Kingdon, 2002, Punctuated Equilibrium Framework by Baumgartner and Jones, 1993, The Advocacy Coalition Framework by Sabatier and Jenkins-Smith, 1993, Policy Domains Approach by Laumann and Knoke, 1987, Policy Analysis Triangle (PAT) by Buse et al. (2005, 2012), Policy Feedback Theory by Mettler and Sorelle (2014), Systems Models of the Policy-Making Process Jenkins (1978).

Nevertheless, these theoretical frameworks are expected to achieve the following: **a.)** Each must meet the criteria for a scientific theory to a high degree, that is, must possess concepts and propositions that are relatively clear and internally consistent, it must identify clear causal drivers, and it must be fairly broad in scope; **b.)** each must be peer-reviewed by policy scholars to be a viable way of understanding the policy process; **c.)** each must be a positive theory that seeks to explain much of the policy process; and **d.)** each must address the broad sets of factors that political scientists would traditionally deem important and would consider at different aspects of public policymaking such as the conflicting values and interests, information flows, institutional arrangements and variation in the socio-economic environment (Breton and De Leeuw, 2011).

Going by the expectations of the productivity of theories, it is obvious why Weible (2014) opines that the policy process is complex in terms of its interactions among diverse people

who often seek political influence at multiple levels of engagement and governance. These complexities make the need for theories to study policy processes essential (ibid). However, there is often the problem of cognitive presuppositions, which is the situation where people tend to recognise some aspects of the process and ignore others, Weible suggests that using one or more theories is one strategy that highlights the most important items for study and specifies the relationship between them. By doing this, the theories increase the likelihood of recognising errors.

These views set the basis for discussing some theories applied in public policy studies, especially referencing one that is applied specifically in health policy studies.

3.4.1 Policy Analysis Triangle (PAT)

More specific to the health policy process is the framework of the policy analysis triangle (Buse et al., 2012), which is described as a simplified approach to a complex set of inter-relationships by establishing the importance of looking at the content of policy, the processes of policy-making and how power is used in health policy (ibid). The analytical framework of PAT incorporates politics in its analysis, as it is determined that politics cannot be separated from health policy. Indeed, it is a framework that helps to explore the role of the state nationally and internationally and the groups making up national and global civil society to understand how they interact and influence health policy. It does this by focusing on content, context, process, and actors (ibid). In examining *the content* of a particular policy, the focus is on describing what it claims to do, the strategy to achieve set goals, and whether or not it achieves it. Within this examination, the questions of what would work, who will carry out an action and how it will be done are asked and answered. Examining *a policy's content* is interrelated with analysing the policy context, the actors, and the process. *The context* in which a policy is developed is influenced by the actors whose decisions demonstrate the political context in which the policy is being developed or implemented. For example, when presidents make certain policy pronouncements, one might ask certain questions to understand the political context within which that decision was made, such as considering whether the decision was made to gain votes in an upcoming election, the power of the president to introduce change, and the role of evidence in influencing the decision. When the focus is turned to *the actor*, the examination is to consider who the actor is and how they influence the local, national, regional, or international policy process. However, to understand how much actors influence the policy process, the concepts of power must be understood. Power, in terms of the actor’s personal wealth, personality, level of or access to knowledge or

authority etc., are attributes that influence the extent to which they can influence policy. It is assumed that power results from the interaction between the capacity or power of actors (also described as Agency) to act independently and make their own free choices and the arrangements (that is, Structures) that limit the choices and opportunities available to specific actors. In other words, the power of actors is intertwined with the structures to which they belong. The *policy process* refers to how policies are originated, formulated, negotiated, communicated, implemented, and evaluated (ibid). To analyse the policy process, there are theories that look at parameters that determine policy theories (Breton and De Leeuw, 2011), such as the policy feedback theory, which is described next.

3.4.2 Policy Feedback Theory

The Policy Feedback Theory by Mettler and Sorelle (2014) focuses on factors that are seemingly external to the public policy itself, such that policy creation typically occurs in a context that is deeply influenced by already existing policies (ibid). This theory sits at the intersection of two approaches, where it brings political considerations to bear on policy analysis, assessing how policies affect crucial aspects of governance, such as whether they promote civic engagement or deter it, whether they foster the development of powerful interest groups, and how they affect institutional governing capacity (ibid). This theoretical analysis can illuminate the impact of policies on democracy and help reveal what might otherwise become unintentional consequences of policies, such as the development of vested interests that reconfigure arrangements of power in society. It can also enrich policy process studies by highlighting how previously created policies affect the likelihood and form of future policy creation (ibid). For example, the study by Hinterleitner & Sager (2022), whose goal was to propose a novel theoretical framework that allows the analysis of how the increased policy activity of modern democratic States influences the emergence and development of societal conflicts. To achieve this goal, they argue for an updated understanding of democratic conflict management that acknowledges the increasingly significant role of policies in it. This study was driven by the knowledge of public policy's significant role in democratic conflict management that has developed from increased social and cultural heterogeneity, economic inequality, globalization, and climate change causing policy problems that strain the conflict management capacities of advanced democracies. These issues relegate policy to a secondary role in conflict management. Hence, drawing on policy feedback theory and other policy theory sources, the analysis suggests that policies, once signed into law, influence societal conflicts in diverse and important ways. Because of this, it is expected that democratic States with conflict-mediating policy infrastructures will be

more stable over time than States with conflict-escalating and/or -suppressing policy infrastructures.

3.4.3 Systems Models of the Policy-Making Process

Similarly, Jenkins (1978) illustrates systems models of the policy-making process. Jenkins' model extends on previously existing systems models by including the political and decision-making system with the organisational framework within which decisions are made, presenting three key features of policy. First, policy output studies where public policy is viewed as the output of government, a system that receives and processes inputs, to which an organisational perspective is then added; Secondly, policy content theory, where policy becomes an independent variable in the sense that "policies may determine politics" (Jenkins, 1978, p. 27), therefore, focusing on power, conflict, and coercion and the process of action or non-action in the political system; and thirdly, the theory of public choice and political economy has behavioural models to understand motivation and hence political mobilisation. However, Jenkin considers the discourse that suggests policy theories and models are useful to a limited extent but are insufficient to explain the policy process. Jenkins (1978) opines that policy implementation and evaluation are problems of practice in policy analysis because they may place constraints on policy actions. For example, the failure to implement a policy may be due to the organisational context, the political system, and a motivational problem or the capacity to mobilise. Meanwhile, evaluation may be useful as an attempt to rationalise policy but may also be a threat to a policy if a programme does not achieve impact. Hence the suggestion to consider the effect of evaluation within and between organisations in terms of political conflicts and control and a focus on what evaluation methods are politically feasible in such a context. Exworthy (2008) is of the opinion that there is a need for a standardised appraiser of policy processes and their evaluation. For example, the listings of policy competencies provided by the US National Commission for Health Education Credentialing are acclaimed to be the most detailed, and it includes five key guidelines under the section for influencing policy to promote health: i) Use evaluation and research findings in policy analysis; ii) identify the significance and implications of health policy for individuals, groups, and communities; iii) advocate for health-related policies, regulations, laws, or rules; iv) use evidence-based research to develop policies to promote health; and employ policy and media advocacy techniques to influence decision-makers (ibid). Jenkins' (1978) view is that an elaborate systems model requires us to combine the political perspective with the organisational one or, rather, to redefine analytical models to encompass dimensions of both perspectives. Analysis of public policymaking would then involve a number of conceptual

platforms and analytical tools and an awareness of the complexity of the environment, behaviour, motivation, and policy constraints. Nevertheless, through case studies, Jenkins demonstrates the limitations of individual paradigms to encapsulate the reality of policymaking in a complex intra- and inter-organisational environment where the issue of methodological problems of generalisability, a common issue in social sciences, becomes apparent. However, Jenkins argues that even the application of political sociology in analysing public policy increases the risk often present in all systems theories when attributing a unique configuration to the variables identified. Despite the identified risks, Peter (1978) is of the position that this should not prevent a consideration for synthesising political and organisational perspectives. Otherwise, failing to combine these models may account for the lack of success of various reforms in an organisation, although acknowledging as an example that this might be an illustration of Jenkins' assertion of the failure of the NHS in the 1960s to produce the planned, balanced range of services that it was designed to because of the planners' belief that, to affect process and behaviour, all that was needed was an alteration in the structure. However, although the amended structure seems to have some positive impact in changing the process, it hardly have any impact on behaviour. Indicating that no account was taken of the influence of local providers rooted in clinical and professional practice.

In summary, the various perspectives gathered so far on the nature and role of theories in the studies and practise of PS and HP truly depict the belief that theory provides an intellectual, research-grounded basis for understanding, applying, analysing, and designing new ways to investigate relationships and to solve problems in educational and social sciences contexts (Kivunja, 2018). Consequently, the assumptions, assertions, and predictions of relationships postulated by a theory become an intellectual base upon which research data can be grounded to search for meaning in future studies (ibid).

Nevertheless, the various perspectives demonstrated that the application of theories in the field of PS and HP is very fluid. In PSP and PSR, theories are applied from allied disciplines, implying that the field is atheoretical. While in the field of HP, theories are developed within the discipline of politics, which is home to the discipline of public policy, despite there being no single theory that addresses policy analysis or policy process because policy studies also rely on multiple theories for the projected study outcomes.

3.5 **Conclusion**

This chapter has succeeded in considering other sources of knowledge in the studies of the two central concepts of this research, including PS and Health Policy. However, this is empirical research that relies on observed and measured phenomena that derive knowledge from actual experience rather than from theory or belief (LaSalle University, 2023). Because of this, the study intends to generate new knowledge about the status of PS and how the role of the NHP influences clinical practice to achieve safety for patients in Nigeria. This will be achieved by analysing evidence from the observed work experiences of health policy administrators and clinicians in a selected sample, interview responses from the sample, and a review of the 2016 NNHP document. These pieces of evidence will be processed through the methodological approach of Actor-Network Theory (ANT), which is a loose intellectual toolkit or sensibility that could help to sensitise researchers to complex and multiple realities that might otherwise have remained obscure (Nimmo, 2011). This concept, the philosophical underpinnings, and the methodology of this research are critically discussed in the next chapter.

Chapter 4: Methodology

4.1 Introduction to Methodology Chapter

The preceding conceptual analyses of patient safety (PS) and Health Policy (HP), and the discussions around the theoretical perspectives of these concepts, informed the choice of the methodological approach used in this project. This methodological approach will produce the information that will illuminate the various perspectives being considered to assess the national health policy's role in achieving patient safety in Nigerian clinical healthcare systems.

This chapter's aims are accomplished through narrative and descriptive accounts of the processes followed in collecting the primary data, which is presented by critically discussing the philosophical underpinnings of the research approach and a description of the methodological process itself.

Further, an important part of laying a foundation for the ensuing discussion is the presentation of the study design which is fully discussed later in the Chapter.

***Study Design*:** The research design is an ethnographic approach that involved three months of fieldwork in Nigeria from June 2018 to September 2018.

Scope: The study was carried out in the Federal capital city of Abuja in five institutions including the FMoH and four health institutions.

Methods: The tools of the study are document analysis, observation, and semi-structured interviews.

Data Analysis: the data collected were analysed using multiple approaches to ensure that all data had the opportunity to be enrolled in the study. The four moments of translation were instrumental to analysing the NNHP document, while thematic data analysis was applied in the analysis of observation notes and transcribed interview data.

These highlighted elements of the technical aspect of the research project facilitated the demonstration of the skills that produced the research outcome. Before the details of the study design are presented later in the chapter, a critical discussion of the research approach and philosophical underpinnings of the qualitative study is presented in the next section.

4.2 Research Approach and the Philosophical Underpinnings

4.2.1 Qualitative approach

The study follows a qualitative research approach mainly because it is designed to answer the "hows" and "whats" of the impact of the Nigerian National Health Policy (NNHP) on clinical practices and processes (Guest et al., 2013). This approach is highly instrumental in evaluating the impact on patient safety in the selected healthcare institutions, especially since this form of inquiry is difficult to obtain through a quantitative study. While the study takes the qualitative approach, it is also exploratory. This approach is preferred, given the recognition that it enables the understanding of the meaning people have constructed, that is, how people make sense of their world and the experiences they have in the world (Denzin & Lincoln, 2000; Henn et al., 2006; Merriam, 2009, in Guest et al., 2013, p.13). It is also a research design that is flexible and one that uses small-scale and intensive data derived from insider accounts based on what is seen and what is heard (Henn et al., 2006). However, there is a substantial level of disagreement among scholars of qualitative methods, such as the questioning of what qualitative research is, how and why it should be conducted, analysed, and in what form it should be presented (Guest et al., 2013).

First, the term 'qualitative research' is defined in several ways. While some define it in terms of the research purpose, for others it is based on its epistemological position. In contrast, some define it in terms of the research focus on the process and context of data collection (Jackson et al., 2007). In Jackson's view, qualitative researchers specifically attempt to discover new or diverse ways of understanding the changing nature of lived social realities because they often presume that there is a systematic way of apprehending critical dimensions of problems that confront our social world. More importantly, synonymous with non-experimental and ethnographic inquiry, qualitative inquiry has its intellectual roots in hermeneutics, the verstehen tradition, and phenomenology (ibid). It encompasses all forms of social inquiry that rely primarily on non-numeric data in the form of words, including all types of textual analyses such as content, conversation, discourse, and narrative analyses (ibid). Whereas it is perhaps beneficial to consider definitions that include the attribute of qualitative approach as applied research. For example, the analysed definition by Guest et al. (2013) states that the qualitative research approach is one that uses data that do not indicate ordinal values. This, to the authors, mean

> Qualitative research involves collecting and/or working with text, images, or sounds. It avoids typically inaccurate generalizations and the unnecessary dichotomous positioning of qualitative research with respect to its quantitative counterparts. It

> allows for the inclusion of many diverse kinds of data collection and analysis techniques, as well as the diversity of theoretical and epistemological frameworks that are associated with qualitative research (Guest et al., 2013, p. 3).

Overall, in whichever way qualitative research is defined, the reality is that social scientists are aware that they can only uncover what is available or accessible at the time of the investigation leading up to the point of inquiry (Jackson et al., 2007). Therefore, the knowledge that it is impossible to grasp every aspect of a social phenomenon, investigation, or question, but what is expected of every researcher is to take responsibility for the way they approach each study with as much objectivity, ethical diligence, and rigour as much as possible (ibid). In Guest's opinion, how one approaches qualitative research, and research in general, depends on a variety of personal, professional, political, and contextual factors because, ultimately, there is no right or wrong way of conducting qualitative research but bearing in mind that some approaches and methods are more conducive to certain types of qualitative inquiry than are others (Guest et al., 2013).

From another perspective, Jackson et al. (2007) position that a qualitative researcher can achieve the aforementioned expectations depending on whether the study is qualitative or quantitative. Hammersley (2013) states qualitative research is an amorphous, multi-dimensional field which forbids any easy single definition or set of definitions. He opines that one way of identifying distinguishing features of qualitative research is by contrasting it with quantitative research. This requirement sets off unique perspectives on distinguishing between the two main approaches. For instance, "it is better to understand that the key distinctions between the two can be found within both method and methodology" (Jackson et al., 2007, p. 22). Where method is defined in terms of how data is collected, and methodology in terms of the identification and utilization of the best approach for addressing a theoretical or practical problem (ibid). The usefulness of these two elements is important in research design, often illustrated in the phases of a social scientist inquiry, starting with questioning a social problem, simultaneous consideration of constructs and theories that can adequately facilitate how the problem is conceptually understood, and thoughts about the practical ways of collecting data (ibid). As such, some methods of qualitative research are interviews which utilise structured, semi-structured, or unstructured questioning formats, which are often used in conjunction with other modes of data collection like focus groups, case studies, ethnography, and/or participant observation. On the other hand, Guest et al. (2013) present qualitative research methods where qualitative data is divided into its three main forms: texts, images, and sounds, which are further divided into two components: text as an object of analysis and text as a proxy for experience (See Fig. 8)

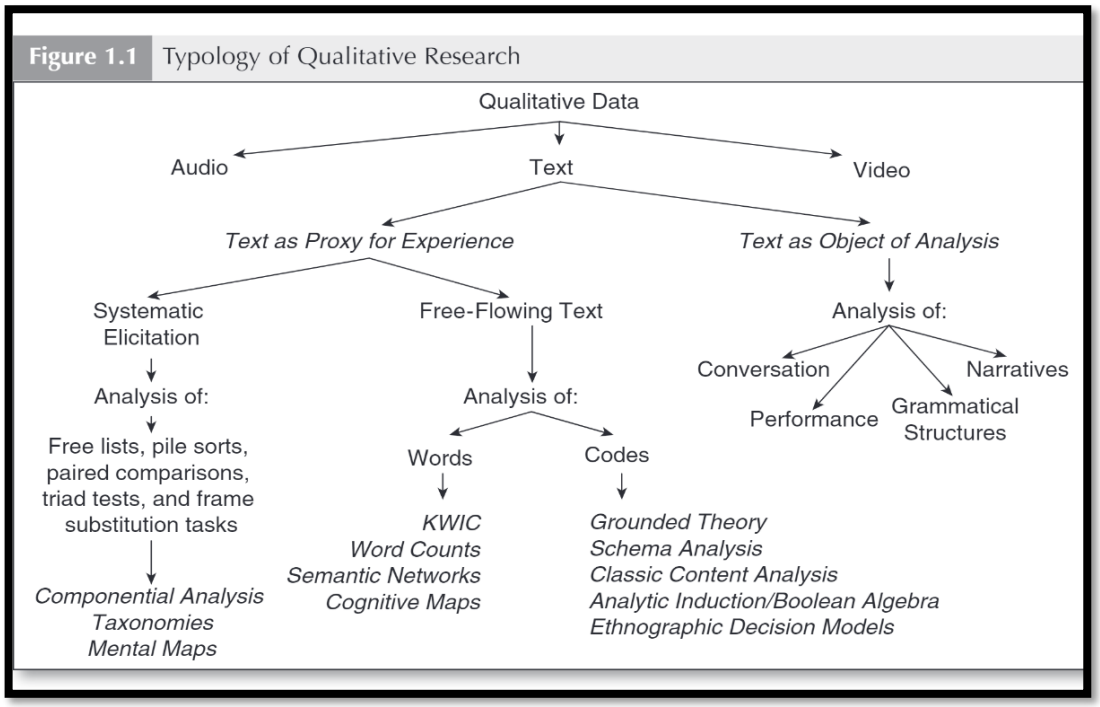


Figure 8 : Typology of Qualitative Research (Ryan & Bernard, 2000).

Apart from setting the scene for understanding the qualitative research approach through its various definitions and the position to distinguish it from the quantitative approach, perspectives that are often critically discussed include interrogation of the nature, function, and types of qualitative inquiry. These are areas of significance for a qualitative researcher in terms of understanding its purpose and the significance of both a personal role and social construction of reality within this paradigm (Jackson et al., 2007).

Within these perspectives are several arguments and criticisms, often around matters not agreed upon amongst qualitative researchers themselves, about the claims of which approach carries more validity, that is, qualitative vs quantitative approaches. Some examples include the arguments of some authors in social science disciplines. Hammersley's reading of interpretivism, positivism, and critical theory and constructivism points to divides within qualitative research. He highlights the debate relating to ontological/epistemological positions on the nature of the world and our ability to gather knowledge of it- such debates; he posits inform methodological disagreements about our ability to gather and synthesise information when, for example, interview respondents may not know, or be willing to explain, what they think and why they act; we rely on a problematic notion of observing behaviour in 'natural' environments; researcher-biases influence the information they receive; and we consider the role of social research as a detached scientific enterprise or a tool to be used to influence our

object of study. Hammersley (2013) seems to prefer the field of political science as he describes it as “a relatively harmonious place for qualitative-quantitative relations”. He considers this the home of approaches not covered in the texts, such as ‘process tracing’. For the most part, Hammersley appears to reject the term “Qualitative” given his description of the post-war re-development of qualitative methods as a reaction to the rise of quantitative methods. Whereas Cairney & Denny (2015) lean towards a favourable position on qualitative research by drawing the differences between quantitative and qualitative approaches. They argue that, if quantitative research is known to be generally committed to large-scale and efficient research through its various research processes, such as testing hypotheses, numerical measurement, standardised measures to promote objectivity, using samples to generalise across large populations, systemic identification of cause and effect, and controlling variables through experimentation, then qualitative research can be seen in its own right as a way to study the complex world in a more meaningful way by observing behaviour and encouraging interviewee expression rather than relying on closed-box questionnaires. In addition, qualitative methods can focus on being flexible enough to modify research as it progresses, rejecting the idea of objective research and often engaging in in-depth case study research (ibid).

No matter what these arguments are, as much as these are not new debates, it is beneficial for the researcher to be aware of these key issues in the process of their work to enrich the knowledge production in their study (Jackson et al., 2013). Moreover, Cairney and Denny (2015) believe that, if we accept that qualitative research is heterogeneous and nuanced, we can say the same for quantitative research and accept the idea that methods can be combined either explicitly or simply because various kinds of social research share many common elements. Things will be better if quantitative researchers do not describe qualitative research as ‘not scientific’ and qualitative researchers don’t feel the need to dismiss quantitative research as ‘positivism’ because, for some researchers, research mixes are driven by pragmatism rather than philosophical harmony (ibid).

Establishing this fundamental knowledge about the tenets of qualitative research approach, firstly, is a clarification that the choice of Actor-Network Theory as the methodological approach is not out of place and can achieve robust evidence to meet the goal of this research, same as other methodologies applied in the study of PS. As such, the ensuing discussions examine the perspectives in ANT as a methodology giving focused attention to its methodological approaches, which to a significant extent, are consistent with the principles of qualitative research. Additionally, a diagrammatic representation is shown below to

demonstrate the ontology of this research philosophy as a representation of the forgone discussions.

4.2.2 The Rationale for Choosing the Methodological Approach of Actor-Network Theory

The choice of ANT methodology for this study is based on a number of reasons. Firstly, the strength of its visibility in the social sciences; second, the nature of its methodological approach in considering social phenomena; and lastly, a deliberate attempt to explore its adaptability in a public health research project in the area of clinical health study.

4.2.2.1 The Visibility of ANT in Social Sciences

In the first place, ANT has become very influential and transformed into an intellectual project. The reason for the increased interest of many heterogeneous fields of intellectual and creative practice in ANT and why they are embracing ANT as a new semantic and analytic inventory (Blok et al., 2020; Cresswell et al., 2010). This popularity is illuminated when one considers the journey ANT has made in the last two decades. Indeed, as Lezaun states, "ANT has travelled far and wide, insinuating itself into a variety of disciplines in the social sciences and beyond and becoming a powerful counterpoint to mainstream understandings of the nature and purposes of social theory" (Lezaun, 2017, p.1).

Alluding to the views of Blok et al., a summary of this growth, according to Mike (2016), spans across the two major works that are cited in classical ANT texts, including Michel Callon's 1984 "Some elements in the sociology of translation: domestication of the scallops and the fishermen of St Brieuc Bay" which had received 4700 citations as of 2013, and Bruno Latour's 2005 Reassembling the Social: An Introduction to Actor-Network Theory which has had about 6700 citations. These citations came from sociological disciplines, including Sociology, Anthropology, Geography, Management and Organizational Studies, Political Science, and Social Psychology. This level of visibility and recognition of ANT in social science research is enough grounds for making a choice to employ its methodological process in this research inquiry.

4.2.2.2 The Nature of ANT Methodology in Consideration of Social Phenomena

ANT methodology is known for its ability to navigate the complex and often disparate ideas/perceptions/or views closely aligned with an evolving set of sensibilities that opens a

space for asking certain methodological, empirical, analytical, and political questions about processes of the "more-than" social world (Mike, 2016). An example is Latour and Woolgar's (1986) work in the book *Laboratory Life: The Construction of Scientific Facts*. They were concerned with the social construction of scientific knowledge as this draws attention to the process by which scientists make sense of their observations, hence their examination of a science laboratory to illustrate what they meant by "the process of making sense in the social construction of science".

They demonstrated this in reference to Woolgar's (1976) work on *Writing an Intellectual History of Scientific Development: The Use of Discovery Accounts.* Woolgar was interested in examining the extent to which scientific activity in one area associated with research into the pulsar phenomenon corresponds to the sequence of processes described in the theoretical statement. This interest was driven after Woolgar and his colleagues presented the general statement of the sequence of social and intellectual processes which characterized the emergence, growth, and final decline of specific areas of scientific endeavour. Latour and Woolgar (1986) use this research experience to illustrate the application of ANT methodology while making a point of emphasising the non-linear discoveries through the process. Woolgar (1976) revisited the very beginning of pulsar discovery which he found in the scientific report written by Jocelyn Bell - a research student at Cambridge radio astronomy laboratories. She noted, "the persistent appearance of a strange section of "scruff" on the recorded output from apparatus designed to produce a sky survey of quasars" (Latour and Woolgar, 1986, p. 32), which showed a rapid and irregular fluctuation in intensity. This situation is known as Scintillation, similar to the twinkling of stars visible to the naked eye (Woolgar, 1976). This was thought to result from the passage of radio waves through the irregular clouds of plasma, or ionised gas, which stream outwards from the sun. This 'solar wind' only causes twinkling if the radio waves are sufficiently coherent, meaning that the twinkling effect clearly indicates the presence of a radio galaxy with particularly small angular dimensions known as quasars. The Scintillation was more marked at the longer radio wavelengths, of the order of one meter. Whilst the detail of this finding is significant to the scientists, Latour, and Woolgar's interest centres on how socially available procedures function for constructing an ordered account out of the prevalent chaos of available perceptions. Hence their interest in the details of the observation process followed by Bell in order for them (ibid) to grasp the details of how she arrived at the perception that "there was a recurrence of a bit of scruff" (Latour and Woolgar, 1986, p. 33), is the focus of their study.

Latour and Woolgar's methodological approach in the above-mentioned study is guidance afforded to researchers who wish to create order out of the chaotic volumes of their primary data.

The starting point is the acknowledgement that the way research order is constructed out of chaos is dependent on a number of considerations (ibid). In the first place, there has to be a consciousness that there are alternative sociological approaches that could explain the occurrence of a particular scientific action which could also be faulted (ibid). In view of this, the observer has to base his/her analysis on shifting ground while ensuring that the production of order is done for practical purposes (Latour, 2007). This implies that the researcher proceeds by evading or ignoring difficulties of principle (ibid). In addition, it is beneficial to the researcher to understand that the focus of investigation from this perspective is the production of order because the standard of assessing the produced work is based on investigating the methods and procedures by which the observer has produced ordered versions of the utterances and observations which they have accumulated (ibid).

Consequently, in this study, a number of alternative ways of researching the concepts of patient safety in relation to health policy were considered and acknowledged, and what is achieved to create order includes the application of some approaches (Law's moment of translation, thematic data analysis and the application of data analysis software - NVivo) to inductively draw themes that identify actant-networks in the data (this process is explained in chapter 4).

Secondly, there is an advantage in obtaining an analytic view from the reflexivity of other researchers in the field of study who are also confronted with constructing an ordered account out of a disordered array of observations. This is achieved in the consultation of ways by which thematic analysis is done. The works of Attride-Stirling (2001) on *Thematic Networks: An Analytic Tool for Qualitative Research*, and Braun & Clarke (2006) on *Using Thematic Analysis in Psychology* were consulted for guidance on how to create order from the data collected. Further, a study of the functionality of NVivo, a qualitative analytic tool, was particularly useful in the process of making sense of the chaos of the large volume of data collected.

Whilst these considerations appear to provide some comfort that the task of creating order could be achieved easily, there remains the challenge of determining exactly how and where the researcher should begin translation (Latour and Woolgar, 1986). Often, the observer starts

by adopting some kind of theme by which he/she hopes to be able to construct a pattern to make sense of a mysterious and unconnected sequence of events encountered in the volume of data gathered (ibid); however, given that the selection and adoption of themes are highly problematic, there is the risk of merely explaining the observation findings as merely the existence of a pattern. Therefore, how the themes are selected may be questioned with an impact on the validity of the explanations of the findings (ibid). Because of this, the "observer's selection of a theme constitutes his method for which he is accountable. It is not enough simply to fabricate order out of an initially chaotic collection of observations; the observer needs to be able to demonstrate that this fabrication has been done correctly, or, in short, that his method is valid" (Latour and Woolgar, 1986, p. 37). In compliance with this guidance, the data analysis tools mentioned above were chosen and applied to inductively generate the themes that are foundational to the creation of actant-networks from the primary data. These analytic tools and processes are widely used in social science studies and other disciplines. Thus, there is confidence in its validity, especially because of the notion that the operation of black boxing is made possible by the availability of credibility (Latour, 2007), because required attention is accorded to the work sequences, networks, and techniques of argument which indicate themselves as more appropriate units of analysis than the analyst (ibid), which is what creates credibility. This implies that the distinction between the individual and the work done provides a valuable resource in the construction of facts (ibid). Further discussion on validity is provided in the Methodology section below.

This study focuses on how Latour and Woolgar (1986) applied ANT methodology to trace the networks in a laboratory report, as written by Jocelyn Bell. In the process, they acknowledged that sociologists of different persuasions and research styles would undoubtedly view this episode in a variety of diverse ways. In their reflection of other's possible consideration of Joycelyn's findings, the approach of ANT was clarified, and the Author's position states-

> Our use of "anthropology" denotes the importance of bracketing our familiarity with the object of our study. By this, we mean that we regard it as instructive to apprehend as strange those aspects of scientific activity which are readily taken for granted. It is evident that the uncritical acceptance of the concepts and terminology used by some scientists has had the effect of enhancing rather than reducing the mystery that surrounds the doing of science. Paradoxically, our utilization of the notion of anthropological strangeness is intended to dissolve rather than reaffirm the exoticism with which science is sometimes associated. This approach, together with our desire to avoid adopting the distinction between "technical" and "social", leads us to what might be regarded as a particularly irreverent approach to the analysis of science (Latour and Woolgar, 1986, p. 29).

They also recognised the research limitations in that the authors believe it is unlikely that their discussion will tell working scientists anything they do not already know well as recognising the research limitations. Further, they acknowledged that their description of the way in which such craft activities become transformed into "statements about science" might constitute a new perspective on what working scientists know to be the case. Likewise, it may emerge that the actant network in the assessment of the status of PS in Nigeria, when it comes to the impact of the national health policy in clinical practice, might reveal already known perspectives. Still, the contribution to knowledge through a research approach that is not commonly explored would provide significant insight into the sociological perspectives of considering the status of patient safety in Nigeria.

Latour and Woolgar's firm belief in what ANT methodology can achieve is another driving force in making the choice to apply its methodology in this research process. For example, Emilie Cloatre (2013) interrogates the journey of medicines to determine if they reach poor patients in Djibouti while the study traces the impact of the law on pharmaceutical intellectual property in the process. Cloatre demonstrates the impact of the ANT methodology by recognising the margins that occur in her study. Although her study was inspired by her interest or concerns for the cross-cutting issues of inequalities, dependency, and persistent dissymmetry in opportunities and possibilities that underlie most of the themes relating to networks associated with how HIV medicines travel from the international to national and the role of the law in this process. The study uncovered "the constitutive reality of phenomena, and 'things' we take for granted- the nature of 'medicines,' but also the nature and modes of action of the law" (Cloatre, 2013, p. ix).

The point is to hint at the reach of ANT - It has come to be an intellectual port of call for many disciplines and their subsidiaries beyond the social sciences. Despite the significant critique it receives, it is recognised as a conceptual framework or, as lately considered, an analytical and methodological framework (Blok et al., 2016). It believes that to carry out social science enquiry is to ask how things, people, and ideas become connected and assembled in larger units (Latour, 2007). Although Latour has been criticised for his position on carrying out research based on a detailed empirical approach rather than employing critical theories and his views on mainly describing the particular situation at hand (Whittle and Spencer, 2008), the critics acknowledge that ANT's commitment to realism, positivism, and conservatism makes it valuable for conducting detailed empirical studies of organisations (*ibid*). Despite similar criticisms, ANT remains an increasingly influential approach employed

to understand humans and their interactions with inanimate objects in helping to appreciate the complexity of reality and organisations (Cresswell et al., 2010).

4.2.2.3 The Adaptability of ANT in Public Health and in Clinical Health Studies.

The extensive production of knowledge and the expertise of producing it in the above-cited works and many other ANT research studies is a powerful force in driving the interest in employing this methodological approach in this project. Of course, within public health and clinical health studies, both qualitative and quantitative approaches are recognised. However, many of the research designs appear to favour quantitative approaches. Bates (2005) highlighted the WHO theoretical framework in PS research, including five domains - measuring harm, understanding causes, identifying solutions, evaluating impact, and translating evidence into safer healthcare. These domains are reflected in the research designs favoured in PS research, which are cross-sectional, retrospective, and prospective (ibid). These appear to follow the traditional epistemological grounds of causal and effect research approaches described by Prof. Perri 6 and Bellamy (2012) in how explanatory inferences are made. For example, Wu (2005), in sessions 2 and 5 of the PS research introductory course, demonstrates the various research approaches used in PS studies, which embrace both qualitative and quantitative research processes. However, he states that the hierarchy of PS research evidence includes Systematic Review, Randomised Controlled Trials, Cohort Studies, and Case Series and Case Reports. Some of these studies produce outcomes in numeric terms, and others generate causative factors.

In most PS research analyses, the Vincent Framework for Risk Analysis is often used to determine causes, effects, and interventions for PS errors (Bates, 2005).

These PSR methods and analyses are not deemed appropriate for this study because many of them do not provide the opportunity for an empirical approach that the study requires. For example, the consideration for a systematic review in this study was abandoned due to the realisation that its methodological process would not provide the firsthand information obtained from observations and interviews carried out in the various study institutions during the ethnographic fieldwork. This is apparent in what constitutes a systematic review, where one definition is as follows: “systematic reviews answer pre-defined research questions using explicit, reproductive methods to identify, critically appraise and combine results of primary research studies (Pollock and Berge, 2018, p. 138). Indeed, although this approach has great value and has contributed to knowledge in many ways, especially in PSR, it does not have

immediate benefit to this research. Given this definition, this work could be subject to the scrutiny of a systematic review in the future since this is primary research.

Furthermore, to consider a cohort study would mean this research is informed by biomedical traditions because it is a study where people are observed in groups and are followed up to determine the incidence of, or mortality from, some specific disease, all causes of death, or some other outcomes (Wang and Kattan, 2020). This would be a total deviation from the intention of this work to explore a phenomenon using observational studies, document analysis, and interviews to generate new knowledge.

These two examples of the inability of the commonly used PSR methods are highlighted for emphasis on the rationale behind the choice of methods used in fulfilling the research process of this study. However, although these approaches are not discredited, it is important to demonstrate that their usefulness does not benefit the research intentions of this study. These methods produce outcomes in numeric terms, and others generate causative factors.

Whereas, in ANT research, what constitutes evidence is not to seek 'cause and effect' outcomes of phenomena. Rather, what it does can be demonstrated in Law's analysis of Latour's observational work in the science laboratory (previously summarised example from the book- Laboratory Life: The Social Construction of Scientific Facts).

> Drawing on the work of A. J. Greimas and ethnomethodology, [Latour] explored the semiotics of the practices that lead to scientific truths-claims. He noted that in the laboratory, most claims about the world are vague and promiscuously mix the social and the natural… A tiny handful of these suggestions subsequently get transmitted into the much harder statements about nature that circulate in scientific papers. Latour observed that by the time this has happened, the social has disappeared along with almost everything to do with how the new truth was produced. With most of the messy relations gone, we are left with nature, a textual account of nature and a set of more or less formulaic statements about methods that purport to explain why the latter reflects the former. The intermediate and heterogeneous relations of production are deleted to generate two quite distinct and separate domains: reality on the one hand and knowledge of reality on the other. It is a system of purification that depends on a heterogeneous web of relations that is subsequently effaced (Law, 2007, pp. 4-5).

Basically, it is Latour's (2005) opinion that when social scientists add the adjective 'social' to some phenomenon, they portray a stabilised state of affairs; a bundle of ties that may later be mobilised to account for some other phenomenon if it designates what is already assembled together without making any superfluous assumption about the nature of what is assembled. Where the problem lies is when 'social' begins to mean a type of material, as if the adjective was roughly comparable to other terms, like 'biological', 'economical', or linguistic etc.

When this happens, the meaning of the word breaks down since it now designates two entirely different things: first, a movement during a process of assembling and, second, a specific type of ingredient that is supposed to differ from other materials (ibid). In ANT tradition, the 'social' cannot be construed as a kind of material or domain where the project of providing a 'social explanation' of some other state of affairs is disputed (ibid). In place of the social explanation, Latour attempts to redefine the notion of social by returning to its original meaning and making it able to trace connections again. Based on this premise, the ANT signature is recognised when its core principles are present in the studied phenomenon. There should be a materially heterogeneous relation, which is analysed with semiotic tools, while the study demonstrates asymmetrical indifference to the truth or otherwise of what it is looking at (ibid). Also, the study should be concerned with the productivity of practice. It should show interest in the circulation of its findings and should have a predisposition to exemplary case studies (Law, 2007).

It is, therefore, a deliberate act in choosing ANT as the methodological framework to interrogate the status of PS in Nigerian clinical settings by tracing the networks that exist between policy and practice. This project stands to benefit from the advantages that the ANT methodological framework provides in achieving its goals. These advantages include (i) its ability to deal with systems made of human and non-human entities and the ability to propose a relational view of action; (ii) its ability to provide an understanding of the intervention-contest interactions, and (iii) its ability as a tool for opening the intervention's black box (Bilodeau and Potvin, 2018). These advantages are not prominent in the WHO prescribed approaches to PSR.

Further, it is essential to discuss key perspectives in ANT to appreciate its complexities and especially its application to this project. In the next section, the entity "ANT" will be discussed regarding its background, philosophical underpinnings, its terminologies, and the application of ANT methodology to this research.

4.3 About ANT

4.3.1 Background

Although ANT is often ascribed to Bruno Latour, it is a collective achievement with other renowned writers such as Michael Callon, Madeleine Akrich, Antoine Hennion, Vololona Rabeharisoa, John Law, Annemarie Mol, Vicky Singleton with many others who are central to its emergence and subsequent trajectory (Lancaster University, 2004).

ANT denotes a family of conceptual and methodological sensibilities that grew out of science and technology in the late 1970s onwards (Cresswell et al., 2010; Quinlan, 2014; and Blok et al., 2020).

Latour termed ANT the *sociology of association*" (Latour, 2007, p.9), but Law's (1990) extensive definition encompasses its key components-

> Actor-network theory is a disparate family of material-semiotic tools, sensibilities, and methods of analysis that treat everything in the social and natural worlds as a continuously generated effect of the webs of relations within which they are located. It assumes that nothing has reality or form outside the enactment of those relations. Its studies explore and characterise the webs and the practices that carry them. Like other material-semiotic approaches, the actor-network approach thus describes the enactment of materially and discursively heterogeneous relations that produce and reshuffle all kinds of actors, including objects, subjects, human beings, machines, animals, "nature" ideas, organizations inequalities, scale, and sizes and geographical arrangements (Law, 1990, p. 1).

Law explores this definition in four categories, and in doing so, he provides insights into the misconceptions about ANT. The first consideration is to correct the notion that this definition refers to ANT in the abstract, as often done in textbooks. Law argues that this definition of ANT is not abstract but is grounded in empirical case studies. Law opines that a theory is embedded and extended in empirical practice and practice itself is necessarily theoretical. Therefore, in order not to betray the status of the ANT approach, the researcher needs to overthrow the definition above by translating it into a set of empirically grounded practices.

Meanwhile, the second moment in Law's consideration of ANT's definition remains one of the controversies of this domain where the argument is to determine whether ANT is a theory or a methodological framework. Law explains that ANT is not a theory in that theories usually attempt to explain why something happens, but ANT is descriptive rather than foundational in explanatory terms. Instead, it tells stories about how relations assemble or don't. As such, it is better understood as a toolkit for telling interesting stories about and interfering stories in relations. In Mol's opinion:

> ANT is not a theory. It offers no casual explanations and no consistent method. It rather takes the form of a repertoire. If you link up with it, you learn sensitising terms, ways of asking questions and techniques for turning issues inside out or upside down. With these you may go out and work new roads. But beware: as you walk, nobody will hold your hand, there are no assurances. In "linking up with ANT", the art is not to repeat and confirm but to seek out cases that contrast with those that came earlier. A contribution to ANT gently shifts the existing theoretical repertoire. And then, as the theoretical repertoire shifts, it becomes possible to describe further different cases and to articulate so far untold events (relations, phenomena, situations). These, in turn, will

> help to add to and shift the theoretical repertoire …and so on. The point is not to fight until a single pattern holds, but to add on ever more layers and enrich the repertoire (Mol, 2010, p. 261).

On the other hand, Lezaun's view is that in the emergence of ANT, there is an increasingly explicit social theory, although it might still be resolutely unconventional, because of the view that:

> ANT has not acquired the status and capacities of a social theory by means of increasing abstraction upon the particulars of a multitude of empirical case studies. Rather, ANT has found its way to social theory through a series of deep and transformative immersions into the peculiarities of different "regimes of truth" or "modes of existence" – beginning with its original journey into the nitty-gritty of scientific and technological innovation. In other words, the unfolding of ANT into a full-blown social theory has involved a multipronged effort to account for what is unique, specific, and empirically striking in different orders of action, without in the process conceiving of those orders as separate "domains" or "regions" of a broader, totalizing reality. Each of its empirical engagements has transformed ANT- or has afforded ANT an opportunity to mutate and reinvent itself, which is in keeping with a theory for which every action of translation, every displacement, involves change, distortion, and ultimately betrayal (Lezaun, 2017, p. 2).

Despite varying perspectives on whether ANT is a theory or a methodological tool, the transformation of ANT over the years has not altered its core concepts (Blok et al., 2020). Perhaps Callon (1999) had a sense of the impacts of these contentions on the future of ANT when he encouraged researchers not to lose sight of some of the positive results obtained by the approach in any debate about what might follow ANT. The most important of this is that ANT is based on no stable theory of the actor. Rather, it assumes the radical indeterminacy of the actor; for example, the actor's size, its psychological make-up, and the motivations behind its actions of which none of these are predetermined (ibid).

Collins and Stockton (2018) expand on this fluidity in that the ANT researcher's perspective should consider theory as a way of seeing and methodology as a way of doing. However, the researcher is warned against an overreliance on a theory as this can produce other types of problems (ibid). Further, the Social Care Institute for Excellence (SCIE) (2012) states that theory will become apparent to some degree in the theoretical approach itself, that is, in the methodology, in the arguments about what might happen, in the approach to the fieldwork or data-gathering, and in the analysis and synthesis of the findings. This position is demonstrated when some researchers still apply ANT as a theoretical and methodological framework for their inquiry. For example, Bilodeau and Potvin (2016) created a theoretical framework derived from the three principles of ANT, which they used in addressing theoretical problems in the Conceptualisation of public health interventions as complex systems are proposed.

Since theory is considered to arise out of a value position (Royse, 2008), it can be explanatory or predictive. It can underpin interventions and be used within research frameworks (SCIE, 2012). Therefore, these opinions can be interpreted to suggest an expected responsibility from the researcher such that when the concept of a study is being reviewed for insight into the area of concern, it is expected that the researcher would bear in mind that they have a responsibility to establish the place of their findings in practice. In other words, it is important to be able to translate theory into practice.

The discussions above extend Law's third category, where he describes ANT as a movement that overlaps with other intellectual traditions. For this, he prefers discussions that talk about material semiotics rather than actor-network theory because these better illustrate the openness, uncertainty, revisability, and diversity of the most interesting projects. This third category unpacks the core benefits of ANT when unrelated research studies draw on a range of theoretical resources and are found in many different case studies, practices, and locations that are done in many different ways; "this is perceived as a sign of the strength of material-semiotic sensibilities than as a weakness" (Law, 2007, p.2).

Law's fourth category of the definition focuses on how text is relational; in that they come from somewhere and tell particular stories about particular relations. Because of this, the ANT researcher is warned to beware of any text about ANT that pretends to the objectivity of an overall view.

The extensiveness of this definition provides a lens through which one can view the contemporary perspectives around the background and development of ANT over the last two decades.

In an account by Blok et al. (2020), the root of ANT is traced to a number of traditions within philosophy and the social sciences, including lineages in the Sociology of scientific knowledge where the social constructedness of scientific knowledge serves as a base for ANT's more radical notion of construction. This linkage is reflected in the work of philosophers such as Michel Serres, Alfred North Whitehead, and Michel Foucault (ibid). While this is the general intellectual scaffold from which ANT might be hung, various other predecessors have supplemented this.

Blok et al. (2020) opine that, in many ways, the increasing popularity of ANT in a wide array of fields is startling and ambivalent, especially when they consider the occurrences and expansion of the ANT discourse over the last two decades. Prominent reference is made to the

position of key ANT scholars who declared an end to what was first called ANT. Particularly, the volume *Actor-Network Theory and After* by Law & Hassard (1999) marked an end of ANT as a theoretical position fully embedded in the field of science and technology studies and thus mostly concerned with problems of technoscience and biomedicine (ibid). Alongside this occurrence, ANT marked the beginning of broad and more open-ended inquiries into other fields of practice, such as the economy, cultural taste, and social movements (ibid). The wide range of empirical topics, with which, in one way or another ANT has engaged, highlights the challenge that ANT is not a static edifice (ibid). As there are a set of possible relations through which one can engage productively with ANT, one must be aware that ANT does not necessarily remain the same because its use in its specificity can mean that ANT itself changes (Mol, 2010).

The discussions about the background of ANT and its extensive definition provide a wealth of information on the core perspectives in the agenda of this methodological process, but also important is the need to explore the basis of its philosophical underpinnings within the social sciences.

4.3.2 Philosophical underpinnings of ANT

4.3.2.1 Ontology

This research relies significantly on the ontological foundations of ANT. ANT is affiliated with a number of traditions in sociology, especially in its perspectives on the human actor and agency, the relation between macrosocial and microsocial processes, and the nature of power. The interests of ANT share the core philosophical perspectives of Elias's figurational sociology, Bourdieusian practice of sociology, and Giddens' structuration theory (Michael, 2016). These traditions, too, are concerned with solving classic tensions within sociology, such as that between human agency and social structure (ibid). Many authors who follow these traditions have produced works that have drawn on ANT to supplement their use of Elias, Bourdieu, or Giddens (ibid).

This flexibility of considering a way of knowing in sociological studies aligns with the meaning of "ontology", that is, the philosophical study of what applies neutrally to everything that is real (Simons, 2015). This research work is exploratory in nature and will benefit from the ontological foundation of ANT in seeking to know the intricacies that constitute significant actions in the network of activities between policy and practice in the Nigerian health systems. This is to achieve the goal of identifying the lessons that can be learnt from

emerging historical and contemporary perspectives in applying policy to clinical practice in the country.

The ANT way of knowing and doing where Latour is concerned is his idea of a new principle of philosophy based on his judgement of inadequacies of ontological perspectives such as realism, constructivism, and reductionism (Harman, 2009). Most of Latour's arguments to establish the philosophical underpinnings of ANT are covered in his key writings, including, but not limited to The Power of Association (Irreductionism) (1984), Science in Action: How to Follow Scientists and Engineers Through Society (1988), The Pasteurization of France (1993), We have never been Modern (1993), and Pandora's Hope: Essays on the Reality of Science Studies (1999). In these writings, Latour's arguments are about how we should consider the social fabric of society while, in many ways laying emphasis on his rejection of the idea that 'social relations' are independent of the material and natural world (Latour, 2005). A brief discussion of Latour's perspectives and the consideration of the main criticisms of some of his ideas are stated next.

ANT is described as a constructivist approach due to its focus on connections in its consideration of the world as consisting of networks (Latour, 2005; Creswell et al., 2010). This is made apparent in Latour's (1984) four central ideas that are believed to be the building foundation of his philosophical principles which are first, *Actors* or *Actants* (also known as objects) considered in the belief that all entities are on exactly the same ontological footing, which in certain circumstances are in full or partial agreement with some other philosophers or in total disagreement with others. Secondly, the principle of Irreductions itself which argues that no object is inherently reducible or irreducible to any other. Thirdly, the principle of translation, which is the principle of linking one thing to another and in this process, other events occur, such as mediation. While the fourth principle speaks of alliance which illustrates that actants are not stronger or weaker by some attribute of inner strength or weakness in their inner essence but by gaining strength only through their alliances. Therefore, the description of determining the creation of connectivity is better realised when the nature of a network itself is understood.

The concept of ***Rhizome,*** developed by Deleuze and Guattari (1988), is often referred to by scholars of association to illustrate and clarify the ANT concept of a **network**. Rhizomes from the Greek word *rhizome* is often described as being synonymous with the term 'root' (Mambrol, 2017). A rhizome, also known as a fungus, is a plant that grows underground and has both roots and shoots (ibid). Deleuze and Guattari (1988) argue against the idea of what

they termed arborescence or the model of the tree that was operative before the postmodern era. The model of the tree is explained in the analogy of a small seed growing into a tree with a sturdy trunk which supports many branches and are all linked to and traceable back to the original seed (Deleuze and Guattari, 1988; Mambrol, 2017). As such, the seed is considered the beginning point of a coherent organic system that grows vertically and progressively, continually sending out branches that are part of an identical to the point of origin (ibid). Deleuze and Guattari (1988) are opposed to the idea of the tree model because the tree represents that which reveals the deep structures that lie behind the messiness of reality. In contrast, rhizomes are the opposite because they do not reproduce by way of clearly delineated hierarchies but by underground stems in which many parts may send additional shoots upwards, downwards, or laterally. A rhizome is an organism of interconnected living fibres that has no central point, no origin, and no particular form or unity or structure (Mambrol, 2017). It does not start from anywhere or end anywhere; it grows from everywhere and is the same at any point, as such, a rhizome has no centre, which makes it difficult to uproot (ibid). It is likened to the internet, which has a rhizomic structure with no point of origin, no central locus, and nothing that controls or shapes or organizes it: the web simply grows (ibid). Any of its links or website can be removed without damaging or changing the internet- it continues to exist without a path or pattern. The concept of the rhizome is important as they are a way of thinking about things in general because they continually create the new in the sense that it is not predictable, it does not follow a linear pattern of growth and reproduction such that its connections are lateral and not hierarchical (Deleuze and Guattari, 1988).

Therefore, the proposal to think about a phenomenon through the application of the rhizome concept is to be enabled to create new connections as well. However, the question then, is how does one make a rhizome [a network] out of anything and everything? (ibid). Deleuze and Guattari provide six principles to follow in the process of tracing a network and interpreting the assemblages. These principles align with Latour's four philosophical principles of asymmetry, reductionism, translation, and alliance (explained above), but Deleuze and Guattari's principles constitute more elaborate explanations that are not discussed in this thesis; however, they are mentioned - i) the principle of connection, ii) the principle of heterogeneity, iii) the principle of multiplicity, iv) the principle of a signifying rupture, v) the principle of cartography, and vi) the principle of decalcomania, which is the methodological inverse of cartography. Mainly, a network in ANT can be considered a point of entry for the researcher to come in contact with actors for their translation. This gives the

researcher the opportunity to start to explore the ontological grounds by which each actor has come to be.

ANT's ontological position considers **networks** to include humans, things, ideas, and concepts- all of which are referred to as "actors" in the network, hence the position that this idea is a flat ontological approach for theorising a range of phenomena (Latour, 1993a; Creswell et al., 2010; Ash, 2020). In this process, **actors** form groups in the actor networks, but the actor is not implied in its regular meaning. Instead, the word **actant** is deemed more applicable because an actant is described as that which accomplishes or undergoes an act (actor with agency) (Latour, 1993a). Actants differ from actors because an actant can not only be a human but also an animal, object or concept that accomplishes or undergoes an act (Dankert, 2011). The use of the word actant permits treating concepts, humans, and animals equally in an analytical sense (ibid). ANT points out that humans and non-human entities are constantly influencing these changes (ibid). For this, ANT is often criticised for its central analytically radical position that there is no difference between people on the one hand and objects on the other (Law, 1992). This position is criticised as an unequal attribution of power to the actants (i.e., humans and objects are given the same significance level) (Casper and Clarke, 1998). Whereas ANT rejects this as a reductionist view. Instead, it believes there is no reason to assume, a priori, that either objects or people determine the character of social change or stability (Law, 1992). This makes it possible to differentiate between entities where the beginning and the ending of an entity's qualities can be identified (Ash, 2020). In doing so, differences between entities can be accounted for without reducing these differences to the product of a particular set of relations or by returning to essentialist or binary modes of thinking (ibid).

Furthermore, an outstanding differing opinion, for example, within the field of Geography. There is the belief that entities are theorised as relational, whereas the exact relationality is often not accounted for (Ash, 2020), which is very much recognised by geographers when Johannesson and Baerenholdt (2009) state that a very important element of ANT in geographical studies is that it sees nature and the material as integral to the social and the cultural instead of the focus on key concepts of the hybrid and quasi-objects (ibid). This view is one of many ideas that Latour argues against because he believes there are no grounds for philosophising principles from their unprocessed form but must follow objects in action and describe what we see (Harman, 2009). Therefore, the way of knowing in ANT is the *tracing of associations* or *relationships between network components* (or actors) (Latour, 2007; Latour, 1984; Cresswell et al., 2010). ANT assumes that the sum of non-social phenomena

can account for something social, resulting from groups or assemblages of human and non-human actors constituting the network (Latour, 2005). In essence, the main concern of ANT is in establishing the 'flatness' of the social, the 'relationality' of the human, and the role of the nonhuman (Blok et al., 2020). To fulfil the criteria for each of these concerns, ANT proponents expand this ontology in the philosophical context of several ideas termed controversies. In the first place, tracing a network requires understanding the elements seen in the network. As such, identifying all groups of human and non-human entities (***group formation),*** such as employees, building materials, and computers, etc (Dankert, 2016) is essential. As a constructivist approach, these groups must be deconstructed to identify what is happening inside them (Latour 1993b). Often it becomes clear that every single entity is, in fact, a group of other entities (ibid), because of this, ANT-driven research seeks to show the dynamics of how groups are made and re-made (Latour, 1993a; Latour, 2005). What drives this is that ANT is concerned with the mechanism of power (*ibid*), apparent in the view that it can provide an understanding of the social world through the tracing of associations in a network (of humans and objects) and its ability to translate the type of connections between things that are not themselves social (Latour, 2007). However, to achieve the equal attribution of powers to the actants, the researcher must ensure the maintenance of the three main principles of ANT: The principle of impartiality, the principle of generalised symmetry and the principle of free association (Callon, 1984). Actant-networks are thus constructed and reconstructed through interaction between actants (Latour, 1993), such that, as long as the actants keep interacting, the actant-network will look stable from the outside, and the connections between their constituting actants will hold (*ibid*). However, if the interaction ends, the actant-network will break down (*ibid*). The central idea of ANT is to investigate and theorise about how networks come into being, to trace what associations exist, how they move, how actors are enrolled into a network, how parts of a network form a whole network, and how networks achieve temporary stability (or conversely why some new connections may form unstable networks). In other words, the researcher seeks to understand what constitutes **intermediaries** and **mediators** and how they form relationships between actors (Latour, 1993a; Cresswell et al., 2010). The difference between the two is that the outputs of intermediaries can be easily predicted based on their inputs (Latour, 1999). Mediators, on the other hand, transform inputs into unpredictable outputs. This means they can also transform actions, making something happen that is not necessarily related to that which was initially set in motion (*ibid*). ANT assumes that the social world consists of many mediators, which tend to be the focus of analysis as they impact social outcomes in often unpredictable ways (*ibid*). Typically, in ANT tradition, there is often no explanation of why or how a network takes the

form it does, instead, it is a way of thoroughly exploring the relational ties within a network (Latour, 2007). However, the term "network" is considered problematic as it is believed to lead to a description that seems pointless or unsuitable. For example, some feminist writers argue that ANT is inadequate for research that concerns women's interest in some situations.

First, Wajcam (2000) acknowledges the importance of accepting the consumer as an integral part of the process of technological development to feminine research (that is, identifying a network). Further, the recognition that ANT's ontological position about preventing *a priori* determination that non-human actors do not possess agency has been beneficial in understanding the role of technology in producing social life. Nonetheless, Wajcam (2000) opines that there is a marginalisation of gender within the ANT constructivist studies of technology, as such, concludes that this is indicative of a general problem with ANT methodology. Wajcam arrived at this conclusion because she notes that Latour, Callon, and the others were more concerned about identifying and studying the social groups or networks that actively seek to influence the form and direction of technological design. Therefore, the product of their focus on observable conflict led to a common assumption that gender interests were not being mobilised. The main concern for the inadequacy of ANT methodology in this criticism is that they restricted their analyses to the two observable dimensions of power while they neglected a third, which is the structural dimension. The perceived neglect of the structural dimension comes from the belief that the exclusion of some groups, while not empirically noticeable, may nevertheless impact technological development processes. Wajcam concludes that constructivist studies have generally assumed that gender has little bearing on the development of technology because the masculinity of the actors involved was not made explicit. To correct this, Wajcam (2000) prefers that a full theoretical integration of the analysis of gender into technology studies is achieved, which should be influenced by the understanding that both men and women have gender identities that structure their experiences and their beliefs.

Meanwhile, Casper and Clarke (1998) explore the meaning of Pap smear and the practical uses for different actors within the practice of cervical cancer screening. And although the role of Pap smear is acknowledged to be that of a non-human actor within the practice of cervical cancer screening, the researchers disagree with ANT's position that it should be analysed symmetrically with 'human' actors. They also disagree with the notion that all human actors should be accorded the same analytic stature (ibid). Their position is rooted in the belief that "all actors (whether human or non-human) are assigned ontological status and significance within social worlds of meaning by the actors involved themselves" (Casper and

Clarke, 1998, p. 257). Their stand is that their position on this matter provides an understanding of these attributions and provides them with information about the distribution of power in this area of practice. Therefore, their decision to opt for asymmetry is to utilise the application of political and theoretical perspectives that can examine certain practices more than others in this field.

Latour's defence on how actants are given equal attention comes from his application of three resources; the attribution of naturality to agencies and linking them with nature, secondly granting these agencies sociality by tying them with the social fabric, and thirdly to consider them as a semiotic construction and to relate agency with the building of meaning. Latour praises this approach by acknowledging its success, as he states that the originality of scientific studies has come from the impossibility of clearly differentiating those three resources (Latour, 2017). Given that these arguments about attribution of power to human and non-human entities emerged within the discourse of the activities occurring within a 'network', we return to the clarifications provided by Latour in his justifications for using the term 'network' to illustrate the process of translation in ANT.

Latour (2007) maintains that it is fitting to use the term 'network' because the descriptions and discussions are not limited to the axiological myth of a top and a bottom of society. Because it makes no assumption about whether a specific position is macro or micro, and it does not adjust the tools to study the elements involved. The need to bring this to light is because of the way the term networks have been interpreted over time. Latour (2017) refers to the three misunderstandings arising from the common usage of the word 'network' itself. The first mistake would be to give it a common technical meaning in the sense of sewage, train, subway, or a telephone "network". While the second misunderstanding pertains to the study of social networks, which is concerned with the social relations of individual human actors, such as their frequency, distribution, homogeneity, and proximity, which developed as a response to global concepts like those of institutions, organisations, states, and nations, adding to them a more realistic and smaller set of associations. The third misunderstanding concerns the act of considering an actor to be an intentional individual that is often contrasted with mere behaviour. Latour (2017) concludes that, whereas social network adds information on the relations of humans in a social and natural world left untouched by the analysis, ANT aims to account for the very essence of societies and natures. It does not wish to add social networks to social theory but to rebuild social theory out of networks (ibid).

In recognition of the many criticisms and debates about ANT's ontological and epistemological positions, Callon (1984) and Latour (2007) agree that ANT is not a complete theory in explaining the social world, which is, by the way, peculiar to other social theories. Nonetheless, they maintain that the benefit to the researcher is the gain of a detailed description of the concrete mechanisms at work that holds the network together while allowing an impartial treatment of the actor. Notwithstanding (Callon, 1984), the controversies over sociological explanations are unending amongst sociologists, whereas there is a fair consensus that there is no theory without a limitation. Therefore, it becomes the researcher's responsibility to determine an appropriate tool for the work to be done (Latour, 2007).

Having defended the nature of a network, it is a requirement to understand that the interactions between actants are necessary to establish and hold the connections between them, noting that, to establish connections, actants have to be displaced and transformed in order to make them fit into an actant-network. It is this work of displacement and transformation that is known as **translation.** In Latour's notion of translation and composition, he states that "I use translation to mean displacement, drift, invention, mediation, the creation of a link that did not exist before and that to some degree modifies two elements or agents" (Latour, 1999, p. 32), and in terms of Composition, Latour states that things have to be put together to retain their heterogeneity. Latour is believed to indicate his Amodernist liminality that seeks to frame the world and its processes as it is rather than forcing it into discrete linguistic categories (Johannesson and Baerenholdt, 2009). Further, when actants have not been translated (or have not translated themselves), they are not part of the actant-network (Latour, 1999). The process by which a researcher reports all these intrigues can be described as an **immutable mobile** because the actant interactions are like a flow; that is, something flows from one actor-network to another

(Dankert, 2016). This flow is what the researcher wants to track because to let something flow from one actant-network to another, it has to be put into a form (ibid).

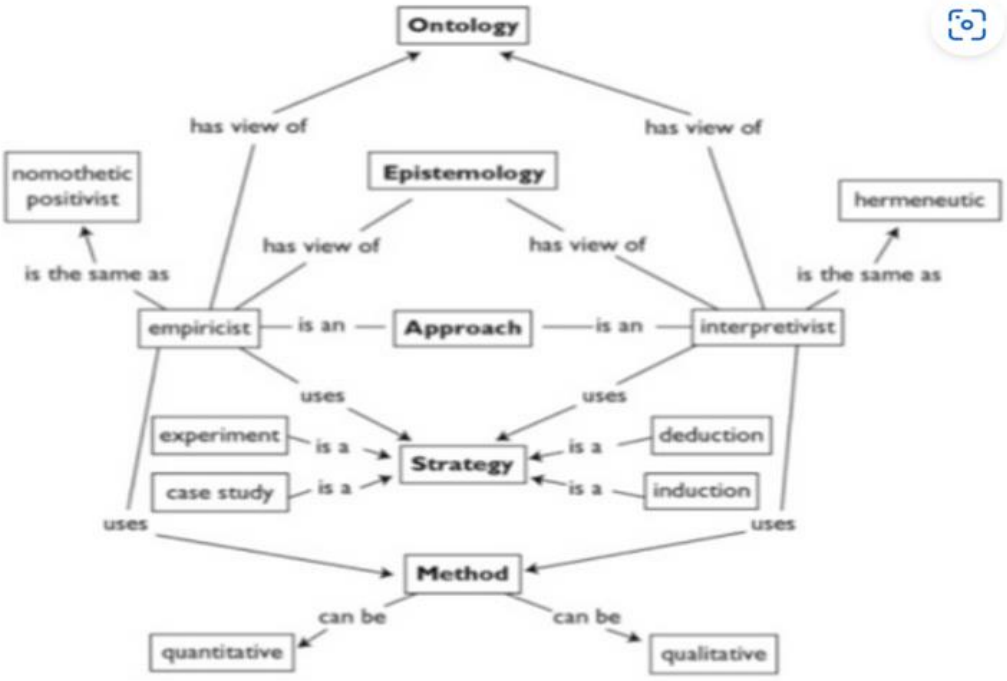
The ANT way of 'knowing' as discussed above establishes the process by which this research will generate knowledge about the status of PS in Nigeria and how the clinical practices that influences patient outcomes is impacted by the NNHPs. Meanwhile, a part of this process requires a brief insight into the epistemology of ANT as discussed below.

4.3.2.2 Epistemology

Winthereik (2019) describes the ANT epistemology as that which follows concepts as they enter into conversation and convince each other of a different being which is the radical empiricism of ANT, and more specifically, the 'follow the actor' dictum. This is a key element in ANT's methodology and the one that has been instrumentalised (ibid). Further, "this simple instruction 'follow the actor' does not outline any specific kind of action, nor does it explain anything. It is an investigation for in situ sense-making and sorting out relations and attachments" (Winthereik, 2019, p. 24). In considering Winthereik's statement, one would agree with the notion that ontology and epistemology are intricately linked: 'commonly regarded as related, sometimes in a lineal fashion, with ontological preferences informing epistemological issues' (Hardy and Evans 2010, p. 18). This is because they are about the ways that we understand the world and the nature of reality and our understanding of 'knowledge' within that. Definitively, the perception of ontology and epistemology in ANT are a collection of concepts and processes that are closely linked as demonstrated in the foregone discussions above on the ontology of ANT. Nonetheless, if we must distinguish between these terminologies, the simple explanations firstly, describes *ontology* as the philosophy of the nature of the world, and what we can know about it (Orme and Shemmings, 2010) while *epistemology* is the philosophy or theory of 'knowing' that is focused on the criteria used to distinguish knowledge claims, or assess their rigor and validity (ibid). In this space of establishing a set of knowledge and how we come about producing them, what might also become apparent and important for social research is the consideration of how we understand reality within the social world from a realist view where considerations might be unyielding regardless of our thoughts about it, or a product of our knowing about it and constructing it through our individual thoughts, known as idealism (SCIE, 2012). However, even where not explicitly stated, researchers approach their topic from a particular position and understand the world in a certain way given that we all hold an ontological position, knowingly or unknowingly, and our values affect our research at every level (ibid). Moreover, ontological views correspond to different mentalities while there are perspectives often considered from epistemological standpoints. The two approaches are- *positivism* a scientific approach that seeks knowledge through objective research by looking for facts such as cause and effect, and researchers try to measure and then theorise from this (Corby, 2006). While, a post-positivist approach, is more often used in social sciences because it acknowledges the difficulties of writing yourself out of the research, particularly in relation to one's value base and interpretivism (ibid). The second approach being *interpretivism* - an approach that sees

knowledge as constructed by the subjective meaning that people make of their world and its distinctive feature - the interpretive researcher see people, and their interpretations, perceptions, meanings, and understandings, as the primary data sources (Mason, 2002), but for this approach, the researcher needs to acknowledge their own subjectivity and value base (ibid). It can then be concluded that ontologically, ANT demonstrates realist view and leans towards interpretivism epistemologically. Nonetheless, whichever approach, epistemologies are both, supported by and support fundamental ontologies (Chatterjee, 2013). Although there is the notion that there isn't necessarily a perfect correspondence between ontology, epistemology, and methodology, they do constrain each other (SCIE, 2012). As such, it is possible to make methodological choices that are at odds with one's ontology or argue from an ontology that is inconsistent with one's choice of methods (ibid). Meanwhile, in this study the methodology is consistent with the chosen methods employed. However, there is the recognition that when it comes to the status that might be ascribed to ANT's methodology and analytics, nowadays there seems to be a concern with the ways in which method and analysis are complexly constitutive of their objects of study (Blok et al., 2020). In that, method 'performs' the social, and in the process makes it in particular ways (ibid). Nonetheless, the epistemology of ANT is accomplished through its methodology which has its main tool in ethnography which are useful ways to explore an interpretivist approach (SCIE, 2012).

The benefit of understanding the ontological and epistemological perspectives of ANT is that it provides the researcher with set skills in communicating the complexities encountered during the fieldwork and they are able to reflect on the process of their data collection and then communicate their findings to the appropriate audience. Two diagrammatic representations of the components of ANT in relation to philosophical paradigms are presented in Figs. 9 and 10 below.



Business Research Methodology (2011) *Ontology*.
Available at: https://research-methodology.net/research-philosophy/ontology/

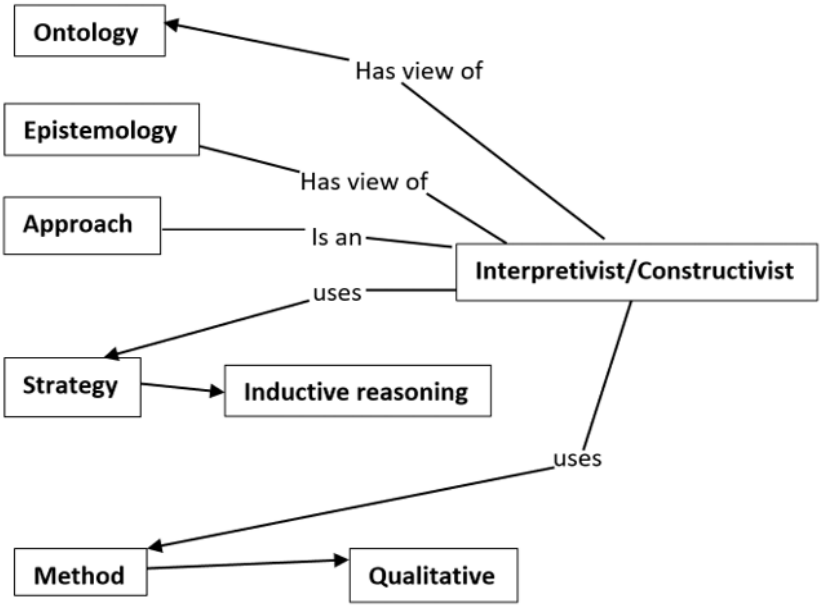


Figure 9: Ontology of this Research Philosophy.

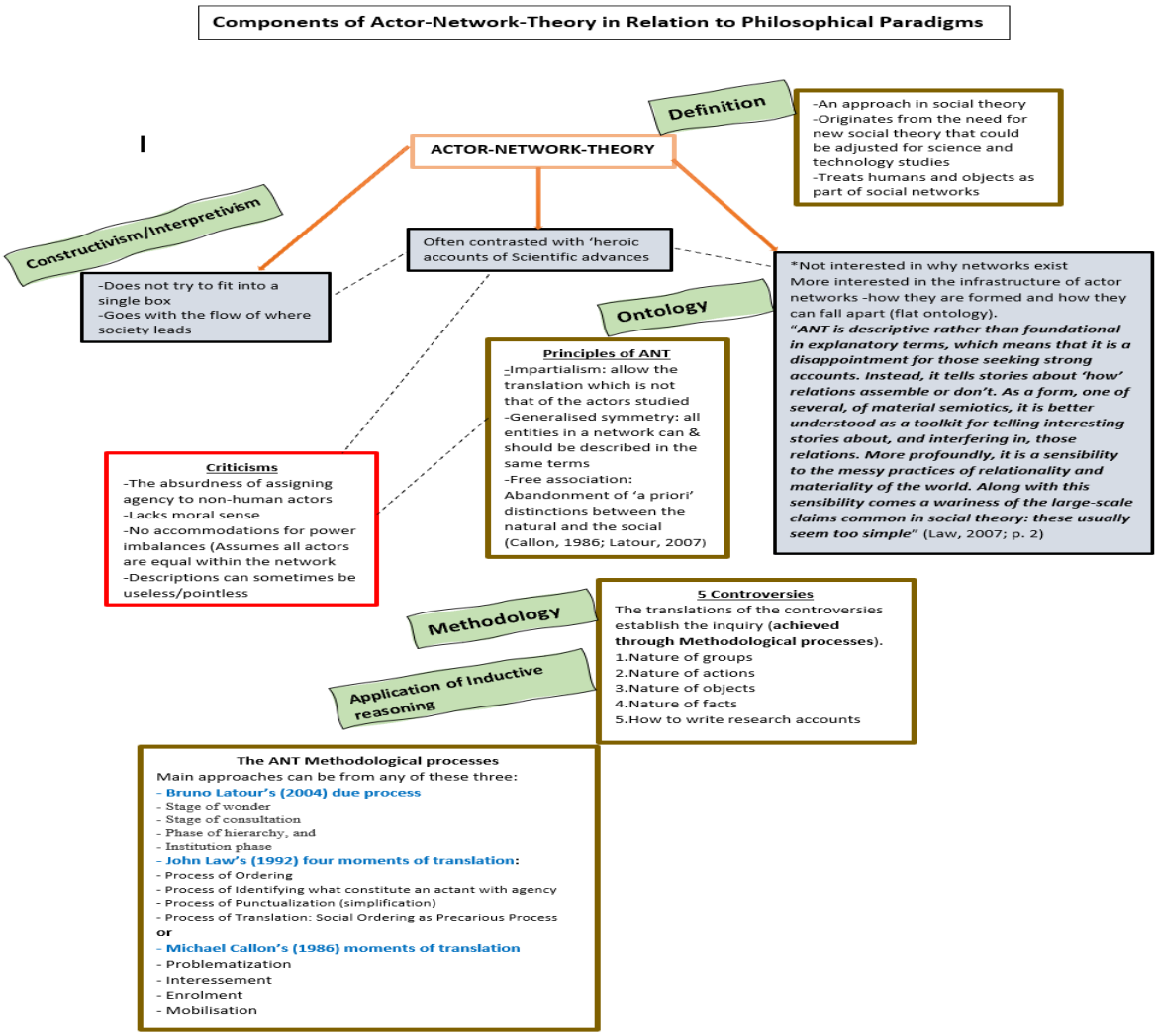


Figure 10 : Components of Actor-Network Theory in Relation to Philosophical Paradigms

To proceed from these narratives of ANT, the methodological process is discussed below, as it is applied in this current project.

4.3.2.3 The Methodology of Actor-Network Theory

Introduction

The ANT methodological approach is rooted in anthropology. Firstly, the term anthropology is intended to denote the preliminary presentation of accumulated empirical material (Latour and Woolgar, 1986) expected to be achieved through a research procedure that carries the same strength and tenacity of research production of knowledge attributed to earlier works of Anthropologists (ibid). This is the grounds for employing an ethnographic approach in obtaining empirical data in ANT research, which is also applicable to this project. However,

the starting point of how to carry out ANT research begins before data is collected. For example, Bilodeau and Potvin (2016) demonstrate the sequence of events in their views that the task of the researcher in the application of ANT in research is to first document the events that transform the network and intervention. Secondly, events must be ordered chronologically to represent the intervention's evolution, and lastly, a broad range of data is needed to capture complex interventions' evolution. This summarizes 'the due process" (also known as the moment of translation) in Latour's prescribed way of applying ANT methodology in social science research.

In 2004, Latour made a proposal about the way in which translation is/should come about in four phases that a new actant must go through before it is included in the existing order. In other words, when the four phases of the process have been completed, the new actant can be regarded as 'true'. In that sense, *the due process model* is very similar to Callon's (1984) *moments of translation*, a conceptual framework that explains the development of an actor-network which include problematization, interessement, enrolment, and mobilization. The main difference is that Callon uses his moments in a more descriptive sense, while Latour's model with the themes- stage of wonder, stage of consultation, phase of hierarchy, and institution phase is used more normatively. Latour's due process is followed as the guiding methodological process. In other works, on translation the above analysis when illustrated in the methodological order of ANT, the researcher would consider the relativist principles (Latour, 1987), the view that standards of reasoning and procedures of justification are products of differing conventions and frameworks of assessment where their authority is confined to the context giving rise to them (Stanford Encyclopaedia of Philosophy, 2020). This implies an understanding of the types of controversies that helps in explaining the social world in the studied phenomenon (Callon, 1984). Controversy pertains to all the manifestations by which the actants are questioned, discussed, negotiated, rejected, etc. (ibid). The research outcome(s) can then be obtained by templating elements of the work on what is known as the 'five controversies' (*ibid*). This is achieved after letting the actors deploy the full range of perspectives in which they are immersed (Latour, 2007). Since each perspective is a source of controversy to be explored, this becomes the starting point of the enquiry (Dolwick and Arch, 2009). There are five sources of controversy: the nature of groups, the nature of actions, the nature of objects, the nature of facts, and how to write research accounts (Latour, 2007). Within the practice of ANT, each source of controversy provides the researcher with the framework to critically analyse the perspectives deployed during observation or from the results of interviews. The researcher has the discretion to apply all the

sources of controversy in the analysis or choose the most appropriate. However, quoting from Pinch's review of Latour's Science in Action, care must be taken in how the entities are translated- " Latour argues powerfully that 'society' is another term which should be treated like 'nature'. In other words, 'society' is the outcome of settling controversies and should not itself be used to explain such outcomes" (Pinch, 1987, p. 484). Achieving a translation based on this warning can be illustrated in the approach of Young et al. (2020) in their ANT methodological process.

In a number of policy studies, researchers have followed various analytical processes used in ANT. For example, Young et al. (2010) chose to understand how change occurs in complex systems by analysing policy innovation for smoke-free places. In this study, the four stages of policy innovation were examined using the ANT initial model, starting with establishing the embryonic actor-network, which must link with and mobilise a range of nonhuman resources. The next is the creation of alliance building which in the study of innovation involves contests over alliance partners such that to contribute to the developing discourse, some alliance partners are added and some discarded. Thirdly, establishing a balance of opinion requires gaining the acceptance of individuals involved in the study interest, while the final stage involves setting up inquiries through the examination of reports or establishing issue-specific units. This final stage of Young et al.'s analysis is, as they put it, 'the autonomisation of an issue', which is important to their study because it establishes autonomy by distinguishing the issue from others competing for institutional support. Young et al. (2010) chose ANT because they found it to be a broader umbrella framework that can explain all four stages of their policy innovation studies.

In other ANT approaches, researchers have chosen to understand the world (or an organisation) by unpacking the 'black box' (Harman, 2009). Latour's description of the black box is that the world is not made of natural units or numbers that endure through all surface fluctuations. Instead, each actant (actors or objects, e.g., policymakers in Nigeria or the policy document itself) results from numerous previous forces assembled. In essence, this analytical approach considers that actors of a study are born amidst strife and controversy, but they eventually solidify into a stable configuration. However, Latour states that if we simply reawaken arguments, that is, reopen the black box, what is revealed is that the actants have no smooth, unified principle (Latour, 2005). Therefore, the non-static nature of ANT comes to life.

Hence, the various changes experienced would have to be managed by the researcher such that once the fieldwork is completed, a new phase starts (Dankert, 2018). The researcher would have to make sense of the data collected by selecting relevant ideas pertinent to the focus of the research, which will need to be substantiated (ibid). Dankert (2018) states the importance of going into the existing literature on the subject because only then can the researcher show how ANT-driven results connect with existing knowledge.

In the introductory discussion above, ANT methodology provides many opportunities, as stated by its proponents and scholars, who appreciate that it can achieve the same result as other research approaches. Therefore, this current research applies the methodological procedure of Latour's due process model, as will be discussed below.

4.3.2.4 The Application of ANT Methodology to this Research

This research commenced at the *stage of wonder/perplexity* in stating the need to investigate the impact that the Nigerian National Health Policy has on patients' experiences in the hospitals. The interest in questioning what might be happening within the health systems is driven by the numerous socio-economic and political instabilities in the country. To establish this starting point is to identify the appearance of a new actant, in this case, the role of health policy in PS in Nigeria, which marks the beginning of the first phase in Latour's philosophy. This phase is that of wonder, also known as perplexity, where the importance of being open to the actant's right to exist is stressed (Latour 2004). The stage of wonder is a search for this right to exist, and its main requirement is not to underestimate the number of possibilities that must come into play in the discussion. To achieve this requirement, the approach explores the actant nature of NNHP firstly in the examination of the policy document, followed by tracing the networks of human and non-human objects through observations of work processes, conversations, and situational occurrences at the Federal Ministry of Health and a number of acute healthcare settings. Nonetheless, focus is maintained on the premise that ANT differs from a traditional anthropological approach in that the idea of a 'participant' includes non-human actors and the various networks of relationship and interaction that radiate out from people and things (Latour, 2007). Whereas traditional social scientific research paradigms would have one observe the (active) participant in the implementation of a (passive) policy (i.e. a policy that is only given agency *through* its implementation by a human), the 'flat ontology' (Harman, 2009) of ANT ascribes the same ontological status to both the human subject and the policy object as a starting point: in short, all components of the network, humans, virtual objects (software for example) traditional objects, institutional structures,

discursive structures, written and unwritten policies, practices, infrastructures, etc. are classed as potential participants (actors) and are consequently subject to observation. By purposefully refusing to pre-determine potential participants in a categorical manner, ANT does not enter the field with presuppositions with respect to which actors may or may not act in any given scenario (Latour, 2007). To prescribe a methodology that did so, limit potential actors, for instance, to enter the field having determined a priori that only humans and institutional policies are relevant to the study, would be seen from an ANT paradigm to restrict and prefigure the inquiry (Latour, 2004). For any concrete empirical scenario, one cannot, in principle, determine beforehand which actors will display agency. Thus, and accordingly, *prior to engaging with the network concretely*, any attempt to prefigure the focus of the inquiry in terms of which objects are deemed most relevant is avoided. This is in no sense a lack of precision, clarity, or preparation, but a function of a deeper ontological commitment: one is not investigating specific predefined objects but, rather, that agential force that in principle may invest *any* object and will concretely invest this or that object *only in the singular empirical context under investigation*. Once engaged with the network, these agential objects are identified and the inquiry proceeds.

The next stage, which requires *consultations to give the actants a chance*, commences, but it is now no longer a question of whether the actant has a right to exist but how the essence of the actant can be fleshed out and giving the actant(s) a chance to present itself is the important expectation. It is important to enter into discussions with all possible spokespersons for the actant, which was achieved by conducting interviews with the health policy administrators at the Federal Ministry of Health and the clinical professionals (Doctors, Pharmacists, Nurses, and Laboratory Scientists) in the selected clinical institutions. In addition, a non-human spokesperson is the NNHP document, which was also consulted, and the abstract concept of observation was transferred into physical action whereby policy administrators and clinical practitioners were observed, and information gathered was documented. These spokespersons give specific interpretations of the impact of health policy on patients' outcomes by interpreting how the policies influence clinical practice. In this consultation phase, it is not yet about a discussion but about getting a complete picture of all the angles to give substance to the actant (Latour, 2004). The rule for stage two was incorporated by ensuring that the number of spokespersons who participated in filling in the actant was not arbitrarily short-circuited (ibid). In the third phase of the process, which is the *Phase of hierarchy* the determination of the place of the actant within existing structures is established. This starts when the actant has been able to present itself through all its spokesperson, based on all the

information that has been collected. In this phase, it is necessary to fit the actant into existing structures; for example, the assessment of the NNHP requires that it possess features that meet the international standards expected of health policies and especially the policies focusing on patient safety; in addition, specific clinical guidelines are examined to determine if they fit in prescribed standards. Nonetheless, by fitting in, the essence of the actant can still change form, at the same time. However, the existing structures are often also changing. Meanwhile, a lot of consultation is required in this phase with the spokespersons of the various existing structures, that is, the continuous review of the existing standards while the investigation is in progress. The point is to fulfil the need to see how the new actant can 'coexist' with everything already existing by formulating this process as a *categorical obligation* (ibid). The agreed connections are recorded in the fourth phase, the *Institution phase.* The methodological application of this phase to this project becomes a summary of what was achieved in the previous stages, that is, when an actant has the right to exist when it has been presented by various spokespersons and when it can 'coexist' with the already existing structures, the actant can be institutionalised; in other words, be recorded. What this implies is the documentation of how the actants in the actor-network were determined and the interpretation of the intricacies of how things flow in the network, the identification of what constitutes intermediaries and mediators that changes the stability of the NNHP. From this point, an agreement on paper about the 'coexistence' of the new actant with the existing structures can be seen as the starting point for this phase. However, the institution goes much further because the actant now belongs to the existing structures. It is therefore important in this last phase to close the discussion (ibid) because, according to Latour, from the moment an actant is institutionalised, the legality of the new reality is no longer questioned, but it should be noted that new actants will emerge who will also exert influence on the now institutionalised actant in the hierarchy phase. This concluding aspect of the process shows the fluidity of the methodological process of ANT (Mol, 2010), yet its far-reaching attributes to elucidate complex layers of information cannot be overemphasised (Law, 1992). Fig. 11 below illustrates, in summary, the rationale for employing the ANT methodology in this research.

The rationale for choosing ANT methodological framework	
Existing Patient Safety Research Status and Approaches	**Nature and Benefits of Applying Actor-Network Theory Methodology**
▪ Patient Safety Research (PSR) is Atheoretical. ▪ Employs theories from the fields of occupational health safety and behavioural sciences. ▪ Draws on models within human factors and ergonomics as well as socio-technological systems theory. ▪ World Health Organisation's hierarchy of PS research evidence includes Systematic Review, Randomised Controlled Trials, Cohort Studies, Case Series and Case Reports- which produce outcomes in numeric terms and or causative factors.	▪ ANT navigates the complex and often disparate resources closely aligned with evolving set of sensibilities that opens a space for asking certain methodological, empirical, analytical, and political questions about processes of the "more-than" social world (Mike, 2016). ▪ What constitute evidence is not to seek 'causal and effect' outcomes of phenomena. ▪ Advantages of applying ANT methodological framework: - Ability to deal with systems made of human and non-human entities and the ability to propose a relational view of action. - Provides an understanding of the intervention-contest interactions and, - It is a tool for opening the intervention's black box (Bilodeau and Potvin, 2018).

Figure 11: The Rationale for Choosing ANT Methodological Framework

The application of ANT methodology to this research is enhanced by the research methods that generated the primary data and that constitute the evidence for the discussions that evaluate the actant or non-actant nature of the NNHP in terms of PS in clinical practice in selected Nigerian health institutions. The research methods are discussed in the presentation of the research design in the next section.

4.4 The Research Design

4.4.1 Ethnography

The key element of the ANT method is its ethnographic approach, where the achievement of research rigour is at the heart of fieldwork (Latour, 2007).

In ANT ethnographic procedure, the twin methods of depth interviewing, and observation are deployed (Berghe, n.d.; Latour, 2007). Although ethnographic methods are thought to be unsystematic by nature because there is no testing (Librett, & Perrone, 2010), nonetheless, the knowledge generated is heuristic (*ibid*). Additionally, it can set out to show how social action in one world makes sense from the point of view of another (Agar, 1986) when intensive

personal involvement, an abandonment of traditional scientific control, and an unrehearsed style to meet situations not of the researcher's making is required (*Ibid*). Therefore, it mainly uses observational studies and in-depth interviews. Using direct observation for data collection is a tool for a qualitative researcher who can observe in two main roles: as a participant observer or as an observer only (Matthews and Kostalis, 2011). Usually, this choice is dictated by what the researcher needs or wants to know (*ibid*). Additionally, when the researcher employs the use of semi-structured interviews, there is the benefit of developing predetermined questions that will be used as a guide which allows for flexibility as opposed to questions that are verbatim (Matthews and Kostalis, 2011).

However, there are data collection implications relating to the observational studies being generally related to social and cultural processes and shared meaning within a limited group of people (Guest et al., 2013). In addition, it is traditionally associated with long-term fieldwork, which often is time-consuming and expensive (Guest et al., 2013; Matthews and Kimberly, 2011). Notwithstanding, the benefits of these factors are attributed to the significance of the field notes when they are very detailed, as they provide a description of the setting and the interrelationships within the setting (Matthews and Kimberly, 2011).

The ethnographic approach has the defining feature that is orientated towards studying shared meanings and practices; for example, culture, thus emphasising the study's emic (internal) perspectives, with the ability to have a contemporary or historical focus (Guest et al., 2013).

Indeed, Guest et al. (2013) state 'Ethnography' literally means "to write about a group of people" (pp. 11-12) obtained from the researcher's immersion within the community he/she is studying for extended periods of time. In this instance, the community of study refers to some parts of the Nigerian Health System involving the FMoH and four healthcare institutions (three hospitals and one primary healthcare centre). This is because the project has employed a rapid ethnographic approach. Although traditional ethnography requires longer periods in the field, contemporary use of ethnography, especially in applied research, is generally not as immersive as traditional ethnography. Often, this is because most researchers cannot afford to spend lengthy periods (e.g., one year) in the field as this has huge financial costs (Guest et al., 2013). Therefore, three months was the duration of the time spent in the field for this research data collection.

Likewise, the practice of ethnography provides the space in which observation is conducted and has been a scientific tool and a method of data collection (Berghe, n.d.) with the

expectation that it would assist in formulating the research purpose, plan, and systematic recording of the findings (*Ibid*). Further, it can be subjected to checks and controls on validity and reliability (*Ibid*). Schensul et al. (1999) explain that one primary difference between ethnography as science and other social and behavioural science methods of investigation is that ethnographers discover what people do and why they do things before they assign meaning to behaviours and beliefs. Moreover, ethnography depends on the researcher as the primary tool of data collection. Thus, ethnographers pay special attention to issues of bias and ways of ensuring the accuracy of the data (ibid). In view of this importance, the standards of the quality of this project are discussed later in this section. Meanwhile, the practicality of the study is discussed next.

4.4.2 Entering the Field

There were requirements to be fulfilled before the current fieldwork could be started. Gaining access to the field and fulfilling ethical approvals at the university level and at various institutions was achieved in stages (Figure 12).

Research Ethics Approval by Institution	Date of Approval
Nottingham Trent University Ethics Committee.	22nd May 2018
Federal Capital Territory Health Research Ethics Committee, Nigeria.	15th February 2018
Nisa, Garki Hospital, Abuja, Nigeria.	28th February 2018
Federal Ministry of Health, Abuja, Nigeria.	9th May 2018
Wuse General Hospital, Abuja, Nigeria.	10th May 2018
The University of Abuja Teaching Hospital, Gwagwalada, Abuja, Nigeria.	24th of July 2018
Federal Capital Territory Administration, FCT Primary Health Care Board, Abuja, Nigeria.	2nd August 2018

Figure 12 Research Ethics Approval Dates

Once the authorisation to enter the field was achieved, the fieldwork plan was developed, which required specific steps to achieve the goal of a successful data collection process. This is enumerated below.

Procedure for data collection

- The fieldwork will cover a period of approximately three months spread to cover observations and the conduction of interviews at the selected institutions. The research design will ensure a provision of time allocation to be spent in each institution, that is,

at the FMoH and in each clinical area. In each institution, the main aim is to apply methods of participant or non-participant observation (as permitted in each institution) and to conduct semi-structured interviews.

- A fieldwork calendar is drawn to allocate time to be spent at each institution, bearing in mind the need for flexibility to address necessary adjustments that might occur due to unforeseen circumstances.
- Data collection should take place within the key departments in each institution of study relevant to the theme of the research.
- On each day of observation in each institution, potential interviewees will be identified, consent will be obtained, and an interview date will be agreed upon.
- Specific time will be allocated to carrying out interviews towards the end of each period spent in any of the institutions. The interviewees will include a mix of healthcare professionals and administrators, such as health policy administrators, doctors, nurses, pharmacists, laboratory scientists, radiologists etc.
- The number of professionals to be interviewed will be dependent on the number of those who agree to be interviewed, but efforts will be made to get five interviewees in each institution.
- The fieldwork progress will be communicated with the Director of Studies (DoS) and second supervisor regularly, and a preliminary report on the study findings will be submitted for review at the next supervisory meeting after returning to the University.
- At the end of this process, the observation notes will be sorted by documenting events chronologically, including the identification of key events, description of various settings, people, processes followed, and issues encountered. Interviews will be transcribed, and leading themes will be collated, which will be analysed using content and narrative analysis approaches. This will then generate critical discussion, which will be both descriptive and interpretative.

Equipped with the fieldwork plan and the authorisation to enter the field and collect data was the opportunity to utilise the ethnographic methods designed for this project. The fieldwork process is narrated below.

4.4.3 The Fieldwork

Following the requirement of an ethnographic approach, a shared period of 3 months amongst the various institutions was spent in the field (See Appendix 1 - Field Calendar) from June to

September 2018. It was an interesting experience to work closely with health policy administrators and clinicians in their various work environments.

The data collection was conducted in the Federal Capital City, Abuja, in Nigeria.

The Scope of the study covered the Federal Ministry of Health (FMoH) and four hospitals which were selected based on the representation of governance in the country. This refers to the selection of a tertiary-level hospital (a federal-level institution) - University Teaching Hospital, Gwagwalada, a secondary-level hospital (i.e., at the State government level) - Wuse General Hospital, a primary - level health care centre (i.e., at the local government level) - Kuchingoro Primary Health Centre and a Private Sector hospital - Garki General Hospital, all located in Abuja, Nigeria.

Since there is no prescribed starting point of enquiry (Law, 1992), observation commenced at the Federal Ministry of Health, as the main ethics approval for the data collection in the country was issued by the Ministry. In addition, the Health Planning Research & Statistics Department (HPRSD), one of the six technical departments, is located within the FMoH and happens to be the assigned department to be a participant observer. The HPRSD has five sub-departments (known as divisions): Policy & Planning Division, Health Systems Support Division, Monitoring & Evaluation Division, Research & Knowledge Management Division, and International Cooperation & Resources Mobilization Division. The FMoH is a vast institution comprising twelve departments (six technical departments and six non-technical departments). It has affiliations with seven agencies and two health services special programmes (See Appendix 2 - FMoH Organogram).

Fortunately, the primary sub-department allocated for the participant observation was the Policy & Planning Division. The head of this division was appointed as the shadow lead for the participant observation, with whom attendance of meetings, coordination of departmental visits, and organising of interviews was achieved. Further, arriving in Nigeria in June of 2018 was at a good time because the new policy document was just ratified and launched in June 2018, which replaces the 2004 version. These factors influenced the decision to begin data collection at FMoH. The participant observations and interviews took place mainly within the six technical departments.

Furthermore, gaining access to the clinical institutions was preceded by a presentation of the ethical approval by the FMoH to the research and ethics department of the Federal Capital Territory (FCT), Abuja and to the Abuja Municipal Area Council (AMAC). This State and

local government authorities granted ethics approval presented to each clinical institution where individual ethics approval was granted. In each of the institutions, the emergency department was the location where the position of a non-participant observer was granted. Nevertheless, visits to other departments, such as the intensive care unit (ICU), outpatient department (OPD), pharmacy, etc., were permitted. This arrangement was accepted because obtaining ethical approval as a participant observer in the clinical institutions would have taken longer to process. This would have affected the time spent in the field. More than the three months spent would have been needed because the FMoH has a set of different requirements to conduct participant observation in any clinical setting.

Three methods of data collection were used during the fieldwork. Firstly, *document analysis,* which was used to examine the content of the NNHP document with the intention of identifying key attributes that correspond with existing accepted standards that should influence PS in a clinical healthcare environment. Secondly, *observations of the practices* of policy administrators and clinicians. Lastly, *21 interviews* were conducted with the policy administrators and the clinicians, including doctors, nurses, pharmacists, and laboratory scientists, as shown in the chart below.

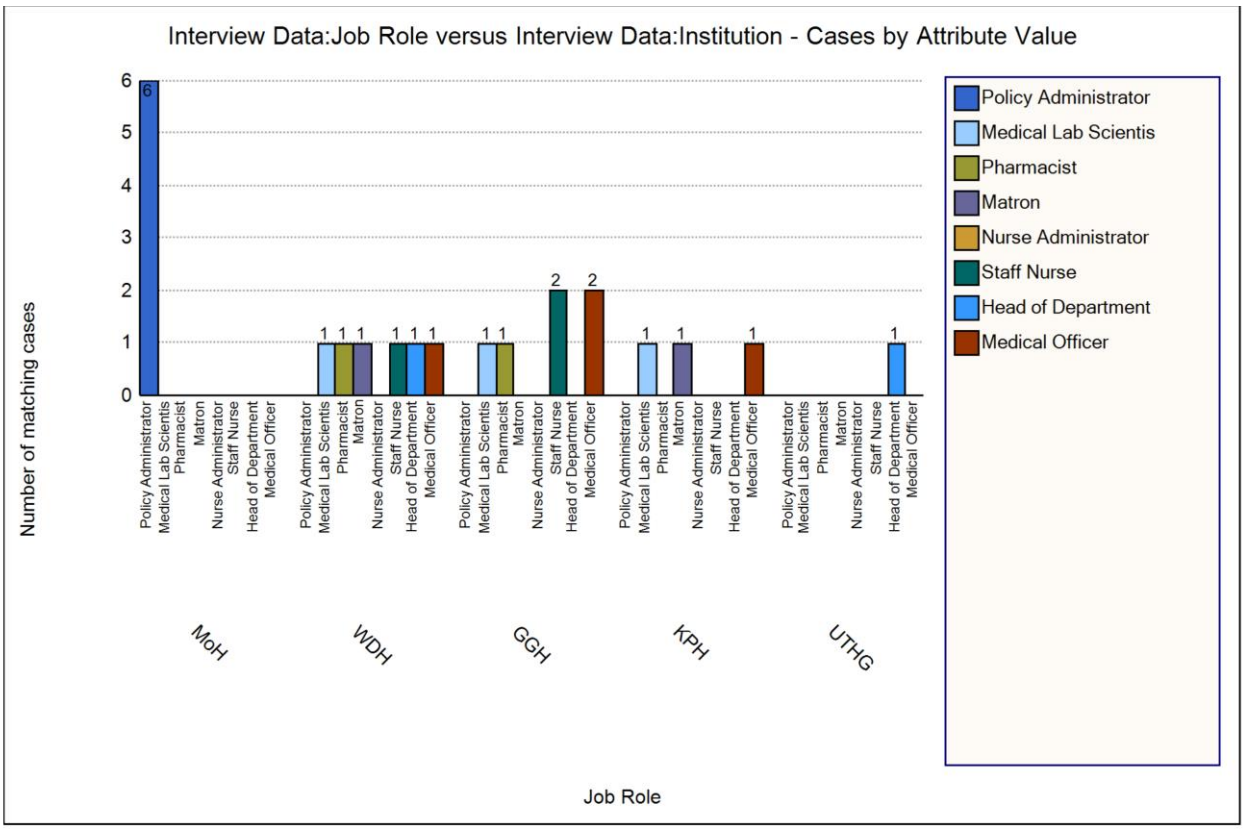


Figure 13: Interviewee Demographics

These activities enabled the achievement of the goal of identifying a network of actors, which provided a physical trace of some a priori activity which can be followed and recorded empirically (Dolwick and Arch, 2009; Latour, 1997).

The observed actions and processes were documented through note-taking, such that when analysed on a daily basis, information from what the actors have to say was generated (Dolwick and Arch, 2009) and correlated with interview responses. The transcribed interview responses and note-taking became essential to managing the risk of tracing the inconsistency of accounts that might be given and resolving the indications of a multiplicity of agencies (Dolwick and Arch, 2009). Lastly, equal attention was accorded to the interactions between objects observed from the health policy department to the clinical areas.

The activities that follow include the analyses of all the collected data, including field notes and transcribed interview responses, as demonstrated in subsequent chapters.

The findings are reported as a foundation for the discussions of the key results of the study, and this makes it possible to provide the research recommendations in the final chapter.

4.4.3.1 Research Methods

The research methods were adjusted based on the institutions and the level of authorisation available for the data collection. However, the fieldwork plan was to apply participant or non-participant observation methods and semi-structured interviews.

4.4.3.1.1 Observation

The choice of observation as an ethnographic research method (Baker, 2006) is based on its usefulness, though a complex process but one that allows the researcher to use a number of techniques as well as enable the use of the researcher in multiple roles (ibid) in the research process. The complexity of the method is also multidimensional when it comes to determining what observation means and how it is done (ibid). Often the same meaning is ascribed to a number of labels, such as observation, participant observation, or ethnography (ibid), with the central description that either defines observation within the broader context of ethnography or the narrower one of participant observation. Even so, the general definition is that it is a data collection technique that requires the researcher to be present at, involved in, and recording the routine daily activities with people to study and understand them within their environment (Schensul et al., 1999; Baker, 2006).

Meanwhile, observation is not achieved in a single method; the researcher's role is fluid and could be any of the many which produce the study result (Baker, 2006). According to Gold (1958 cited in Baker, 2006), the researcher's role could be complete observer, observer-as-participant, participant-as-observer, and complete participant. Other perspectives consider the role of the observer in terms of the researcher's sensory perception of things that can be seen, heard, or felt, which relates specifically to the only one kind of phenomenon in the whole realm of social life, which is, specific actions of an individual whether by physical acts or speech acts (Ellen, 1984). Whichever role is assumed by the researcher, the activities of the people studied, its degree, depending on the circumstances of the work and the problems researched, enables the researcher not only to observe the actual behaviour of the subjects but to apply effectively all other possible research techniques such as to conduct both informal and structured interviews to collect qualitative data (ibid). Although this is not a full analysis of the concept of observation as a research tool, the expectations as related above was certainly instrumental to shaping the observations carried out during the fieldwork.

At the FMoH, though the research plan was to be a non-participant observer, participant observation was allowed because of the permission granted to shadow in the Policy and

Planning division of the Health & Planning Research & Statics Department. During the three weeks in the division, participation in departmental meetings, attendance at partnership meetings and the responsibility to update the organogram of the FMoH were the activities experienced. Nonetheless, there were days when the role was mainly that of a non-participant observer. Meanwhile, non-participant observation was strictly adhered to in the clinical institutions, given that ethical approval does not cover patient handling or any clinical activities. No doubt, the observation activities contributed to shaping the semi-structured interview questions while in the field.

4.4.3.1.2 Semi-Structured Interviews

In all the institutions, semi-structured interviews were conducted. This format was considered beneficial to the study given some central perspectives on the types of interview designs researchers can adopt. Ellen (1984) states the differences in types of interviews along a continuum based on certain criteria. One, is the level of pre-determination in the questions asked such as been able to move from formal questionnaires through standardised agendas and checklists to questions arising spontaneously. Two, the criterion that demonstrates the degree of directiveness, for example, where the interviewer starts from neutral questions, to vaguely encouraging prompts to the most specific of questions on particular subjects and the third which is similar to this is the degree of openness or closedness of the questions asked. The fourth criterion relates to the length of the interview, while the fifth criterion relates to the degree of prior arrangement which could be a set appointment to a totally unexpected meeting and subject of conversation. The sixth criterion relates to the interview settings which can be a wild range of circumstances such as doing a group interview, interviewing at the subject's domicile or the interviewer's house or at a neutral location etc.

These range of determining types of interviews preludes the importance of being aware of the possibility of the reality of the claims that the objectivity of formally structured interviews can be false and the concern that less structured approaches can be unfamiliar to informants and subject to rejection and more subtle forms of non-response and distortion (ibid). These underpinnings of the concept of ethnographic interviewing informed the choice of conducting twenty-one (21) semi-structured interviews across all the institutions during the period of visit to each of them. The choice of conducting in-depth, open-ended interviews, though the most technically challenging, has truly been the most innovative and exciting interviewing (Schensul et al., 1999) during the fieldwork from the designing of the interview questions to scheduling and conducting the interviews to transcribing and analysing the transcripts.

The choice of conducting semi-structured interview is based on the benefit of the opportunity to maximise flexibility in exploring any topic in depth and being able to identify and cover new topics as they arise (ibid). More importantly, semi structured interviews play a significant role in the development of exploratory research as it provides more systematic forms of investigation (ibid). In addition, it is an approach that is appreciated for developing hypotheses, and more generally to make probes for circumscription, description, and interpretation of less well understood topics (ibid).

Therefore, the interview questions were designed guided by these foreknowledge of the concepts of semi-structured interviews and the adoption of some of the technical guidelines on designing such interview questions from the formative theory of Schensul et al. (1999), which include clarifying the central domains and factors in the study, operationalising factors into variables, developing preliminary hypotheses, and developing a qualitative base for the construction of the ethnographic study.

The questions covered perspectives in the knowledge base of respondents about patient safety and Health policies and policy processes. This background informed the designing of the questions such that the focus of the research inquiry is maintained, that is, obtaining the information to assess the role of NNHP in patient safety in Nigeria (See Appendix 3a & 3b for research interview questions). The semi-structured question guides for both the administrators and the clinical practitioners were preformulated to achieve open-ended answers (Schensul et al., 1999). A total of twenty-one (21) interviews were scheduled and conducted across all the institutions during the period of visit to each of them.

The benefit of being able to fully expand the questions *(ibid)* as the interviewer and by the interviewee was fully utilised.

4.5 Qualitative Assurance Data

Maintaining the quality of data starts with adhering to the methodological principles of ANT, that is, maintaining impartiality (agnosticism) between all identified actors engaged in controversy, making a commitment to explain conflicting viewpoints on equal terms (generalised symmetry) and abandoning all a priori distinctions between the natural and the social (free association) (Callon, 1984). While paying attention to these principles, exploring ANT perspectives in achieving data validity and reliability was an outstanding technique employed in the data collection process.

Latour and Woolgar (1984) extensively address the expectations for achieving validity and reliability in ANT observational methods. Often the adequacy of the researcher's description of his/her observations is judged on how they emerge during the course of techniques such as participant observation, but it is argued that these are more likely to find some measure of congruence with the set of categories and concepts of participants under study. Meanwhile, this assertion is faced with the task of differentiating the adequacy of the description going either by the notion of ***etic*** validation, that is, the audience who will ultimately assess the validity of a description is a community of fellow observers. This is considered a favourable deductive production of testable descriptions in that; it has the advantage of comparative ease with which the reliability and replicability of descriptions can be assessed (ibid). Or going by the notion of the perspective that favours the development of phenomenologically informed descriptions of social behaviours that is most appropriately agreeable to ***emic*** validation, that is, where the ultimate decision about the adequacy of description rest with participants themselves (ibid). What is believed to be of benefit of this notion is that descriptions produced by an observer are less likely to be mere impositions of categories and concepts which are alien to participants (ibid). At the same time, however, descriptions based on the categorical systems of participants in particular situations can provide problems for their generalisation to other situations (ibid). Furthermore, the Observer remains accountable to a community of fellow observers in the sense that they provide a check that he has correctly followed procedures for ***emic*** validation (ibid).

Nonetheless, this is perceived as a simplistic distinction between methods for making sense of observations which scarcely does justice to the range of methodological positions and debates within sociology but, it helps clarify the diversity of approaches which can be adopted (ibid).

Further, researchers are pointed to the danger of "going native"- an idea that is common with observers reliant on emic validation who are necessarily concerned with whether or not they are correctly using the concepts employed by the subjects of their study (ibid). If the observer is overly focused on this, they stand the risk of an "analysis of a tribe coached entirely in the concepts and language of the tribe, which would be both incomprehensible and unhelpful to all non-members of the tribe" (Latour and Woolgar, 1986, pp. 38-39). Consequently, a concerted effort was ensured to present observation notes in simplified terms to adequately communicate the concepts of the study to ensure readers outside the discipline of health systems, health governance, patient safety, health policy and clinical practice understand the information the study generates.

Moreover, the path of this research observation has mainly leaned on achieving validity and reliability based on etic validation. This has entailed adhering to techniques that demonstrate trustworthiness in the research process, which determines the integrity of qualitative data. Matthews and Kimberly (2011) identify the features required to provide evidence for the trustworthiness of data collection through the requirement for the approach. This is usually based on ***(i) The study duration****:* The benefit of spending three months in the field as an ethnographic observational approach provided the opportunity to build rapport and trust with the study group.

(ii) Peer debriefing: Regular debriefing with the research supervisory team has been a strong means of providing an alternative view of the data since they are not involved in the fieldwork.

(iii) Member checking**:** Participants were given the opportunity to withdraw their data within two weeks of providing the information during the briefing about the interviews and before they signed the consent form. This is a check on how the data is collected and used.

(iv)Triangulation: By seconding observational data with interview data and document analysis data, a way of validating one result against the other is established as the outcomes are expected to be very closely related.

4.5.1 Research Validity and Reliability

This project has internal and external validity based on the rigour of the research process and the study outcomes. First, its internal validity is attributed to the achievement of reaching a logical conclusion through the competence of ANT methodology as demonstrated in the data analysis, research findings and discussion chapters (Mann, 2003). Secondly, its external validity is based on the value of its generalisability as the study can be replicated in all States of Nigeria because the structure of the health system and the workforce is similar throughout the country (Baker, 2006). Additionally, its external validity can also be attributed to the value of the knowledge that the research findings add to health system studies, especially in low and middle-income countries (Mann, 2003). This study especially contributes to understanding the necessity of the visibility of PS in a national health policy. The tangible value of this research outcome may be long-term, but the foundation is now laid to be built on through wider studies on the mediators and intermediaries in the actor-network.

4.6 Research Reflexivity

Introduction

Writing a reflexive account of my research journey was initially challenging, given the different perspectives of reflexivity to be aware of before embarking on this type of responsibility. First, it is expected that a researcher's engagement in reflexivity should add to the meaning made of the data, participants, documents, and observations that inform the research question (Alvarez-Hernandez, 2021) while on the other hand, qualitative researchers are made aware of many alternative processes at their disposal to engage in reflexivity (ibid). When confronted with multiple approaches to reflexivity, one is faced with the challenge of what is important to include or exclude. Still, how one engages in reflexivity depends on the connections we are seeking to make, the research study, and one's level of awareness (ibid). In this regard, since the presentation of ethnographic work can either be through an account of personal insights that are separate from the field experience or as integrated subjective factors of doing fieldwork into the final ethnography (Chiseri-Strate, 1996), I considered addressing my positionality in terms of both directions since every aspect of the journey has influenced the research process. Moreover, I need to ensure that my fixed or culturally ascribed attributes are disclosed, especially since this is not optional but an integral part of the data (ibid). I hope that whatever the presentation, the expectation that the reader would read to understand what the researcher was positioned to know and what they were not positioned to know and why would be achieved (ibid).

4.6.1 Knowledge Construction from Disciplinary Backgrounds

My account, therefore, begins by exploring the ways by which I have come to understand the concept of safety in clinical practice and my engagement with different theoretical backgrounds to achieve my knowledge base about the status of PS in Nigeria in relation to the role the NNHP plays in its existence. My knowledge construction of the research emerged based on my cultural origin, educational background and progress, profession, and multidisciplinary engagements within the healthcare industry. These attributes are significant disclosures in relation to components of the ethnographic fieldwork.

I was born and raised in Nigeria, where I obtained my foundational nursing qualifications (A diploma in Nursing and Midwifery and a degree in Nursing Education) in the early 1990s. Early into my nursing practice, I was very inquisitive about many aspects of my practice, which eventually led to taking on this research project. As a new nurse in Nigeria, I had a

sense of a gap in applying theoretical knowledge to practice because, starting with the nurse training in the school environment, there were a lot of limitations with the practical aspects of the nurse training programme. These practical pieces of training should have prepared us (student nurses) for clinical placements in the hospitals, but the practice labs were poorly equipped and poorly maintained. The hospital clinical placements were no better because the hospitals were not and are still not well equipped, such that we were groomed into a culture of 'improvising' any unavailable pieces of equipment. For example, improvising a glove for a simple First-aid Latex-free tourniquet or carrying out patient moving and handling without the right equipment, such as transporting a patient that needs a stretcher on a faulty wheelchair, which may be the only available wheelchair for that matter. I always felt these practices could be done better, especially since the nursing practical textbooks illustrate the appropriate practices. This initial sensitisation to my nursing practices' inadequacies stimulated my desire to work in a Western medical institution, as I often saw in my nursing textbooks.

When my opportunity came to practice nursing in the UK, my intuition was right! Nursing practice is indeed done differently when in an enabling environment. My exposure to policy-guided healthcare service delivery was an awakening of new sets of knowledge and skills. Constant reflection and a comparison of my new practice skills to how I practised in Nigeria became a frequent occurrence. Although my training in Nigeria earned me a strong theoretical knowledge of nursing practice, as demonstrated by my training institution, which clearly understood that in their teaching, their goal was to ensure that we became graduates with skills to benefit others through service to our communities in our preparation in the understanding of public life, sharpened skills of critical thinking and the abilities to collaborate with diverse groups to solve problems and create change (Bandy, 2023). However, I lacked the practical skills needed for the job in the UK, even though nursing training has at the forefront of its curriculum to ensure that foundational knowledge forms the basis for student nurses to resolve practice problems using discipline-specific knowledge coherently and meaningfully (Makhene, 2022). Nevertheless, the NHS had skills development mentorship programmes for UK- and overseas-trained nurses. These educational programmes made it clear that applying knowledge to practice is not done in isolation. Practical skills are established based on rules and regulations such that all procedures carried out on service users or non-contact services are guided by policies and procedures (Murphy, 2007). This is necessary to balance the relationships between the healthcare provider and the person receiving the services. Both parties must be protected more so that the safety of any service

provided in this industry is highly significant in error and adverse occurrence prevention (ibid). This transition from a student nurse through practice in two different geographical locations was my infancy in establishing my knowledge base around the concepts of safety in clinical practice. And indeed, the beginning of a need to satisfy my curiosity about the state of affairs of the clinical practice standards in Nigeria, especially in translating theoretical knowledge to practice, fuelled over time by three occurrences.

First, entering into a Public Health (PH) Masters programme at Nottingham Trent University (NTU), I began a new phase of learning in the discipline of social sciences, where the sources of knowledge influenced my thinking and production of information originating from sociological paradigms. This shift expanded my learning orientation from previous biomedical underpinnings of my nurse training and clinical practice to far more reaching ways of thinking about and discussing pertinent health issues in nursing and at a multidisciplinary level. Biomedical science is concerned with the health of living beings, including humans and animals, as the subject areas generally include biochemical and physiological functions, anatomical and histological structures, epistemology, and pharmacology (The Princeton Review, 2023). My learning and knowledge acquisition is designed to help me maintain and promote my patients' health on the basics of many clinical practices such as nutrition, supporting medical teams in treating diseases etc. (ibid). However, transitioning into social sciences and its application to my work and academic pursuit, I identified that there are other ways of knowing and being prepared as a practitioner especially realising through the knowledge base of Social and Behavioural sciences that many health influences occur above the level of the individual and outside the healthcare systems (Riley, 2017). However, I also came to appreciate that there are fundamental tensions between biomedical sciences and social sciences due to their different epistemologies, where biomedicine has typically taken a reductionist approach focused on the physiology of the body, with health and illness understood and treated as internal to its various parts, while the social scientists have tended to overlook the biological aspects of human experience in favour of focusing on the social, economic, and historical contexts shaping health and illness (Hankivsky et al., 2017). This probably explains why most people underestimate social and behavioural determinants of health, including the lack of understanding that social and behavioural factors are the primary contributors to health and illness and that when ill, these factors also play a significant role in disease management and healthcare delivery (Riley, 2017). There are several benefits from this knowledge base on its application to healthcare, for example, the development of effective interventions from the social and behavioural

sciences to address the health risks behaviours such as smoking, poor diet, and sedentary lifestyle, as well as being a source of knowledge to patients who have chronic diseases by offering effective strategies to help them and their providers better in managing their conditions (ibid).

During this project, I have come to understand that despite the differences in epistemologies, there is a recognition of potential synergies between biomedicine and social science which is now increasingly being recognised, and interdisciplinary collaboration has become more common (Hankivsky et al., 2017). This progression in my awareness was evidenced in my PH final project, where I started my journey in examining the significance of health governance in health service delivery when I reviewed the 2010 UK white paper on tackling health inequalities for ideological obstacles. Writing this project was my first experience applying the sociological tool of discourse analysis to discuss my research topic. While in practice I have worked in many ways where I came to appreciate the strength of combining biomedical science knowledge with sociological approaches in successfully planning and delivering health projects, especially in Africa.

The second factor leading and informing my knowledge construction for this project also originated during the PH programme. I entered the programme with the assumption that I could get a job with the WHO simply by completing the PH Master's Programme. This assumption was soon corrected as I quickly learnt that working in a high-profile international ministry of health, such as the WHO, takes place through a standardised process and takes some time to achieve. Nonetheless, my desire was still achieved through my appointment as an intern at the Department of African Partnership for Patient Safety (APPS) at the WHO Headquarters in Geneva through the same PH Master's Programme at NTU. My experience at the APPS department shaped the initial identification of my research focus in the discipline of PS. Completing this work experience further shaped my position about the direction I would want my public health career to go. At this point, my job preference had shifted from working in the high-profile Ministry of Health to working in the field where I could be hands-on in using my nursing and public health skills at the same time, and again, I was privileged to work with Nigerian diaspora medical teams on medical missions to Nigeria. In this work experience which was occurring after ten years of my last nursing practice in Nigeria, I had the opportunity to provide nursing care in surgical services, health education, development of practice guidelines and health promotion at the community level over a period of four years. This experience ties the third occurrence influencing my knowledge construction. It was apparent that since my last active nursing practice in the country, not much has changed, as

described in the introduction chapter (See pp. 10-11). Because of this, my desire to commence my research in examining the status of PS in Nigeria was now more vivid. Still, the challenge remained in determining which aspect of PS science had the most significant knowledge and research gap. Once I realised through working with Nigerian-based colleagues that the awareness of the organisation of clinical practice guided by the PS science curriculum was significantly limited, my research focus began to take shape in the direction of an exploratory study of two interrelated concepts highly recognised globally in the reduction of patient harm in acute healthcare institutions. I arrived at a decision to explore the status of PS in clinical practice in Nigeria and, more so, to question the role of the NNHP in ensuring PS practices are legally guided and active in clinical practice in the country. Arriving at this research focus was not easy, but maintaining regular contact and discussions with my approached potential supervisors was highly instrumental in identifying my research focus.

This earlier research consideration began to take shape in my initial encounter with literature that asserted the importance of policy to practice. As referenced earlier, Woolf et al. (1999) state that policy-guided practice can sometimes disadvantage users or receivers of services. Nonetheless, the WHO (2007) affirm the availability of strong evidence that supports the many benefits to individuals and the nation when healthcare delivery is driven by strong policies, which are also considered a strong tool for building strong health governance. From this point, a new experience emerged when I constantly questioned where and how to initiate the project and often reviewed what my inquiry was about. Most of my ruminations would centre on the possible ways one might interrogate health policy especially how it impacts on PS, for example, by asking the questions such as whether there is a national health policy in place in the first place. If there are policies in place, how efficient are they? Are the users of the policy and the receivers of the services it produces aware of its existence? And are they properly implemented, regularly monitored, reviewed, and evaluated? In some other instances, the questions are considered in terms of whether policies are communicated appropriately, but there are failures on the part of the professionals in applying them to their practice. The significance of these circumstances is the possible benefits or negative impacts on patients' hospital outcomes. As I proposed my study focus, I felt these were questions to be raised and investigated. Nevertheless, moving forward was froth with new concerns in terms of understanding the principles of research and the entire research process itself. This concern was initially sensed while writing my research proposal when I first considered the approach of Action Research because this type of study aims to simultaneously investigate and solve an issue (George, 2023), and it is considered an organisational change model

(McClanahan, 2021). This appeared favourable when I reflected on my work experiences with the medical missions in Nigeria and thought effecting change from within from the approach that allows *Adaptive changes*, which are small, incremental modifications taken by an organisation to evolve over time, would be beneficial to the Nigerian health system. Or through the approach of *Transformational changes* approach, which is larger in scope and scale because it is often driven by outside competitive forces, such as the presence of a new competitor (Stobierski, 2020). Moreso, action research has increasingly gained recognition in identifying problems in clinical practice and helping in the development of potential solutions in order to improve practice (Meyer, 2000). Unfortunately, the financial implications for meeting the criteria to be a participant during the action research could not be met at an individual level nor at the institutional level at the FMoH, Nigeria, where I would need to be ethically cleared to be part of the members of staff for a minimum of 6 months up to 12 months. Further discussions were held with my research supervisors to reconsider an alternative approach to conducting this study. Interestingly, a question was put to me, which became a constant driving force and the source of my determination to make this research relevant and for it to provide an outstanding contribution to the global PS science community. One of my supervisors asked (Paraphrased) - *Pauline, given what we know about Nigeria, in respect of problems of corruption, which is affecting many service delivery, do you think your research will find anything new?*

My supervisor was in a position to ask this question because he had, on many occasions, worked in Nigeria, and he understood the terrain.

This was truly food for thought, and after taking more than a minute to process a response, I suddenly realised that it was not just enough to decide to embark on a research project but the expectations for the outcome for me as the researcher and the others- academia, the community of my discipline and allied professionals was enormous.

My first thought was that he is probably right, there wouldn't be anything to report that people don't know already, but almost immediately, it came to my mind that if for nothing else, I would be responding to the need to document the unspoken occurrences in the field of PS science, especially in Africa. This was the day that one of the research gaps was clearly identified through this conversation. So, I responded to my supervisor (paraphrased):

> *Indeed, perhaps we can already draw a conclusion about the status of PS in Nigeria given the status of the health systems, which is definitely not working well given the level of poverty and corruption, but we still have a responsibility to document exactly*

how these things are happening, especially since there is a serious lack of PSR originating from Africa.

The supervisory team agreed with me that what we know is very much based on anecdotal accounts, but the report of research could either confirm or refute many of these beliefs.

Returning to a choice of an alternative research approach since action research is impossible led to the agreement to pursue a qualitative approach that includes rapid ethnographic fieldwork.

My journey of reviewing the precursors and underpinning paradigms to building my knowledge of the status of PS in Nigeria and how the role of the NNHP has shaped it has been illustrated through important attributes of my personal background and professional activities in healthcare and academics. The research reflexivity is further extended in documenting the *Methodological disclosure,* the *Development of the narrative voice,* and the *Writing of a polyphonic text* next (Chiseri-Strate, 1996).

4.6.2 Research Reflexivity of the Methodology

Since the onus is on the ethnographer whose writing should demonstrate their positionality because this is considered a part of the data (Chiseri-Strate, 1996), I devoted chapter four of this thesis to establishing the research paradigm that informs the process of this study. I determined the research approach to be a qualitative study that is also exploratory, and I base this choice on the premise that the field of PS is not widely researched yet in Nigeria, therefore, exploring the interrelationships between the two concepts – PS and HP would be an easy starting point for an intending future PS researcher. This obviously has turned out not to be an easy venture through the entire methodological process. The alternative choice of an ethnographic study directed by the methodological process of ANT has been a challenge to a new entrant into the world of philosophical, sociological, political, and economic academic thinking in the attempt to make sense of a phenomenon. My experience of learning 'the ways of ANT' dispelled any preconceived notion of the superiority of biomedical or health sciences over social science approaches in research. Immersing myself in understanding the concept of ANT influenced my awareness that there are internal tensions among social scientists in the choice of their research approach. For example, the arguments about the superiority of quantitative over qualitative research approaches and vis versa. In the process of making a case for the choice of my research approach, the review of the literature shaped my acceptance of the methodological challenges ahead and increased my capability of negotiating

my study approach. Retrospectively, I had a window of consideration to change my study approach to perhaps phenomenology, but the foundations of ANT that I was already exposed to became my conviction that I would do better in this project by sticking to the methodology of ANT. Moreover, the limitation of switching to phenomenology lies in its attribute to be focused on experiences that involve perception, thought, memory, imagination, and emotions and each involving intentionality as the individual focuses on a specific thing (Rodriquez & Smith, 2018). Additionally, there is a wider range of disagreement on the epistemological and ontological basis of a phenomenological approach by its pioneering scholars (ibid), whereas ANT's philosophical underpinning is fairly stable in the agreement to a 'flat ontology' where equal power is attributed to all objects under scrutiny in the study (Latour, 2007). As tough as learning the application of the methodological principles of ANT to this research, the experience has earned me the confidence to refer to myself as a social scientist.

The application of the methodological process is one consideration, but the experience of the research tool (ethnography) is another.

4.6.3 Entering the Field

While I was excited that my ethical approvals, both in NTU and especially the various institutions in Nigeria, were itch-free, which made my preparation to enter the field quicker than expected, I still had reservations about what to expect on arrival to the field, perhaps because of the awareness that entering the field is the most difficult phase of the entire process (Gobo, 2008; Schensul et al., 1999). Also, being a Nigerian, I am aware that the reception in these institutions could go in many different directions, such as being treated as an outsider since I have lived outside the country for such a long time or being treated suspiciously, still as an outsider but one with an ulterior motive (perhaps a spy for the Nigerian Government). Some of these played out but were not significant enough to disrupt the fieldwork in any remarkable way (Schensul et al., 1999). My consciousness that, as an ethnographer, I am simultaneously a member of the observed group, and a non-member requires that I continuously frame and reframe my identity (ibid). Learning to balance my identity and explaining my research to potential participants or members of the institution helped the acceptance process in all the visited institutions (Gobo, 2008). Moreso, I strategized to visit each institution a week before commencing my fieldwork, and I also visited and met significant contacts at the department where the observation would be conducted. This was useful because it cut down the bureaucracies that could have been detrimental to my time management before the commencement of the data collection in the

department. Other significant perspectives concerning the practice of Ethnography were considered before progressing to the field.

I had mixed feelings about how my entrance to the field might turn out since I had to make some adjustments to my general process of the field plan. First, the ethical approvals obtained, especially for the hospitals, limited my activities to a non-participant observer, while the ethical approval issued for the FMoH did not particularly state restrictions on administrative participation in the institution. The reality on the ground turned out to be instrumental to my data collection progress, especially at the FMoH, where I was encouraged to participate in the activities of my assigned department. This opportunity was a type of double-sided outcome, first, when I requested for a print of the organogram of the FMoH, it turned out that what is available needed to be updated, so I was assigned the task of doing this, which in a way, raised my consciousness to examine the situation in line with the notion raised by Ellen (1984) as to the grave danger of fieldwork creating a subject/object relationship between the fieldworker and those observed as this relationship is often based on unequal power and resources. Although this could be a relationship that is temporary and exploitative for (me) the observer, it could have permanent and unforeseen results for the observed in that the relationship is asymmetrical, as the fieldworker reports and analyses, the observed may never have access to his data or have the opportunity to react to or criticise them (ibid). In this instance, I was able to derive the benefit from being assigned the task, although executing the task slightly affected my fieldwork plan in terms of time limitation as this was not provided for in the plan. Nevertheless, the visit to both technical and non-technical departments to speak to different administrators to update their departments on the organogram was very useful because I was able to redesign the plan to include and exclude departments that would not be required for the data collection. I also had the opportunity to have conversations that became part of the data, even though they were not formal interviewees. If I had turned down the task, I would have shut a window of opportunity that became very helpful in my data collection.

4.6.4 Methodological disclosure

As part of the preparations for going to the field, determining the type of data to be collected was shaped by the theoretical knowledge and concepts gathered about PS and HP (Schensul et al., 1999). The methods of data collection were identified as observation, semi-structured interviews, and a document analysis of the 2016 NNHP document. The fieldwork plan was a guide to how these three tools would be organised and completed. Of course, the plan

changed constantly due to unforeseen situations. For example, when an interviewee cancels the interview appointment. When the fieldwork plan got disrupted by the participant who either did not show up or cancelled the appointment, or got busy and needed to reschedule, this often created a feeling of anxiety given the pressure of the limitation of time. This, however, changed within the first three weeks of arrival in the field because the culture of the people though not strange to me but required that I reorientate myself to the popular concept of 'African time", where being late or not keeping appointments is generally acceptable although contemporary opinion about this culture state that 'African time' is used by those who want to be late and hide behind some allegedly collective and cultural disregard for time (Dlamini, 2010). Still, it is a reality that needed to be managed within the context of this fieldwork. Therefore, when plans changed, it was always important to revisit my fieldwork plan and adjust to the changes by moving schedules around. Despite some of these challenges, the observations and interviews were conducted in all the selected institutions. This made the achievement of data triangulation possible, as this is significant when attaining validity, reliability, and generalisation of the data (LeCompte, 1982; Brewer, 1994).

4.6.5 Data Collection Process

The observation process at the FMoH was not as cumbersome as the process encountered in clinical settings. Perhaps this can be attributed to the difference in the study environment and the difference in my participatory role. Observations at the FMoH were mostly participatory because I attended meetings and a conference with my allocated mentor. This allowed me to observe meeting proceedings, which enhanced my interview procedures. Whereas in the hospitals, I was a non-participatory observer due to ethical limitations. There was the consciousness of my professional background as a nurse, and especially one with practice experience in Nigeria, as this relates to the issue of bias in the data collection process. Prior to arrival in the field, this potential pitfall often ascribed to the process of ethnography was considered (Brewer, 1994). The preparation lies in considering the type of observation design to follow and how best to design the interview questions. My non-participatory role was a benefit in being able to document as I see things happening, but there was the problem of determining what exactly is to be observed since it is impossible to document every action of the observed practitioners. Being a nurse and being equipped with the theoretical foundations of the concepts of the study was instrumental to designing what is essential in the observation process and what is not (Hammersley & Atkinson, 2019; Schensul et al., 1999). I was able to focus the observations on clinical processes, communications, situations, and practice skills while identifying PS actions within each element. This verified the design of the semi-

structured interviews designed to ask questions that would reflect the role of policy or practice guidelines in practice.

The most outstanding realisation was the occurrence of interview bias when during two interviews, the interviewees clearly did not know what PS science meant and requested that I explain what this meant, this led to a whole lecture about PS science with examples of areas of PS practices in hospitals where I worked. While transcribing this interview, realising that this was a bias, the responses to the particular question were not included in the data as it was clear that the interviewee. continued to give responses based on the examples used in the discussion. This experience reminded me to maintain the rules of interview data collection, especially in maintaining the validity of the data. Furthermore, during the data transcription of the remaining interview recordings, attention was paid to identifying any bias within the interview engagement.

4.6.6 Data analysis

I commenced the data analysis process while I was in the field because of the expectation for me to complete the PhD stage 2 requirement (that is, the transfer from MPhil to PhD) immediately after the fieldwork. I addressed my time management by contracting a transcriber while working on the observation notes transferred from my mobile device to my computer. The transcriber, who had done a good job so far, decided to quit in the fourth week of the fieldwork. While this was a setback, I adjusted my work plan by restructuring the content to report on for the purpose of meeting my transfer submission deadline. Being able to produce and present a preliminary was a massive boost to my psychological well-being in the PhD journey. Nonetheless, the rest of the data analysis was not stress-free, but each step was addressed as the need arose. I re-contracted 11 outstanding interview recordings to another transcriber who did a terrible job, so in the end, I had to redo the entire eleven recordings myself. This was a challenging period, as this was happening during the pandemic. Since I worked as an ICU nurse, it was difficult to navigate this stage, especially mentally and physically. The support and understanding of my supervisors were priceless as they guided me through how to manage the syndrome of ‘drawing in the data’. Some of my colleagues in the graduate school also came to the rescue by providing me with literature they had consulted for their data analysis. At this point, I realised that I had not done enough work in preparatory study on data analysis. Although I already determined that the whole methodological process of ANT would be followed, I did not understand how to apply its tools to data analysis. I re-evaluated my research strategies and reapplied to attend online software data management

classes focusing on using NVIVO qualitative data management tool. I reviewed the literature on qualitative data management and found the works of the following authors: Attride-Stirling (2001) *Thematic Networks: An Analytic Tool for Qualitative Research,* and the work of Braun & Clarke (2006) *Using Thematic Analysis in Psychology* to be highly useful throughout the data analysis process.

4.6.7 Discussion and Reporting

As I immersed myself in the data and became more confident in engaging with it, the experience created an inner voice that was transferred into the written words that enabled the discussions presented in chapter 7, where I explained the findings of this research project. Following the ANT tradition of reporting, I critically discussed key mediators implicated in the discovery of the silence of the NNHP in clinical practice, which implies the undefined nature of PS in Nigerian clinical settings. My thoughts then went back to the beginning of this PhD journey and to the particular question - *Pauline, given what we know about Nigeria, in respect of problems of corruption, which is affecting many service delivery, do you think your research will find anything new?*

I confidently respond in the affirmative that this research has identified that there is an awareness of the need for safety practices among clinical practitioners in acute settings in Nigeria, but both clinicians and health administrators at the FMoH are not aware of the specific classifications of PS areas and their management in clinical settings. This gap is attributed to the status of the NNHP, which lacks any agency when it comes to impacting action on the existence or implementation of PS services in hospitals across the country.

This knowledge will be shared with the FMoH and at participating institutions in Nigeria while seeking to publish this work in PS and HP Journals.

In the interim, this work will be presented at the British Sociological Association: Medical Sociology Conference at the University of Sussex, Brighton, UK, in September 2023.

Conclusion

In this Chapter, critical discussions were presented from various perspectives covering the justification of the choice of the study design, and locating the research methodology, that is, ANT within the discipline of social sciences. A comprehensive discussion of the methodological approach of ANT exposes a possible framework by which the collected data

is analysed. This chapter fully explains the research skills in the ethnographic approach, demonstrating the fieldwork activities that took place in Nigeria, where observations and interviews were conducted. Furthermore, a reflective account of the entire research process was presented.

Finally, the work done in this Chapter has been instrumental in developing the framework for the next four chapters in data analysis, interpreting and presentation of findings, and the discussion of the findings. Given this, achievement, the application of the methodological framework is reflected in the next Chapter where data analysis is done.

Chapter 5 Data Analysis

5.1 Introduction

In this chapter, the presentation of the data analysis outcome is carried out on several levels in an attempt to ensure that the reader can appreciate the process of arriving at the formation of the Actor-network drawn from the volumes of textual materials collected during the fieldwork. It is also important to mention that this chapter is focused on the process of how the data was managed to make sense of the content of the field notes and interview transcripts and is not so much focused on providing details of the research findings, which will be presented in the next chapter.

This chapter starts with a brief reference to the collection of data as explained in chapter four and a short illustration of the process by which the three tools of data collection are analysed. Primary data was collected in Abuja, the FCT in Nigeria, at the FMoH, and at four clinical institutions at tertiary, secondary and primary levels of health systems. In addition, data were also collected at a private hospital (as a representation of the private sector); The activities of the data collection were the observation of practice and the interview of twenty-one respondents, which included policy administrators and clinical practitioners.

At the onset of the research planning, ethnographic fieldwork was determined as the most suitable approach to gaining direct access to sources of primary data that would be important for achieving the aims and objectives of this research, with the eventuality of getting answers to the research questions which is the basis for exploring the arena of this study.

The aims and objectives of the research are reiterated below:

Aim

This study aims to explore and understand how the 2016 Nigerian National Health Policies (NNHP) might interact to improve or militate against patient safety in health care delivery in Nigerian clinical institutions.

Objectives

Although this project is not aimed at an identified problem, rather it explores the potential for patient safety in clinical practice within Nigerian health systems by exploring the influence of

the country's health policy on clinical practice. To fulfil the objectives of the research, focus is placed on the responses to the core interview questions, which are as follows:

- What are the responsibilities of health policies in Nigerian healthcare service provision?
- How does the Nigerian national health policies translate to clinical practice in Nigerian hospitals?
- How would you consider the national health policies in relation to patient safety practices in Nigerian hospitals?
- What are the impacts of health policies on clinical practitioners in Nigerian hospitals?
- What are your views on patient safety?

Responses to these core interview questions are expected to shape the achievement of fulfilling the research objectives:

- To evaluate the 2016 Nigerian national health policy documents.
- To determine the policy translation to clinical practice.
- To identify, analyse, and discuss actant-networks that are significant in the relational activities between policy and practice in Nigerian clinical settings.

Stating the aim and the objectives again is important because they play a vital role in the process of data analysis, in that it is a means of organising information from the data relevant to the research inquiry.

In this section, data obtained from three research tools, including health policy document analysis, observation notes, and semi-structured interviews, is presented. Several analytical approaches were applied in unpacking each of the data collected. As a starting point, one of the analytic frameworks of ANT is applied in the investigation of the 2016 NNHP document. At the same time, thematic analysis and software coding strategies were included in achieving the process of making sense of the textual data from observation and interview notes. This is the case if one were to achieve the analytical skill of creating order from the large volume of data that was generated. Indeed, it is no surprise then that Latour (1986) advocates that a researcher's ethnographic report should be considered on the basis of the methods and procedures by which the researcher produce ordered versions of the utterances and observations that has been accumulated. In view of this, the data analysis process is first

diagrammatically expressed below, with a detailed written explanation presented for each part of the presented data.

5.2 Data Analysis Process

Figure 14 below presents a summary of the data analysis process.

5.3 Document Analysis of the 2016 Nigerian National Health Policy Document

Background

Deciding on the choice of a data analysis tool to analyse the 2016 NNHP document has been a challenging one, mainly because there are many approaches to carrying out health policy document analysis in the policy field.

Health policy document analysis is gaining recognition amongst policy scholars developing frameworks for policy document analysis. Dalglish et al. (2020) recognise document analysis as a most commonly used method in health policy research. Nonetheless, they opined that many of the qualitative research manuals that offer direction for conducting document analysis, do not provide specific discussions about how to use this method to understand and analyse health policy. In view of this, Dalglish et al. developed the systematic approach they call the READ approach, which includes four steps: (i) ready your materials, (ii) extract data, (iii) analyse data, and (iv) distil your findings. The scholars pride this approach based on its strong guidance at every step in the provision of epistemological and theoretical issues such as the socially constructed nature of documents and their role in modern bureaucracies. Likewise, the Policy Analysis Framework by Buse et al. (2012) analyses a policy document in four stages: in terms of context, content, process, and in terms of power.

An assessment of these frameworks and others, previously discussed in chapter 2, shows that there are similar perspectives suggestive of the need to understand a policy document in terms of how it came to be, the human efforts behind it, how the language of expression is constructed and the messages it contains and how these voices communicate the document goals to the audience for which it was written. Given these common grounds for analysing health policy documents, the choice was made to subject the NNHP document to the analytic process of ANT.

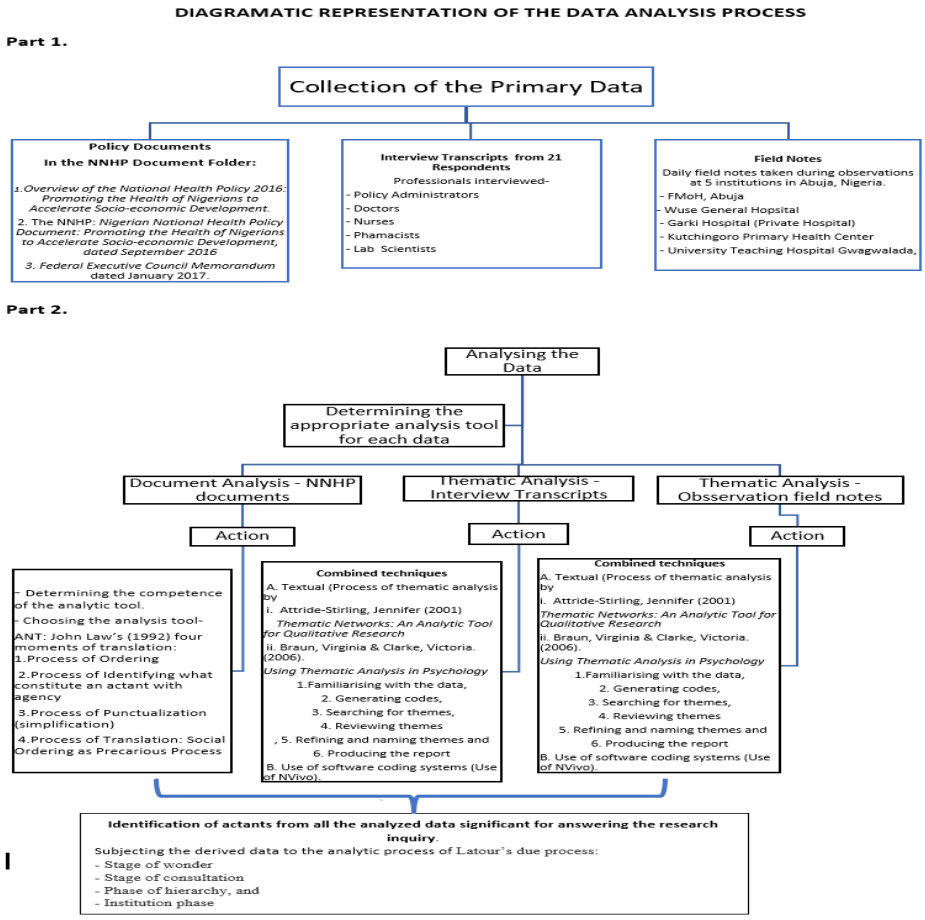


Figure 14 Diagrammatic Representation of the Data Analysis Process

In respect of the analysis of this NNHP document, focus is directed to John Law's (1992) approach that emphasises the ordering, strategy, and heterogeneity of an entity. Therefore, in this document analysis, the NNHP document is considered a heterogenous entity or an actor that is expected to have agency (Latour, 2005). This consideration is based on the insistence of ANT that networks are materially heterogenous, arguing that society and organisation would not exist if they were just simply translated in terms of socially occurring situations (Law, 1992). It is because of this that positions, agents, texts, devices, and architectures are all generated and form part of, and are essential to, the networks of the social (ibid). As such, the NNHP document is intended to be enrolled into the network where the controversies about the impact of health policy (policies) on patient outcomes are to be explored. However, before it can be enrolled in the main network, it needs to be interrogated.

It is intended that after establishing documentation of the heterogeneous bits into a network present in the health policy document, the process of translation will be embarked upon in the discussion chapter, where the combination of the health policy document analysis and the

themes from the textual data will be subjected to interrogation by applying Latour's due process to the overall interpretation of the findings.

The starting point is a presentation of a summary of the NNHP document followed by the analysis of the document through the lens of the four stages of Law's process of translation.

5.3.1 A Summary of the Nigerian National Health Policy Document

At the start of the ethnographic fieldwork, the Federal Ministry of Health, Abuja, Nigeria, was the first point of call. It was an added advantage to be attached to a policy administrator who is a senior staff member in the research and policy development department. At the beginning of the observation period, conversations were directed toward understanding the policy process in the department. The opportunity gave way to having the policy folder shared for this work. The folder contained three related documents, including a PowerPoint presentation dated August 2014 and titled *Overview of the National Health Policy 2016: Promoting the Health of Nigerians to Accelerate Socio-economic Development.* The second document is a classified *Federal Executive Council Memorandum* dated January 2017. The last document is the NNHP, titled: *Nigerian National Health Policy Document: Promoting the Health of Nigerians to Accelerate Socio-economic Development, dated September 2016* (See Appendix 4a, 4b, 4c and 4d). *[It is worth mentioning that the NNHP document 4a was the edition released to me during the fieldwork but at the time of data analysis, an updated version was found on the website of the FMoH. The newer version, appendix 4b has been referenced throughout the thesis because there is no significant difference to the content of the document. It is mainly expansion on the explanations given per topic].*

However, the main NNHP document was not commissioned until June 16th, 2018, a few days before arriving in the field.

Following the familiarisation with all documents in the folder, the document analysis focused on the NNHP document. However, the other two papers were reviewed to consider whether they can be recruited into the network. To begin, a summary of each document's content before starting the translation process was done, as shown below.

Document 1: *Nigerian National Health Policy Document: Promoting the Health of Nigerians to Accelerate Socioeconomic Development* (FMoH, Nigeria, September 2016).

This is a 97-page document, and the content is presented in chapters. A summary of the main themes is described below-

- Introduction

In the introductory statement, the rationale for establishing a new national health policy document was stated. The goal of establishing the new 2016 NHP was preceded by the 2014 National Health Act, which is being used as a framework for the development of the new Policy document. Historically, the country had developed national health policies twice previously. The first was produced in 1988 and the second in 2004. The development of these two National Health policy documents came into existence at a crucial time when Nigerian Health Systems needed much improvement. As a result, part of the rationale for the development of the 2016 NNHP was influenced by the need to acknowledge new realities and trends, for example, the unfinished agenda of the Millennium Development Goals (MDGs), the Sustainable development goals (SDGs), Nigeria's renewed commitment to universal health coverage, and other global issues such as the issue of climate change.

This chapter provides the context within which the National Health Policy is located, that is, its inclusion in the national development agenda, the "Vision 20:2020", spanning the period 2009 to 2020. This agenda states the vision of Nigeria's economic growth and development strategies, where the health sector’s concern is to enhance access to quality and affordable healthcare through the establishment of at least one general hospital in each of the 774 Local Government Areas (LGAs).

The 2016 NNHP document is stated to be the primary document for providing long-term direction for health development in Nigeria from 2016 to 2030.

- Situational Analysis

This situational analysis was done to identify the strengths and weaknesses of the National Health Systems. This was determined by evaluating the healthcare actions and outcomes against what is termed "Strategic Thrusts" of the National Strategic Health Development (NHSDP) and against the World Health Organization's health building blocks. The health system is acknowledged for achieving positive milestones, including eradicating guinea worm, controlling the Ebola Virus outbreak, and interrupting Wild Polio Virus transmission in the country. However, a significant range of poor functionality was identified, as highlighted below:

- Weak health systems,
- Weak health systems governance,
- Significant financial risk protection,
- Largely unresponsive health systems,
- Inequity access to services due to variations in socioeconomic status and geographic location,
- Other health services related problems, such as limited availability of some services such as voluntary counselling and Testing (VCT), consumers' low confidence in the services provided, absence of minimum package of health services especially in public health facilities, and
- Lack of coordination between the public and private sectors.

- Policy Objectives and Orientations

The policy development process was described as an initiative of the FMoH in collaboration with stakeholders. The structure of this collaboration is a product of the establishment of the

Technical Working Group (TWG) comprising of officials from FMoH and its agencies, representatives of development partners, the private sector, civil society organisations, regulatory bodies, ministries of health of all the States and Federal Capital Territory and the academia.

The policy development process involved several meetings, carried out in stages:

Stage 1: The development of the Sub-Zero draft of the 2016 NNHP document

The first meeting was held in 2015 in Calabar, where the 2004 NHP was reviewed for implementation. Discussions focused on emerging health challenges and the proposal of the new 2016 health policy development. The TWG was successful in creating a theme for the policy document at this meeting.

Stage 2: The meeting of the TWG in Enugu in 2016 resulted in the development of a standard draft of the 2016 policy document.

- Vision, Mission, Goal, and Guiding Principles/Values

An affirmation of the commitment of the Federal Government to achieve better health for all Nigerians through the development of the new 2016 health policies were stated in the Vison and mission statements.

Vision- Universal Health Coverage (UHC) for all Nigerians

Mission- To provide stakeholders in health with a comprehensive framework for harnessing all resources for health development towards the achievement of UHC as encapsulated in the National Health Act 2014, in combination with the Sustainable Development Goals (SDGs).

Policy Goal- To strengthen Nigeria's health system, particularly the primary health care sub-system, to deliver effective, efficient, equitable, accessible, affordable, acceptable, and comprehensive healthcare services to all Nigerians. A remarkable statement is the statement of a number of social values and guiding principles for the policy document development.

The Main Policy Coverage Areas- there are 10 "Policy Thrusts" developed from the NHSDP and the World Health Organization health building blocks. These are:

i. Governance and stewardship
ii. Health Service delivery
iii. Health Financing
iv. Human Resources for health
v. Medicines, Vaccines, Commodities, and Health Technologies
vi. Health Infrastructure
vii. Health Information System
viii. Health Research and Development
ix. Health Promotion, Community Ownership and Participation, and
x. Partnerships for health

- The Implementation Framework

The expected impact of the 2016 NHP is illustrated in the statement of the Executive summary of the policy document. Actions were developed for the ten policy trusts in the activities that would significantly impact the Nigerian Health Systems by strengthening it to achieve improved health status and wellbeing for all Nigerians. To achieve this, the highlighted policy areas were planned to be implemented through extensive inter-sectoral and

multi-sectoral collaborations, with the expectation that this would lead to the achievement of the health-related SDGs and UHC.

To achieve the implementation of the policy action areas, 52 actors (See linked file, section 5.2) were identified that would be responsible for the policy implementation.

There are significant actors identified for the success of the implementation of the NHP, such as the Legal Framework encompassing various health Acts and Bills, such as the National Health Act 2014, Various Primary Health Care Development Agency Bills and State Health Insurance Laws.

- Monitoring and Evaluation

The 2016 NNHP document is stated to be the primary document for providing long-term direction for health development in Nigeria from 2016 to 2030. However, this is set to be operationalised and implemented in three phases: 2016 to 2020, 2021 to 2025, and 2026 to 2030. It is also expected that all States will have in place an annual implementation plan. A monitoring and evaluation framework is designed to monitor the implementation process while progress indicators are planned to be used based on each domain area and set objectives. In addition, the targets used for monitoring the performance of the implementation of the health policy will be based on values for Sub-Sahara Africa (SSA). The aim is to measure the targets by indicating absolute achievements and variations across the states of the Federation.

- Conclusion

The document concludes with an overview of all the areas discussed. Significantly, however, it concludes by stating:

"It is now imperative for the Federal, State and Local Governments to implement the policy. It is expected that all States and Local Government Areas (LGAs) shall adopt the policy to their contexts" (FMoH, 2016, p. 95). This is expected to lead to the development of State Health policies and LGA Health policies.

Document 2: *Federal Executive Council Memorandum* (Nigerian FMoH, January 2017).

This is a six pages document written by the Office of the Minister for Health in January 2017. The document requests the Federal Executive Council (FEC) to approve the new draft of the 2016 NHP document for implementation.

To support this request, the council presented the rationale for their proposal, which highlighted the progress made in some of the National Health Systems. For example, the recorded improvements in the indices for the prominent reduction in communicable diseases such as HIV/AIDS, Tuberculosis, considerable reduction in the spread of poliovirus, eradication of guinea-worm disease and the successful control of the spread of the Ebola virus in 2014. The council also referred to the significant improvement in Maternal and Child health. These successes are believed to be a signal for the country to build resilient health systems through sustainable health governance that can be aided by a renewed National Health Policy.

Apart from the 10 Health Trusts earlier mentioned in the Policy Document summary, the council states that the new policy is designed to address priority public health and other health problems in the country. These areas of focus are:

- Reproductive, Maternal, Neonatal, Child and Adolescent Health (RMNCAH)
- Prevention and control of communicable diseases that include the following:
    - HIV/AIDS
    - Malaria
    - Tuberculosis
    - Leprosy
    - Neglected Tropical Diseases
    - Immunization and Vaccine Preventable Diseases
- Prevention and control of non-communicable diseases such as:
    - Cardiovascular diseases (CVDs)
    - Diabetes Mellitus
    - Cancers
    - Sickle cell disorder (SCD)
    - Injuries and Emergencies
- Public Health Epidemic Emergency Preparedness and Response
- Other health problems such as Mental Health, Oral Health, Eye Health, Disability, and

- Health-related problems and issues such as Nutrition, food safety, water and sanitation, Environment, chemical products and medical waste, health promotion, gender, and medical tourism.

Further to identifying these focus areas, the council prescribed expectations from all the stakeholders in the implementation of the NHP. The council expects widespread dissemination of the Policy through various channels, with expectations also for costed strategic health development plans following the 2016 NHP strategic designs, annual timed review, monitoring and evaluation of the implementation of the strategic plan, timely disbursement of funds allocated for health, financial structuring through development of expenditure frameworks or strategy that include a review process, sourcing for significant resources that will enhance the achievement of the objectives of the NHP, and reporting the achievements of the policy.

The council presented all the above-mentioned rationale to the FEC for approval because of the identified benefit, namely, that the Policy document will be the vehicle for the accelerated implementation of the National Health Act of 2014.

What has been achieved in reviewing this document is the identification of clinical conditions that are related to areas of healthcare provision. These are healthcare problem areas that require Policy application in clinical practice. Likewise, this identification constitutes an important aspect of the data analysis to gather evidence to address the research objectives.

Document 3: *Overview of the National Health Policy 2016: Promoting the Health of Nigerians to Accelerate Socioeconomic Development* (Nigerian FMoH, August 2014).

This is a PowerPoint document where the initial plannings to develop the 2016 NHP were discussed and planned. The presentation highlighted the main themes of the 2016 NHP document but it also reflected the milestones already attained by the TWG such as the Stage 1 meeting and the production of the Sub-Zero draft of the policy document. It could be said that this is where the structure on which the 2016 Policy document was written.

The three documents in the policy folder that was shared by the policy department of the FMoH have all been summarised above. Although the 2016 NNHP document is presented as an immediate point of reference for the overall data analysis, there is significant information in document 2 and 3 that points to the centre of the research inquiry. This significance will be discussed in the research findings section.

5.3.2 Health Policy Document as a Heterogeneous Network

ANT is not only concerned with the mechanics of power, but through its moments of translation, it is concerned with questioning what happened or what is happening within an entity (Law 1992). Hence the interrogation of the NNHP document starts off by ensuring that there are no *a priori* assumptions of what is to be explained (Latour, 2005; Law, 1992) to avoid the danger of closing off the nature of what constitutes an actant within the document (Law, 1992). Therefore, in *the process of ordering*, the document is read multiple times to achieve the identification of "heterogenous bits and pieces … that would like to make off on their own [but] are juxtaposed into a patterned network which overcomes their resistance" (Law, 1992, p. 4). According to this requirement, the order in this document is, in effect, generated by heterogeneous means (ibid). In terms of the NNHP document, Law's approach implies that reading the policy document multiple times is essential to identify keywords, phrases, sentences, ideas, and all that can be considered significant in the document and that which have relational ties. Essentially, when the ordering of these attributes is achieved, the identification of heterogenous bits and pieces can then be documented. It is important to know that this process focuses on the material but is also a matter of organising and ordering those materials (ibid).

Next is determining *what constitutes an actant* with agency within the network found in the policy document. However, this merges into the next stage - *the document interrogation* in which the network in this document will have to be investigated for what is concealed from view through the process of *punctualization* (also known as simplification). Punctualization refers to the act of examining network patterns that briefly show up and tend to mask the networks that produce them. In this process, what is found are known as network packages and routines that can be more or less taken for granted and regarded as *resources* which may come in a variety of ways, such as texts, organisational relations, protocols, agents, devices etc (ibid). The analysis extends to questioning why the network which makes up the actor come to be concealed or completely absent? The answer to this question is the role of punctualization in the translation process where there is the job of determining what might be concealed in the policy document or if the disappearance of network is encountered deciphering how it happened is essential in the interrogation (ibid). The last stage of Law's interrogation process is termed *Translation: Social Ordering as Precarious Process*. In this process, focus is on emphasising that punctualization is a process rather than something that can be achieved once and for all. Therefore, progress is made towards the cumulative practice of demonstrating how-

> actors and organisations mobilise, juxtapose and hold together the bits and pieces out of which they are composed; how they are sometimes able to prevent those bits and pieces from following their own inclinations and making off; and how they manage, as a result, to conceal for a time the process of translation itself and to turn a network from heterogenous set to bits and pieces each with its own inclinations, into something that passes as a punctualized actor (Law, 1992, p.9).

The implication of Law's process for this study is, firstly, in experiencing the application of these four strategic steps to familiarise with the policy document, identify the actors and actants, identify the networks while paying attention to the punctualized actors from the heterogenous network found in the interrogated NNHP document. Secondly, achieving the identification of materials that are more durable than others that hold their relational patterns for longer, that is, the exploration of translations that create the possibility of transmitting immutable mobiles (network element with strong properties of irreversibility, and effects which transcend time and place, for example, the qualifying standard(s) of a health policy document) (Latour, 1987). Thirdly, enhanced translation through anticipated responses and actions of the materials to be translated, and fourth is the issue of what the scope of ordering might be, bearing in mind that no ordering is ever complete (Latour, 1986). The practicality of this process is demonstrated, as explained in the presentation of the stages below. This presentation is important to establish the knowledge of the networks in the entity of the NNHP document because this will need to be part of the group formation when it comes to the continuation of the research data analysis and translation. An explanation of these stages is stated below.

5.3.3 The Four Moments of Translation of the 2016 NNHP Document.

John Law's (1992) four moments of translation were applied in the analysis of the 2016 NNHP document in the steps below.

5.3.3.1 Process of Ordering

The process of ordering required reading the document multiple times to identify what *constitutes heterogeneous bits and pieces that would like to make off on their own but are juxtaposed (put together) into a patterned network which overcomes their resistance (Law, 1992).* This means this is a material matter and a matter of organising and ordering those materials.

The three documents in the policy folder were read several times and continued to be reference material as the study progresses. The process of ordering was achieved by

extracting text that provides knowledge about what had happened, why things are happening, who is talking about them, the sequence in which these are communicated, the authority by which the information is transmitted, the intended audience, and the functions ascribed to these texts. This is illustrated in the table below.

Table 1: Outcome of Process of Ordering

Heterogenous bits and pieces	**Description**
The sequence of events and dates	- Historical existence of policy documents: 1988 & 2004 - Current Policy Document development: 2014 to 2016 - Commissioning and the Authorization of the use of the 2016 NNHP document: June 2018.
Voices in the document	- Members of the Federal Executive Council - TWG Inauguration members - Members of TWG - Representatives of the department of health - Members of FMoH - Agencies of the FMoH - Development Partners - Civil society organizations
Context for policy formation	-Rationale for policy development: *Past and present state of the Nigerian health systems *Benchmarks: NSHDP and WHO guidelines for Health systems strengthening strategies.
Content of the policy document	- Statement of the goals of the policy - The policy processes * Key public health areas of concern - Clinical conditions
The language of the policy document	Written in English Language
Intended audience	All stakeholders: including health administrators, clinical practitioners, partners in health service provision, and all Nigerians.
The expected function of the health policies	Improved health systems leading to better health for all people
Determining the success of interventions	Monitoring and evaluation of the implementation of the policies.

5.3.3.2 Process of Identifying what constitutes an actant with agency.

This was followed by a process of identifying actants within the document, with a focus on those that perform an action (s).

Table 2: Actant Identification

Actor to Actant with agency	Action performed
Text on paper	Provision of textual content to be read for information. This textual content acts by providing the reader with an orientation to the actions the text dictates.
Human voices in the paper	The textual content transmits the Human ideas and thoughts that are transferred into words on paper. The human voice is an actant through the textual content of the document.
Text and language in the policy document	Speaks words to be read and understood. Words that take action for health. The text that forms words, phrases, sentences, and ideas has agency when it can identify the key concepts relevant to healthcare.

5.3.3.3 Process of Punctualization (simplification)

This is the process of investigating the network of what is concealed from view.

What is examined here are network patterns within the policy document that come for a time to mask the networks that produce it- Meaning what is found are network packages and routines that can be taken for granted and classed as resources.

This stage involves questioning why the network that makes up the actor comes to be concealed or completely absent in the policy document.

One would get the answer from the role of punctualization in the process:

- Translation of what might be concealed in the policy document is achieved, or
- Carrying out the interrogation of the document if the disappearance of the network is encountered.

The actor-network of ‘heterogeneous bits and pieces’ found in the 2016 NNHP Document is illustrated in the diagram below.

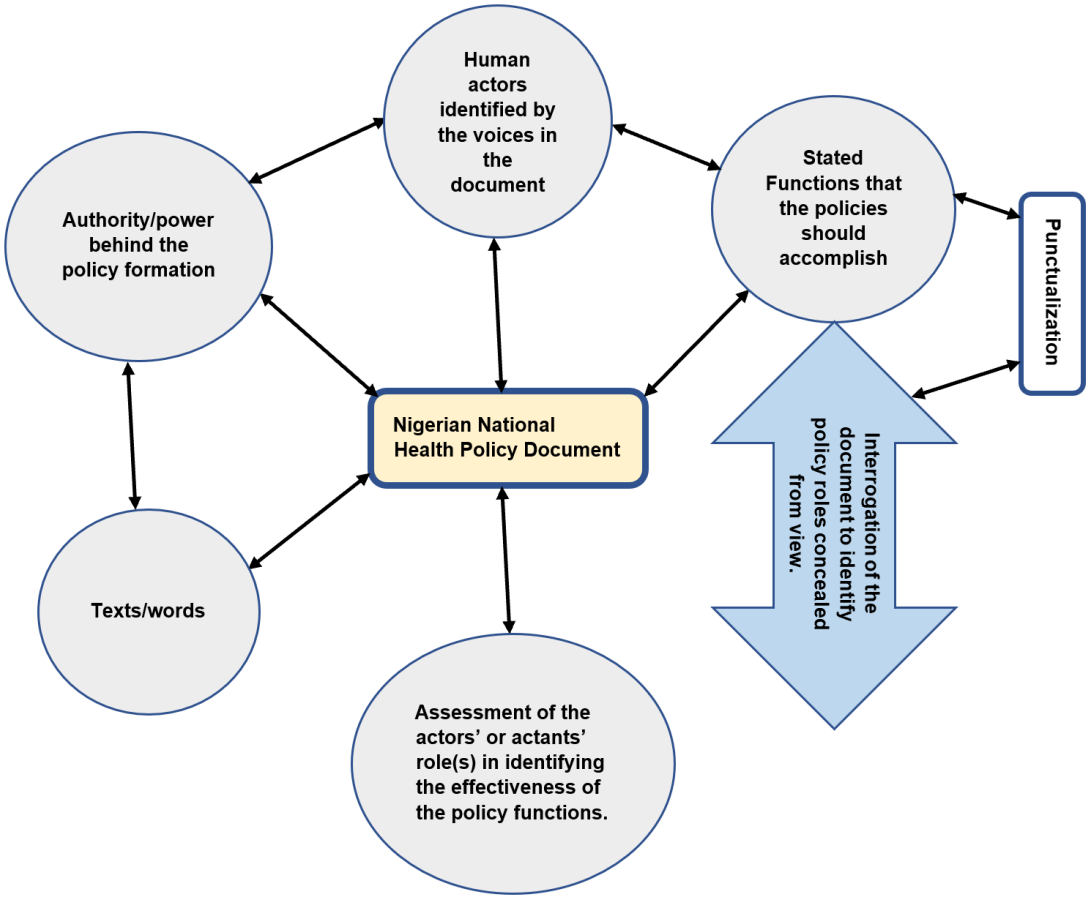


Figure 15 : The Actor-network of the 'heterogeneous bits and pieces' found in the 2016 NNHP Document.

Within the research findings, the discussions will expand on the discussion of this network formation and the relevance of the actors within the network. Technically, these skills are performed as explained in stage four of translation demonstrated next.

5.3.3.4 Process of Translation: Social Ordering as a Precarious Process

This involves the application of the four strategies of translation to the punctualized actors from the heterogeneous network found in the interrogated NNHP document.

1. Identification of durable materials - one that holds their relational patterns for longer.
2. Exploration of translation that creates the possibility of transmitting immutable mobiles.
3. Enhanced translation through anticipated responses and actions of the materials to be translated.

4. Determining what the scope of translation would be, bearing in mind that ordering is never complete.

5.3.4 The Application of the Four Strategies of Translation

5.3.4.1 The identification of durable materials - one that holds their relational patterns for longer.

The durable materials that hold their relational patterns for long in this document are attributed to the network between, initially, the driving force for the production of the NHP, which lies in the need for national health improvement by strengthening the health systems and the act of conversations that produced certain agreements in what needs to be done. This network maintains its durability through the powers that confer authority over the document in its production and its establishment as health policies in its textual form. This power and authority come from the legislative influence that made this happen by implementing the National Health Act of 2014. This is the legal framework on which the NHP document came to be produced. In addition, the policy document's ratification and enactment happened in June of 2018 through the executive power of the office of the President of Nigeria that granted the authorized national use of the policy document.

5.3.4.2 Exploration of translation that creates the possibility of transmitting immutable mobiles (IM).

IM is something that holds its shape either in physical or geographical space (Holder, 2016). The 2016 NNHP document at this stage can be considered as one that holds its entity in a physical space until further interrogation produces additional information on its ability to exist in a geographical space (ibid). The ability of the NNHP document to be mobile requires further investigation where heterogeneous bits and pieces from the other materials (observation and interview notes) are enrolled into the network.

5.3.4.3 Enhanced translation through anticipated responses and actions of the materials to be translated.

Enhanced Translation of the 2016 NNHP document relies on translating the observation and interview data. Here, the process of inductively identifying the separate network of actors is created to enhance the analysed results of the policy document.

5.3.4.4 Determining what the scope of translation would be, bearing in mind that ordering is never complete.

At the stage of translation, it becomes apparent that the entire data collected would not all fit into the discussions that address the research goal. Thus, ordering (as explained in Ch. 4) is never complete, given the presence of heterogenous bits and pieces that do not align with the network. It is then essential to determine where translation stops through the actions that take place, firstly punctualizing materials and resources and secondly interrogating potential actors that are concealed from view with important implications for the significance of PS status within the document. Therefore, materials and resources that cannot be enrolled into a network because they do not have agency are not discarded but can be reopened for further interrogation in the future (Law, 1999) by punctualizing them. In respect of this analysis, while interrogating the policy document, certain resources that do not speak directly to the policy's role in addressing PS in clinical areas are punctualized but with a consideration for re-opening further discussions if needed during the course of translation. Some of the resources are the preliminary preparations for developing the policy document, for example, a background account of the policy document development, the appointment of TWG, and situational analysis.

Meanwhile, re-opening these resources in ANT terms is driven by certain principles. That is the principle guiding the black-boxing of the punctualized resources. According to Callon and Latour (1981), a black box contains what no longer needs to be considered, those things whose contents have become a matter of indifference. However, this is not to say that these resources are no longer useful. The action simply refers to the activity of removing productive non-coherence even further from view (Law, 1999). The black boxing and punctualizing make the movement of these materials easily transportable.

This study takes advantage of the three benefits of black boxing. Firstly, Latour (2007) demystifies the traditional position of other philosophers on realism who accept some ultimate substance of the final layer of reality that can never be opened and examined. Instead, Latour opines that there are no final layers of substance from which everything else is derived. As such, no black boxes that cannot be opened. Next, Latour disagrees with the defence of the parallel notion of essence, where a substance is expected to have essential properties instead of its accidental traits or relations. Rather, actants are believed to be always public and not closed. Lastly, there is a firm insistence that humans are always in contact with reality because things relate to one another, translate into one another, and are never out of mutual

contact. Consequently, Latour's views on the benefits of black boxing in the act of translation of the networks of relations between us humans and non-humans can be said to be a continuous process and should not be closed off. Having this opportunity then provides a sense of reassurance that significant information that emerged from the wealth of available data can be reopened for other forms of discussions in this study or future studies of the Nigerian health systems.

At this stage, the actor-network is not yet complete, but in the next section, actors identified from the observation and interview data are to be enrolled into this network. When this is achieved, then the extent of the translation can be managed by setting the study objectives as the framework within which the identified actor-networks are to be translated.

To proceed in completing the actor-network before the translation can start, the process by which the observation and interview notes were interrogated to determine the actor-network in the data is presented in the next section.

5.4 Analysis of the Observation and Interview Data

5.4.1 Introduction

The process of making sense of volumes of written material from data collection is often chaotic and overwhelming (Latour, 1986), which warrants the need for ordering to make sense of numerous emerging themes to determine what constitutes an actant and to identify networks (ibid). The approach to achieving this has involved extensive consultation of literature on how to do data analysis (Bazeley, 2021; Lester et al., 2019; Harding, 2019; Martinez et al., 2017; Govaert and Govaert, 2009; Attride-Stirling, 2001; and Braun, & Clarke, 2006). The knowledge gained has been directional throughout the data analysis process and instrumental in the decision to apply Law's process of translation to analysing the NNHP document while the observation and interview notes are analysed thematically. Nevertheless, before going into the analysis process, some preliminary perspectives in thematic analysis that are relevant to the process are discussed first.

Thematic analysis is chosen to manage the observation and interview notes because it is compatible with a constructionist paradigm which this study leans towards because it provides a flexible and useful research tool that can potentially provide a rich and detailed yet complex account of data (Braun, & Clarke, 2006). Further, the emergence of the idea of thematic data analysis has had remarkable progress in qualitative research methods in recent times.

Qualitative research methods have enjoyed growing popularity within social science disciplines in recent years (Attride-Stirling, 2001), but there is a gap in terms of a nearly non-existent direction on how to analyse the textual material that qualitative researchers are presented with at the end of their data gathering stage. Thus, qualitative researchers share the opinion that thematic analysis is a poorly defined, rarely acknowledged, yet widely used qualitative analytic method within many social science fields where the qualitative research approach is the focus (Braun and Clarke, 2006; Attride-Stirling, 2001). Therefore, for qualitative research to yield meaningful and useful results, it is crucial that the material under scrutiny is analysed in a methodical manner, keeping in mind that there is also a need for greater disclosure in qualitative analysis (ibid). All of these foundational perspectives have driven the need to develop a step-by-step guide to achieving a thorough data analysis process (ibid). But for this methodical achievement to continue to gain prevalence, there is the need to learn the process and understand that the desired outcome can only be achieved by recording, systematizing, and disclosing the methods of analysis so that existing techniques may be shared and improved, and new and better tools may be developed (Attride-Stirling, 2001).

Given these insights about thematic data analysis, the skills of performing the process of analysis were learnt from the step-by-step processes offered by Braun and Clarke, 2006; Attride-Stirling, 2001. However, the achievement of identifying how the data is to be analysed is not the end of the challenges that comes with the data analysis process. In the next section, a brief explanation is presented on determining whether to do manual or electronic data analysis.

5.4.2 Determining the appropriate data analysis approach and tools

Two of the consulted articles on thematic data analysis have been the main sources of guidance in the analysis of the observation and interview notes. Thus, main references are made to the works of Attride-Stirling, (2001); and Braun and Clarke (2006).

Whilst each author presents steps to follow [see Appendix 5a and 5b], the key features agree on the summarised process enumerated below:

1. Engaging with the data by reading the textual materials initially
2. Designing a coding framework
3. Identifying themes and code to the appropriate coding framework
4. Refining the themes and identifying patterns/networks
5. Describing and exploring the patterns

6. Interpreting and reporting on the network(s)

Exploring the literature on data analysis contributed immensely to acquiring the knowledge and skills in analysing the data. Moreover, these sources of information provided a lens through which ANT approach to data analysis is better understood. As earlier stated, the ANT requirement in achieving order in a set of data is based on reading textual material multiple times to identify key words, phrases, sentences, ideas, and all that can be considered significant in the document and that which have relational ties (Law, 1992). Essentially, when ordering of these attributes are achieved, the identification of heterogenous bits and pieces can then be documented (ibid). In addition to this foundational approach to analysing data, there is also the guidance for the researcher in certain perspectives that enhances and provides rigor to the process of data analysis. Attride-Stirling, (2001) suggests an approach where an established synthesized way by which themes are extracted such as, establishing the basic themes and progressing to organising themes and finally global themes which is expected to help narrow down to the core of the data. Likewise, Braun and Clarke (2006) emphasise the need for the analyst early in the analysis process in order to determine what counts as a pattern/theme before coding; what size a theme needs to be; what proportion of the data set needs to display evidence of the theme to be considered a theme; the level at which themes are to be identified, either at a *semantic* (identifying themes at surface meanings of the data and the analyst is not looking for anything beyond what a participant has said or what has been written) or *explicit level*, or at a *latent or interpretative level* (where the analysis goes beyond the semantic content of the data, and starts to identify or examine the underlying ideas, assumptions, and conceptualisations, and ideologies that are theorised as shaping or informing the semantic content of the data); and determining the type of analysis to be done, and the claims to make, in relation to the data set. More importantly, Latour and Woolgar (1986) recognise that the task of making sense of field notes is no mean feat, given that the observer's task is to transform notes into an ordered account. However, the challenge is often in determining where to begin and how to approach the process. They acknowledge that in making sense of one's observations, observers normally adopt some kind of theme by which they hope to construct a pattern. Nonetheless, the identification of themes could lead to a mere identification of the existence of a pattern, as such, the observer can be said, at least according to relatively weak criteria, to have "explained" his observations (ibid). Of course, the selection and adoption of "themes" is highly problematic, but the way in which the team is selected can be held to bear upon the validity of the observer's explanation (ibid). Therefore, the observer's selection of a theme constitutes his/her method for which he/she is accountable

(ibid). As such, it is not enough simply to construct order out of an initially chaotic collection of observations, the observer needs to be able to demonstrate that this construction has been done correctly, or, in short, that his method is valid.

These contributions are a pathway by which the highlighted core processes to achieving a valid data analysis has been influential in designing the strategies and the stages of analysing the observation and interview notes of this research.

A four steps process has been designed for the purpose of this data analysis especially that there is the recognition that qualitative analysis guidelines are exactly that- they are not rules, and , following the basic precepts, one would need to apply flexibility to fit the research questions and data (Braun and Clarke, 2006), because the end point is the reporting of the content and meaning of patterns (themes) in the data, where themes are abstract constructs, the researcher identify before, during, and after the analysis (ibid). Being afforded this flexibility the four stages developed for this data analysis are i) exploration of the field notes and the creation of initial codes; ii) identification of central themes to the concepts of the research; iii) Creation of actant-network of the emerged themes; and iv) the preparation of the framework for data translation.

Table 3: Adapted Four Steps Process for the Data Analysis

Stages of Analysis	Activity
Stage 1	The exploration of the field notes and the creation of initial codes • Initial engagement with the data - Daily writing and reading of the observation notes - Reading during transcription of recorded interviews • Inputting all notes (observation notes and transcribed interview notes) into NVivo (a data analysis software) • Using NVivo to generate initial codes at level 1 data analysis - File uploads - Auto-coding each interview question to groups of answers. - Creating basic codes and identifying basic themes to the codes from the observation and interview notes.
Stage 2	Identification of central themes to the concepts of the research. • Creating basic, organising, and global themes
Stage 3	Creation of actant-network of the emerged themes • Identifying and enrolling actors into the network • Review of the developed actor-network
Stage 4	The preparation of the framework for data translation • Application of Latour's four moments of translation • Discussions guided by research objectives

5.4.3 The Analysis of the Fieldwork Observation and Interview Notes

Stage 1. The exploration of the field notes and the creation of initial codes:

The initial engagements with the field notes started early at the point of data collection, as field notes were documented daily after observations at any of the data collection venues. The notes were read when the notes were transferred from the mobile phone used as the writing pad to the computer. The notes are read and corrected for typographical errors. Further, there was familiarisation with the interview notes as they were read at transcription time.

After these notes were collated, it became a challenge to determine how best to sort through the huge volume of textual material to identify relevant information for the research. The use of a data analysis tool was then introduced to the process. NVivo (2019) is acclaimed as the leading qualitative data analysis software, and very much so, as it has been useful in setting the foundation for discovering more from my field note data. The observation and interview notes were uploaded to NVivo, and the features in the application were then used to make sense of the textual material.

All fieldwork notes were uploaded into NVivo. While firstly, the initial auto-coding of each interview question to groups of answers was done, the observation notes were uploaded sequentially in order of the dates and venue of note-taking. The focus was then to create basic codes and identify basic themes to the codes from the observation and interview notes.

First, the observation notes were read multiple times, looking out for observed activities that are significant to the concepts of the study. Initial codes were identified from observed work processes and conversations, such that sentences and themes relevant to the study were highlighted. The obtained themes are tagged level one data analysis and are illustrated in the visualisations presented below (Fig.16 and Fig.17).

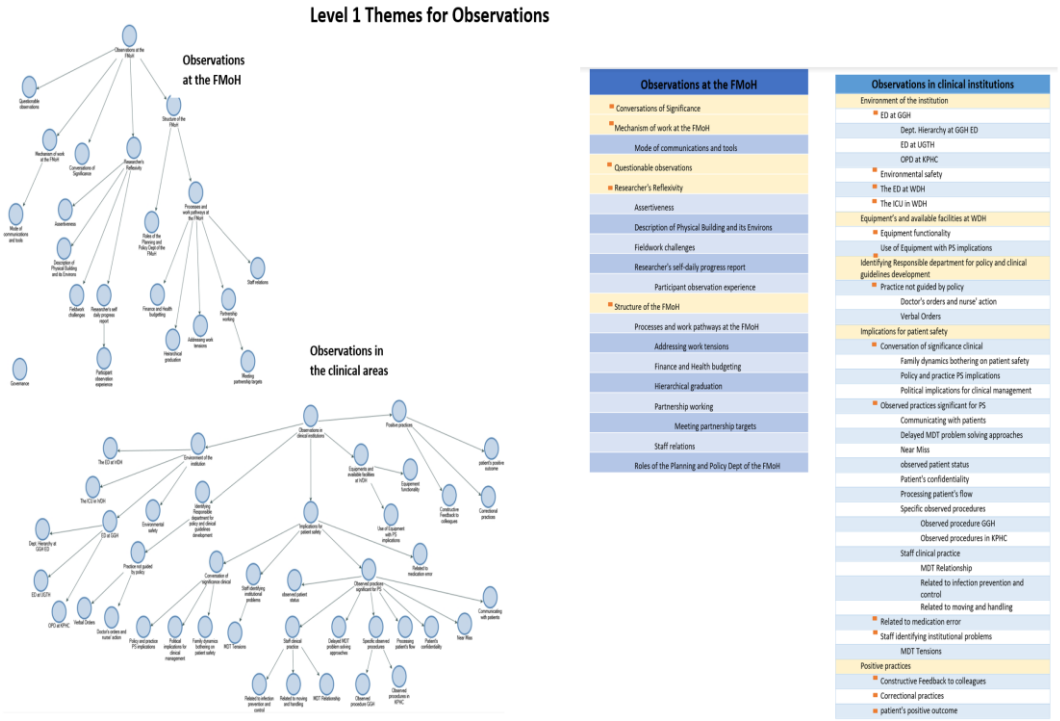


Figure 16: Level 1 Themes for Observations

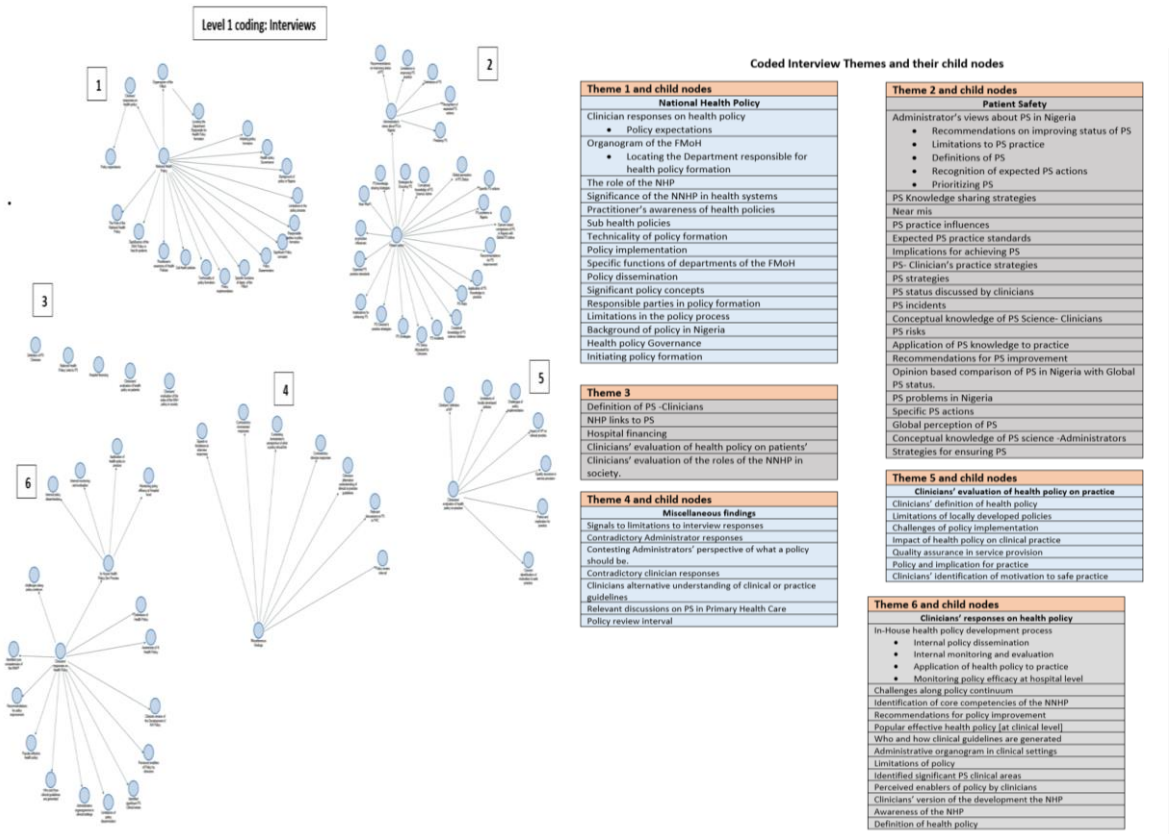


Figure 17: Level 1 Themes for Interview

Stage 2: Identification of central themes to the concepts of the research

This stage is tagged the level two analysis, and it was commenced by reviewing the preliminary decision on how the observation notes would be assessed. During the initial observation note readings, it was apparent that the core information in the notes is embedded in the work processes, situations and conversations observed. These were the activities that formed a framework for how the themes were sourced and generated. This stage was executed by reading the highlighted sentences and paragraphs for each theme identified at level one analysis. When each of the highlighted sentences or paragraphs was read, an idea/sentence would be coded to a basic, organised, or global theme. This depended on how relevant the idea is to the practice process, a situation, or key ideas noted in a conversation. This strategy was also applied to the interview notes, but in addition to this, the notes were read, and sentences that pertain to PS and the NHP were coded to a relevant theme. The themes generated and their organisation are illustrated in the diagram below.

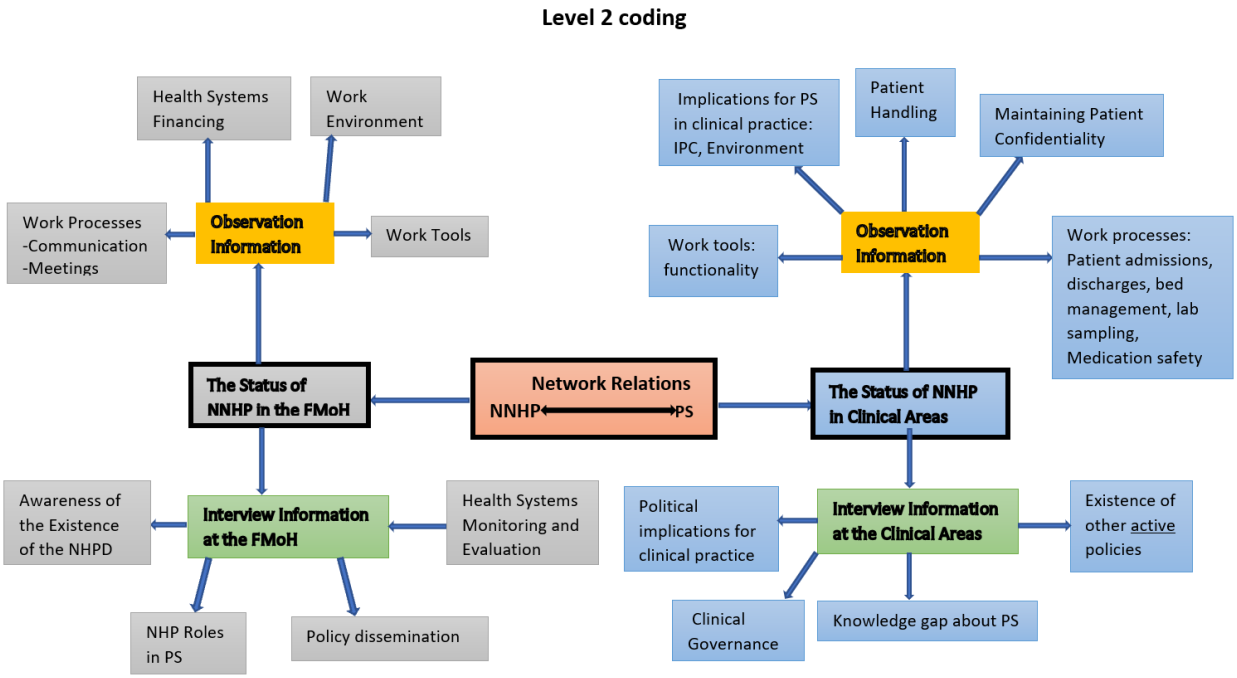


Figure 18 : Level 2 Coding

Stage 3: Creation of actant-network of the emerged themes

- Identifying and enrolling actors into the network

The highlighted sentences and paragraphs identified in level two were examined for patterns and relational ties between the NHP and PS. The interview questions categorised as core questions, as earlier mentioned, were instrumentalised as a sorting frame and are reiterated below:

- *What are the responsibilities of health policies in Nigerian healthcare service provision?*
- *How does Nigerian national health policies translate to clinical practice in Nigerian hospitals?*
- *How would you consider health policies in relation to patient safety practices in Nigerian hospitals?*
- *What are the impacts of health policies on clinical practitioners in Nigerian hospitals?*
- *What are your views on patient safety?*

The process involved reading each highlighted sentence or paragraph in level two coding. To achieve enrolment of actors into the actor-network, any theme relevant to each of the core interview questions was identified and coded as an activity in the network. This process is also diagrammatically demonstrated, as shown below.

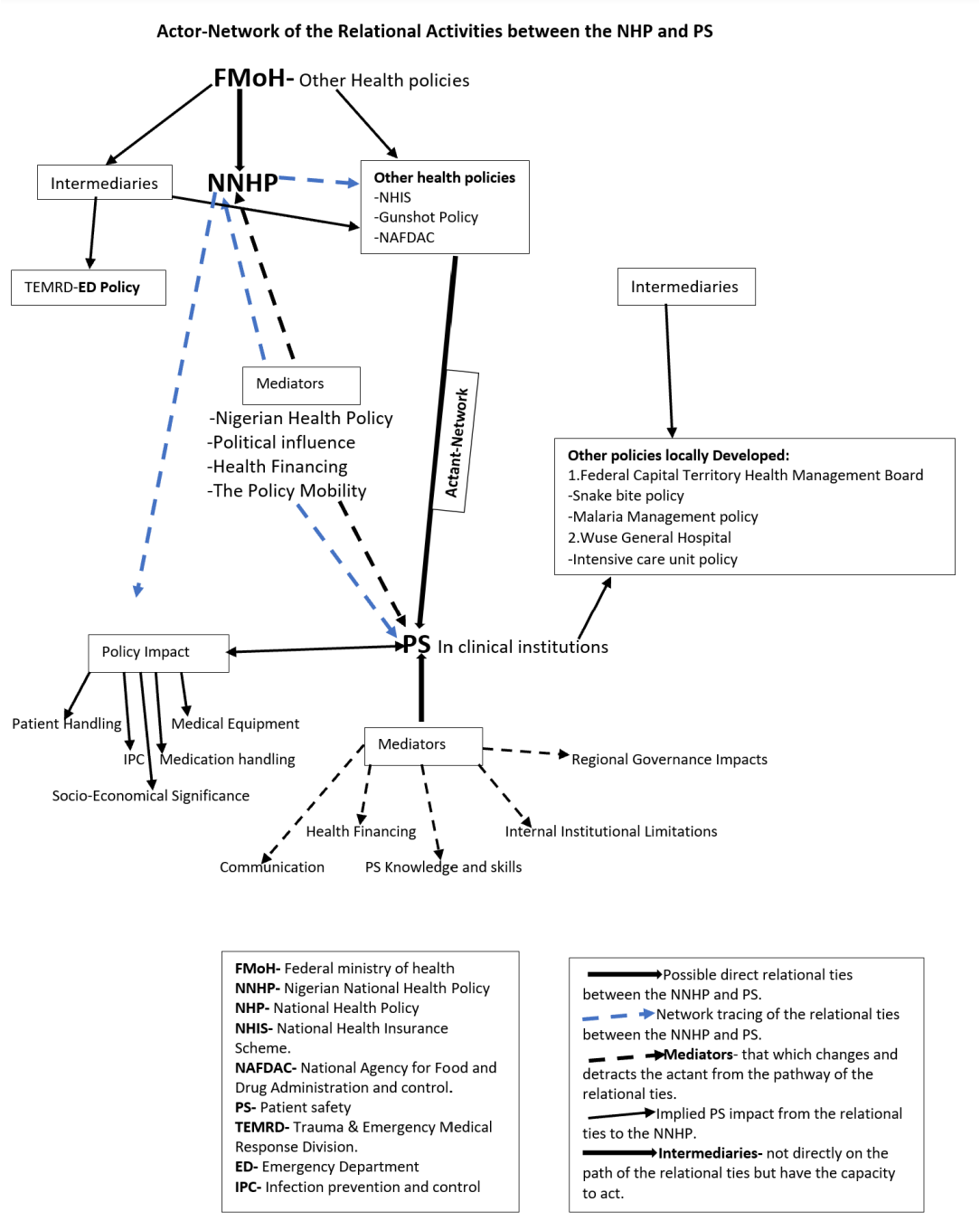


Figure 19: Actor-Network of the Relational Activities Between the NNHP and PS

- Review of the developed actor-network

An actor-network was established, as shown above, which significantly captures a representation of the overall activities from all analysed materials, including document analysis of the NNHP document, observation, and interview notes. This representation provides valuable insight into the relational ties between the NHP and PS in the representative clinical institutions in Nigeria.

However, in the network that has emerged, it would be voluminous to attempt to translate all of the ways and directions that the network has expanded. As such, a review of this network can be drawn from the rhizome concept (discussed in chapter three). The network in its current form is considered a rhizome, that which has roots that do not start from anywhere or end anywhere; one that grows from everywhere and is the same at any point (Mambrol, 2017; Conley, 2015) or one proceeding from the middle through the middle, coming and going rather than starting and finishing (Conley, 2015). At this point, it is simply a way to visualise a single flat sheet where lines can be drawn to connect various points in the text (Adkin, 2015). These lines would be new concepts, they would not represent or reproduce anything, but they would, by virtue of their crisscrossing the plane on which they are drawn, create a space that would set off other lines, other concepts, and other connections (ibid). In other words, mediators point to the proliferation of objects and locate where these objects might connect to and where they expand to. In doing this, they challenge the researcher to follow flows rather than define containers (Conley, 2015).

On this premise, the flow that is explored and to be translated in the reviewed network is represented in Fig. 20, as shown below. The mediators in the network occurring in the relationship between PS and the NHPs is to be translated. Nonetheless, according to Latour (2007), in the process of translation, all actors should be treated as mediators because they are unpredictable, but this is not to ignore intermediaries since there is the possibility that mediators can become intermediaries and vice versa. Therefore, the preferred approach in studying the two is to adhere to translating them through description rather than defining them (ibid).

Therefore, reviewing the intricacies that occur within the refined network is essential because this is required to identify which assemblage(s) to follow in the network as a precursor for the focus of the discussions and the translation of the research findings.

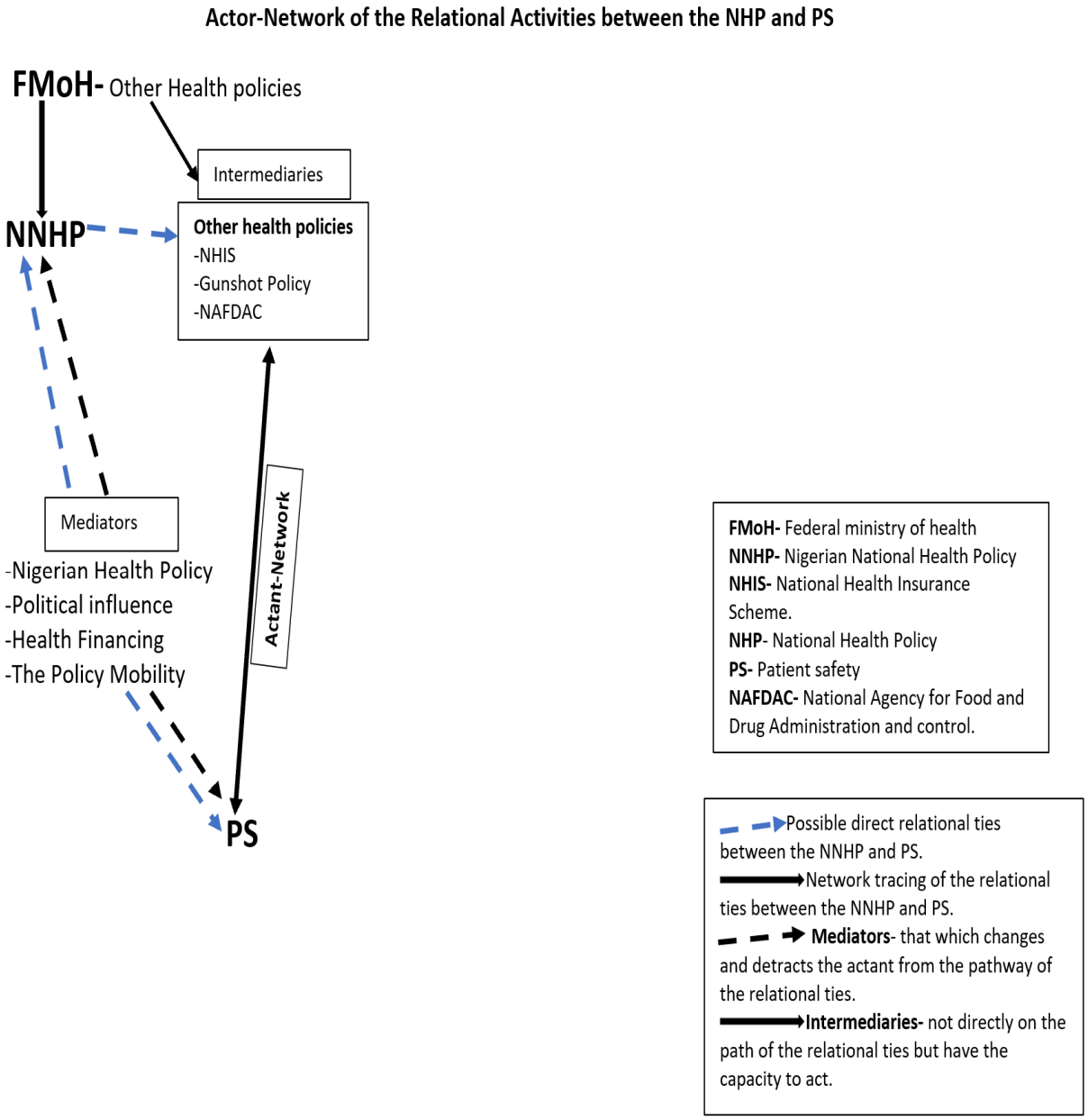


Figure 20: Application of the Rhizome Principle: Focused Actor-Network of the Relational Activities between the NNHP and PS

Stage 4: The preparation of the framework for data translation

In this final stage, determining how the created actor-network is to be translated was the goal. The reporting of findings and the translation of the actor-network was executed by executing the fifth controversy, which involved communicating the findings of the study.

Therefore, what follows in the next chapter will discuss the findings, focusing on the research objectives, which are to evaluate the 2016 Nigerian national health policy documents; to determine the policy translation to clinical practice; and to identify, analyse, and discuss the activities in the actor-network that are significant for PS in Nigerian clinical settings.

Having set this foundation, the data analysis findings and discussions is presented in the next chapter(s).

5.5 Conclusion

The process of the data analysis was presented at the beginning of this chapter, and the process has been adhered to.

The NNHP documents were summarised and described to provide information about the document's content by being subjected to interrogation by applying Law's four moments of translation which led to the development of an actor-network. Following this, the observation and interview notes were analysed based on thematic analysis guidelines consistent with ANT's position about analysing textual data. The actor network was developed by enrolling actors relevant to the NNHP document and PS in the network. This network was reviewed to identify the most crucial assemblage(s) central to the research inquiry. The next steps include the translation process, where the data analysis findings and discussions through Latour's four moments of translation would be done in the next chapter.

Chapter 6: Research Findings and Discussion

6.1 Introduction

This chapter presents the findings from the inductively analysed data of the NNHP document through document analysis using, John Law's four moments of translation, the thematic analysis of the fieldwork observation notes, and the transcribed interview notes. This project is not aimed at an identified problem. Instead, it is focused on exploring sources of knowledge generated from empirical data. While enrolling eligible actors into the network, the interest in this research topic evokes several questions that drive the data exploration. The data was interrogated by questioning the actors and following the flow of their engagement. The interrogation of the actant nature of PS and its relational ties to NHP in Nigeria prompted the following questions:

- What are the responsibilities of health policies in Nigerian healthcare service provision?
- How do Nigerian national health policies translate to clinical practice in Nigerian hospitals?
- How do the health policy administrators and clinical professionals consider the national health policies in relation to patient safety practices in Nigerian hospitals?
- What are the impacts of health policies on clinical practitioners in Nigerian hospitals?
- What are the views of health policy administrators and clinical professionals on patient safety?

The findings address the research goal of understanding how the identified networks between the 2016 Nigerian National Health Policies (NNHPs) and clinical practice provide insight into the status of patient safety within the selected sub-section of the health systems in the FCT of Abuja, Nigeria. The cumulative analysis in identifying the actor-network was achieved by applying the sociology of translation (Latour, 2007), evident in the translation of its associated concepts already discussed in Chapter Four.

6.2 Observations for Presenting the Study Findings

To begin the translation of the actor-network in terms of the study objectives, the report needs to be read in consideration of the following observations:

a. That ANT methodology has been resourceful in articulating the theoretical underpinnings of PS and Health Policy in clinical practice in order to establish a means of examining PS standards in Nigerian health clinical practice based on the role of the NHP. This view emanates from the fundamental translation perspective, an act of setting something in a new place to give it a new construction (Czarniawska and Sevon, 2005). The findings are presented by obeying the ANT methodological principle of agnosticism, generalised symmetry, and free association (Callon, 1984). In the first place, the concepts and perspectives in PS and health policies are considered from the views of biomedical sciences and sociological perspectives by being impartial to both schools of thought and their various arguments. As such, the translation process unpacks the activities within the entity - NHP and how these activities could shed light on how patient outcomes might be influenced in Nigerian clinical practice. In the process, human and non-human actors are considered on equal terms (generalised symmetry). Finally, ensuring that the primary data achieves the goal of following the flow of relations between NNHP and PS rather than assessing the phenomenon mainly based on pre-existing knowledge of health policies and maintaining PS fulfils the principle of free association.
b. That the status of the relational ties between policy and practice came to be in the emergence of an actor-network where heterogeneous human and non-human actors were enrolled into the network, as shown in Fig.19, p. 148 The emergent network is driven by the following the relativist principles (Latour, 2005), where the ANT approach emphasises avoidance of dividing the social domain into a list of actors, methods, and domains already considered members of the social realm (ibid). Instead, an inquiry is to be considered by the types of controversies about what is happening in existence (ibid). The study findings emerged after the five controversies were identified. (The relevance of "controversies" in this methodology is extensively discussed in Chapter 4, and illustrated in the ANT diagram in Fig.10, p. 91)

   Determining the nature of groups entailed many considerations before the enrolment of the different actors into the network could be achieved. The human actors, such as the health policy administrators, clinical practitioners, and patients; non-human actors, including objects- communication tools- computers, mobile phones and files and abstract ideas such as institutional structures, health policy, standard operating procedures, health financing, political power and corruption were identified amidst questions of what constitutes an actor. Meanwhile, establishing the second controversy

entailed determining the nature of actions taken by each of these actors. That is the interrogation of how the entities in the group come to act and whether they influence the study's focus or not. One wonders if they can reveal what policy does to patients' experiences in Nigerian hospitals, what propels such actions, and what makes them act or unable to act. For example, PS conveys the meaning of being safe in a health care system (considered as an intermediary- something that transports meaning without transformation (Latour, 2007)), but the interrogation of the status of the NNHP indicates impacts on PS - these entities leading to the impact are considered mediators - that which transform, translate, distort, and modify the meaning they are supposed to carry (ibid). Meanwhile, health policy itself is considered an intermediary but has experienced change and instability influenced by other actants such as funding, lack of infrastructure including equipment, the environment, etc. Other actants that impact health policy is corruption, the attitude of employees/administrators, lack of adequate training, and lack of monitoring and evaluation of the policy process and clinical practice. This process is constantly challenged because, at every step of action taken by health policy towards a PS impact through clinical practice, many agents seem to barge in and displace the original goals (ibid), for example, policy process, political dimensions and influences, health financing and the mobility of the NNHP are mediators between NNHP and PS. Instrumental to this challenge is the peculiar nature of types of objects; that is, the agencies participating in the interactions with the capacity to take different forms constantly, thereby influencing the goal of the actors (especially the actors trying to establish the relational ties between PS and the NNHP). A consideration of the agency of *communication* is an example of how interactions in the network change constantly. Further, other intermediaries, such as sub-policies from the federal ministry of health, at the regional health management board level, and within the clinical institutions, extend new networks derailing the flow between the NNHP and PS practices. This new entrant into the network is, for the moment, punctualised to be reopened if needed.

Piling the fourth controversy, on the previous three, challenges this research's ontological and epistemological basis because it requires a critique of the nature of facts, which entails acknowledging disputes inherent in the field of study. In this case, acknowledging other forms of knowledge in the study of PS and health policy (discussed in Chapter 3) gives credence to the study's outcome and its contribution to knowledge. Finally, the fifth controversy concerns the presentation of this research's

findings, its discussions and its communication to the body of scholars and the general audience. However, Latour's observation at this stage is that the type of study done is confronted with the scrutiny of determining the precise sense by which this research under the umbrella of social sciences can be said to be empirical. Communicating the findings of this research to the broader public intends to navigate common scrutiny and ensure the delivery of an empirical report of a social science study.

c. In establishing the controversies, the actor-network in Fig.19, p. 148 creates order out of the chaotic volumes of primary data. However, determining the scope of translation is necessary since ordering is never complete (Law, 1999). Therefore, the translation of the actor-network comes down to interrogating the flows between PS and NNHP, which entails critically examining the mediators and intermediaries and the relational ties they generate between the actors. The actor-network that is being translated is illustrated in Fig. 20, p.150.

Although these principles might seem in the abstract, they were always present as checks and balances for the current researcher throughout the period of institutional and practice observations and for considering what constitutes meaning in the interview data. Consequently, collating evidence for the study findings is built on these principles. While the presented information is drawn from the observation notes and substantiated with important interview responses to the core semi-structured interview questions. Finally, the findings that cumulate into an actor-network are also explained. Afterwards, a critical discussion of the network is done to fulfil the requirement of the fifth controversy, that is, the communication of the research outcome to a scholarly body and wider audience.

6.3 The Institutions as Actors

The activities of data gathering took place at the Federal Ministry of Health and four healthcare institutions that represent first, the tertiary healthcare level; University Teaching Hospital, Gwagwalada; the secondary level institution, Wuse General Hospital; a primary level healthcare centre - Kuchingoro Primary Health Centre; and a private sector hospital - Garki General Hospital, all located in Abuja, Nigeria.

Observations began at the FMoH because the main ethics approval for the data collection in the country was issued by the Ministry. In addition, the HPRSD, one of the six technical departments, is located within the FMoH and happens to be the assigned department to be a participant observer in. The HPRSD has five sub-departments (known as divisions): Policy &

Planning Division, Health Systems Support Division, Monitoring & Evaluation Division, Research & Knowledge Management Division, and International Cooperation & Resources Mobilization Division. The FMoH is a vast institution comprising twelve departments (six technical departments and six non-technical departments). It has affiliations with seven agencies and two health services special programmes (See Appendix 2).

Fortunately, the primary sub-department allocated for the participant observation was the Policy & Planning Division. The head of this division was appointed as the shadow lead for the participant observation, with whom attendance of meetings, coordination of departmental visits, and organising of interviews were achieved. Further, arriving in Nigeria in June of 2018 was at a good time because the new policy document was just ratified and launched in June 2018, which replaced the 2004 version. These factors influenced the decision to begin data collection at FMoH. The participant observations and interviews took place mainly within the six technical departments.

Furthermore, gaining access to the clinical institutions was preceded by a presentation of the ethical approval by the FMoH to the research and ethics department of the FCT, Abuja and to the AMAC. The State and local government authorities granted ethical approvals that were presented to each clinical institution where individual internal ethics approval was granted. In each of the institutions, the emergency department was the location where the position of a non-participant observer was granted. Nevertheless, visits to other departments, such as the ICU, OPD, pharmacy, etc., were permitted. This arrangement was accepted because obtaining ethical approval as a participant observer in the clinical institutions would have taken longer to process. This would have affected the time spent in the field. More than the three months spent would have been needed because the FMoH has a set of different requirements to conduct participant observation in any clinical setting.

Nonetheless, these institutions are enrolled in the network with both human and non-human actors that play a role in shaping the actions of the NHP and clinical practice where their agential activities challenge the entity of PS. This would provide insight into possible outcomes of patients' hospital visits. However, building the evidence for establishing the network required determining how to action the fieldwork plan, especially how the observation will be done in all the institutions. Within the first weeks of arrival to the field, the patterns observed brought about the decision to document occurrences of significance (Hoey, 2014) in observed work processes, significant situations, and conversations that

convey relevant meaning to the study. Following this plan, the study findings were collated and are presented below.

6.4 Relational ties between PS and the NNHP Identified within work Processes, Situations, and Conversations.

The opportunity to be a participant observer at the FMoH certainly brought about a huge recognition and respect for the work done daily to address the nation's health needs. In the participant observer role, the permission allows shadowing with the head of the Policy and Planning Division (PPD), where participation in attendance of departmental and partnership meetings was possible. The study findings emerged from the day-to-day work processes embedded in meetings, daily job executions, certain occurrences, and random and deliberate conversations held with members of staff.

6.4.1 Work processes as a mediator in the path of NNHP in transmitting as an immutable mobile (IM)

While observing at the FMoH during meetings and departmental visits, despite the recognition of the administrators' hard work, it was noted that work was mostly done manually. There was an outstanding level of physical file handling through written memos as a form of communication, with a high influx of people to the departmental heads' offices daily, as most business was conducted face-to-face. In addition, the majority of the staff members relied on the use of personal computers/laptops/mobile phones to communicate with each other. These activities are significant in consideration of possible unproductive bureaucratic administrative processes, according to Banton's (2022) definition, which states that bureaucracy refers to a complex organisation that has multi-layered systems and processes that effectively make decision-making slow. This perception is also influenced by what was observed and from conversations held with administrators and clinicians. Some of what was said and seen can be likened to Segel's (2017) description of his experience when he saw clinicians and frontline workers being subjected to increasing numbers of fragmenting directives from above and being forced to devise ways of working to cope with ineffective decisions. Apart from this concern, there is the issue of how confidentiality is maintained if staff members communicate on personal devices. These observations are noted to see if other sources of information would show any correlation or confirmation of the bureaucratic traits. These observations were noted in the field notes, as shown in Figure 21.

Observation FMoH Week 2: 7/2/18 *As I went around, I noticed two key activities in each department especially where I needed to wait to see the head of the department. First, I noticed that a significant amount of communication appeared to be paper based due to very visible file handling. For example, while I was waiting in room 3 (one of the departments that I went to) to see the head of the department, a young man came in holding a pile of files, he dropped one in brown colour with one of the ladies at the front desk. He also passed a big register notebook to her to sign for receiving the file and left. The one that collected the file passed it to her colleague and said, "there are corrections to be done". The other lady accepted the file and exclaimed, "Ah! What corrections? Again? Corrections for the 100th time?" She receives the file and opened it to the last page and studied it and then got on her computer. File handling and passing around is one thing I noted to be a very active activity. Second is the influx of people to the offices to see the heads of the department for various reasons. Because of this, there is often long waiting periods to see the heads of the departments. In one of the front offices, I inquired from the front desk staff if the influx of people is an everyday occurrence and why they have these many people coming in? He explained that some of the visits could be prevented but due to lack of delegation by some of the directors/heads of the departments people had to wait to see the one person and if they are not in, then the person must come back.*

Observation FMoH Week 3: 7/9/18 *The influx of people to this office remains high sometimes the people come in on official reasons and some other times the people are staff members who come in to see their colleagues.*

Observation FMoH Week1: 6/27/ 2018
FMoH.2 *started working on his document on his laptop while I continued my work. FMoH.2's colleague who shares the office was also working on his laptop. This prompted me to ask a few questions based on the observation that in all the offices that I had been to in the last three days, all the laptops appeared to be personal laptops. A good number of the staff also had iPad or some form of tablet with them. I then asked if these laptops were supplied by the institution or if they were personal items. I was told there are a few provided by the institution, and these are limited to a few offices. Majority of the laptops are owned by individuals.*
So, I asked how information was being circulated. They said messages are emailed, and sometimes you call the recipient to inform them to check their emails. I asked how the issue of confidentiality is managed. I was told that they have what is called "secret archive" where they hold classified files. These are paper documents.
They further explained that the institution at a time provided them with work emails so that standard official communication systems could be followed, but this did not progress as they were not provided with adequate infrastructure to use the communication facilities provided, such as individualised computers.
This led to further discussions on the work environment and the setup. Mainly due to lack of space, departmental staff are often separated into different offices. For example, there are 3 people who belong to the finance team, but they all sit in different offices, which makes it difficult to coordinate their work. Further issues raised is the difficulty in internal communication as sometimes there are scheduled meetings which people miss and cannot attend. So, I asked how important information is communicated to members of staff. I was told that when a memo is raised, this is scanned and emailed to all concerned.

Figure 21: Observations noted in the field note.

The format of working in all these offices validates the inquiry about how the NNHP transmits as an immutable mobile (IM) from the FMoH to the clinical areas. There were opportunities to speak to a number of administrators within informal conversations and during the interview sessions about how the working patterns and methods of communication influence the dissemination of the NNHP to clinical areas. The responses portrayed a situation where the NNHP document can be considered an entity that only possesses a physical presence but no geographical mobility.

Previously in the document analysis, the NNHP document was established as an IM because, on the one hand, it fulfilled the ability to hold its shape in some relational and possibly functional manner because it is considered to be a stable network of associations (Holder,

2016). This means that by the legislative authority of its existence, it is a document that has the power to influence action(s). It can be considered as an intermediary. On the other hand, however, the document was questioned about its ability to be seen as a tool for thinking about long-distance control that depends upon a process in which networks of relations are built up to secure immutability on the one hand and mobility on the other (Goncalves and Figueiredo, 2012). This implies that there is an expectation that the NNHP document would secure its immutability through the legislative power conferred on its existence from the office of the President while it is expected to exist in a geographical space. Meaning it becomes mobile by being present for use in the intended healthcare institutions for which it was created. When the NNHP document can achieve this status, the network could expand as more actors could be enrolled. Other actors such as PS could be enrolled such that each entity could be assessed on their agential attributes. These would have provided the lens through which different possibilities of patients' experiences and outcomes could be explored.

These observations of working processes, some situations, and conversations helped to determine the agential status of the NNHP. It is seen as not possessing the ability to be an actant (as an actor with the ability to act) because of its inability to maintain its immutability because its geographical presence is prevented due to the constant appearance of mediators and intermediaries. The mediators, according to the description of certain work processes by administrators and clinical professionals that disempower the NNHP, are things like the lack of awareness of the existence of the NNHP, financial limitations in its dissemination, and lack of commitment by workers as a response to poor resources to fulfil their work requirements. The intermediaries that have some significance to clinical practice are the existence of other policies outside of the NNHP, such as the National Health Insurance Scheme (NHIS).

See exemplars below.

Observation FMoH Week 3:7/9/2018
Conversation with senior Administrator (N) *She gave an example of some problems with disseminating policies. She states that when some policies have been developed and printed into documents, the appropriate stakeholders and divisional heads are meant to get these copies to the end users in their various institutions. Now here is the problem- because there is an approved practice that funding should be allocated for this to happen, officers who could have easily taken these copies in their cars so that it gets to the end users will refuse to do so. Instead, they will be budgeting for this, and when the budget is not covered, then the policy booklets are left to rot away where they are kept in the Ministry of Health because of a lack of responsibility to ensure information dissemination.*

Interview Response FMoH: 7/5/2018
INT 1 MOH: *So, I think that is one important area that we are not doing well in terms of dissemination. So you are very correct that when you were in Nigeria before you travelled out that you never heard that Nigeria had a policy, and I think I can assure you that even at the moment, I am not sure if majority of healthcare professionals that are actually maybe in the hospital based and so on and so forth that will now tell you that they are aware that we have a national policy. So, most of this information are actually disseminated at the higher level, you know, the ministry level, the partner level, but I think it is very correct that we need to take it to the next level and see how we can take it to the people that matter the health care professionals that are actually doing those services.*

Interview Response FMoH: 7/9/2018
INT 3 MOH: *Let me even tell you that even at the ministry now, you will be surprised that some people may not have access to that, and then there is even issue of attitude because you will see someone that will see this document, but he will not have interest to even go through and know what it is. We have that issue, in fact, that is the problem we face even during the first plan. Even within the department, the department was responsible for coming up with the documents, but majority of the staff in the department if you ask them what are the priority areas in the strategy plan, they won't be able to tell you it is because they cannot pick the document on their own to go through it. So, there are issues and then you know Nigeria is known for that. I am sorry.*

Interview Response WDH: 7/18/2018
Int 7. WDH *Okay on a very sincere note the issues of awareness about hospital policies are not properly communicated and that is why sometimes we at the hospital level we run into some bottlenecks trying to untie some issues that are concerned with hospital policies. For some of us the reason why we got to know some of this is because we do a quality management system and its, all about policy and procedures and we have gone ahead to implement what we call ISO 15189 its, a standard that guides diagnostic facilities it's an international standard that tries to implement some of these policies you are asking of but we have discovered that they are not in place some of the issues especially now we are talking about safety they are no written policy document on safety that is communicated at the hospital level. They could be there, but we are not aware they are not communicated.*

Interview Response WDH:7/25/2018
INT 9 WDH: And then with the coming of this NHIS- health insurance policy that has come at least it has helped to some extent to alleviate the suffering of most of the staff who ordinarily when you compare their income it is nowhere to go by to even take care of them feeding wise let alone school, accommodation, transportation and whatever so with the coming of this policy it has really helped.

Interview Response FMoH: 7/5/2018
INT 1 MOH: *So, the next agency in the ministry is the **national health insurance scheme** because in other to see how we can ease the financial burden of Nigerians towards accessing health care that was how the establishment of the national health insurance scheme came about.*

Interview Response WDH:8/8/2018
INT 16 GGH: *Like we have national health insurance scheme for a lot of federal government civil servant and if you get to some hospitals, once they hear you have NHIS, and you are being backed up with that, the attitude and manner at which they will attend to you wouldn't like it. Sometimes you'll even see people opting out to pay cash.*

Nonetheless, there was a different opinion by one of the administrators who inferred that there is a link between the NNHP and PS through one of the programmes of the FMoH, as expressed in his statement below.

Interview Response FMoH: 7/9/2018

INT 2 MOH: *Like I said there is an overall national plan. One of the pillars is called essential package of health services we have about five pillars that deal with issues of governance, issues of healthcare financing, issues of essential services , which I just mentioned, issues of public health emergencies there are about five of them like that and then partnership issues. Now in each of these pillars there are also several things; the patients' safety falls under the essential health services pillars and for each regulatory agency these things are fished out more in terms of protocol system of standards to ensure that the patient is the king then secondly what most of these things do is to help you manage the patient better and make the patient also well informed to be able to do things. We have what they call ICCL (Integrated Management of Childhood Illnesses) there is a protocol like that which is in almost all the hospitals and practised by all the states the surgical checklist we mentioned is also in all the states and particularly for topical issues that are causing problems like postpartum haemorrhage for every theatre every primary healthcare you are also given a protocol of how to approach the issues mainly with these days even in primary healthcare facilities they will tell you what to do so in all these patient safety is guaranteed however like I said what is most important is ensuring that supervisors and monitors go from time to time to ensure that these things are implemented because there is no need having a protocol and they are not being implemented. Then the other one is the financing to ensure that even the supervisors are well trained to be able to do their work and in rare cases let there be a kind of mentoring platform where people discuss their findings and if contraventions become persistent a kind of sanction will have to be meted out.*

The above statement is significant to exploration of the detraction in the pathway of the flows between PS and NNHP, but for now it is black boxed, with the possibility of reponing the box in the future.

While the above path is abandoned, we return to the outputs at the hospital level. Conversations showed varying perspectives on how the NNHP is communicated and used in the hospitals. In some instances, the responses seem to be influenced by the clinician's specialisation and rank. The senior practitioners seem to have the opinion that the policies are well disseminated, while other professionals believe otherwise. In addition, from conversations and interview responses, it is apparent that apart from identifying policy dissemination as an obstacle, there is also the issue of lack of awareness of the existence of the NNHP. Apart from this, there are other locally formulated policies and practice guidelines, both generally in the hospital and at departmental levels. This is shown in the field and interview notes below.

Observation WDH Week 4:7/16/2018

WDH.8 Conversation with senior Doctor (WDH) *explained that this hospital and two others (Maitama and Asokoro district hospitals) are located within the Federal Capital Territory (FCT), as such, the governing directives comes from the FCT Health Management Board to the hospitals' management board. She states that the flow of information on health policies is in a continuum where information originates from the FMoH to health management board of FCT then to the hospitals. Within the hospital there are sub committees who harmonise all information to be passed to various departments in the hospital. I asked how specifically these health policies are broken down as practice guidelines? She said they have various standards of practice which they place at strategic places on each ward for all members of staff to see, examples she gave include an S.O.P that itemised what to do if the staff received a paediatric emergency, where to refer gynaecological emergency cases, how to manage patients coming in with respiratory problems etc. National policies are passed to the Health Management board at the State level, and they then disseminate to hospitals such as theirs. In addition to these, certain policies are developed locally for example, safety precautions are developed by the doctors and various departments develop their own policies/standard operating procedures independently too.*

Observation WDH Week 4:7/18/2018

Conversation with an RN (WDH) *So, I asked how the policies for practice in this ICU is processed and filtered down to the members of staff? She said, "to be honest with you, things are not done in the ideal way here in this hospital". So, I asked her to please explain further. She states that, the anaesthetists head the ICU, and they develop departmental policies for the ICU. However, these policies are not adhered to as she has observed in more than 4 years that she has worked here. For example, she states that they have policy guiding the ICU admission criteria, but this is often not respected here in this hospital because, there is no coordinated communication between the referring Doctors and the ICU anaesthetist who are to accept or decline the patient.*

I asked if she is aware of the existence of the Nigerian National Health Policy and if available to staff members. She said she believes there is a national health policy document, but she has never seen one. She also knows that the policy guidelines for practice for the ICU are locally developed by the Anaesthetists who use critical care international standards to develop these policies for this ICU. However, she feels that these policies are not applied because of certain practice limitations such as practising as a critical care worker itself-She said since she has been working here which is more than four years no patient had been intubated or had tracheostomy inserted! Which means she has not looked after a ventilated patient since she started working here, which is part of ICU interventions for practice improvement. She said most of the staff try to do independent study reviews to keep up their knowledge because nothing really happens here in this ICU.

Interview KPHC: 8/14/2018

RQ4. I asked- do you know if we have national Health Policies in Nigeria? If you are aware of that, have you ever seen a copy of that document?

INT 18 KPHC (Male):

A: *No, I am aware, but I have never seen a copy, I have never been privileged to ask for a copy.*

Interview WDH: 7/26/2018

RQ4 So, are you aware at all whether we have any such national health policies in this country, Nigeria?

INT 11 WDH: *Yes, we have.*

Researcher: *Have you ever seen it?*

INT 11 WDH: *I have not seen it, but I know we have because sometimes, during news or something, you will see them talk about a fragment of that policy, but not that I have seen it in total, like a body.*

Since the foregone perspectives created difficulty in following the flow of events between NNHP and clinical practice, the focus is on interrogating PS as an actor.

6.4.2 Exploring the Agential Nature of PS.

The observation approach changed on entering the phase of visits to the clinical institutions to that of a non-participant observer, as mentioned earlier. Some of the interview responses from the FMoH guided the observation processes in the clinical areas. The observations were carried out with the same framework of assessing for significant information in work processes, situations, and conversations. However, some time was dedicated to doing specific observations because the responses from the administrators indicated that practitioners had

general knowledge about PS and not in-depth knowledge of PS science. Their knowledge is demonstrated in the many mentions about handwashing as an infection prevention practice, management of sharps, and safe surgery. Reflecting on these interview responses practitioners were observed for traits of infection prevention and control (IPC) practices, with a focus on hand hygiene; especially having noticed that practitioners wear gloves but hardly wash their hands when they take them off. Worthy of note is that most of the doctors have wristwatches on and hardly bare below elbows. The observations showed significant gaps in IPC because simple practices such as hand washing were either not done or not properly done. This is illustrated in the observation notes below.

Observations: Hospital 1

10:33

Dr 1. had gloves on to attend to a patient by the bedside to reconnect intravenous infusion (IVI) bag. The doctor discarded the gloves but did not wash their hands then went back to the desk and continued to work on the computer.

10.25

Nurse 1. just completed a procedure (creating window in a plaster of Paris). The nurse changed their gloves but did not wash their hands and did not use alcohol hand rub but went to attend to the next patient.

Nurse 2. While going around the patients to take their vital signs, has used a pair of gloves on 7 patients without changing between patients.

10:35

Nurse 1. Doing hand washing for the first time in my observation. The nurse used the air dryer to blow dry the hands but when they walked past me, I noticed the hands are still wet and not quite dried and then noticed hand drying by rubbing on their clothes.

11:17

Nurse 2. Completed vital signs round. Took off gloves came to the computer to document. Hands not washed.

Dr 1. Went to examine the patient on the middle coach. The doctor put gloves on for the examination. Afterwards, took gloves off went to the computer to document. Hands not washed.

Dr 1. Went to speak with a patient in the inner ward. Came back, put gloves on and went to collect blood from patient on middle couch. Took gloves off after blood collection but did not wash hands.

Dr 1. the doctor put on another pair of gloves and went back to the same patient and started to review the patient. [A general occurrence is that patients are reviewed in full glare and hearing of relatives and other patients, no privacy].

11:20

Nurse 2. Donned a pair of gloves and went to take vital signs of a new patient. Immediately after doing this, the nurse put their gloved hands into uniform pocket to take out a pen. The nurse then came to the computer with gloves still on the hands. The nurse began typing on the computer and then must have remembered, stopped, took gloves off but left them on the desk by the keyboard.

Went to patient in the far-left corner bed in the inner ward. The doctor donned gloves after which it appeared the patient needed the toilet, so she disconnected his drip, capped the canular but hung the drip line without covering.

She walked across to the theatre area with gloves on. Came out with improvised tourniquet and cotton wool in gloved hands. Went back to the patient's bedside but because the patient is still in the toilet, the collected items were placed on the patient's bedside table. The doctor removed the gloves and went back to the computer.

There were observed situations that showed compromised sharps safety, the potential for medication errors, and poor practices in moving and handling of patients, as well as issues with maintaining patients' confidentiality electronically and during physical examinations. Examples of these occurrences are stated in the observation notes below.

Observations: Hospital 2

11:33

Meanwhile, a new patient has just been brought in on a wheelchair she appeared really weak, and she is pregnant. The nurse assistant led the way to the middle bed and asked the patient to stand up and come to the bed. Due to severe weakness, the relatives assisted the patient to stand up from the wheelchair – The wheelchair breaks were not on, the relatives pulled the patient forward by her arms and helped her to the bed. The nurse assistant was standing by waiting for the patient to transfer to the bed. She checked the patient's blood sugar first which was 75mmols. The nurse assistant while progressing on vital signs checks called for the doctor and told him patient's blood sugar readings. The MO went in and started to review. He pulled the curtains for examination.

12:11

The MO attending to the pregnant woman who just arrived in the middle bed instructed the nurse assistant to commence intravenous infusion (IVI). She asked the doctor what type of infusion he wants administering? He said she should administer normal saline. She asked if he wanted 500ml or 1000ml? He said she should administer 1000ml. The nurse assistant went and got 2 bags of 500ml and a giving set. She pierced the first bag at the desk with the bag placed on piles of notebooks. She went to the patient to hang the infusion ready for administering to the patient. She instructed the patient to reposition herself by lying on her side, but patient said she feels weak to move. Nurse assistant said she would help the patient to reposition. She placed her arms under the patient's armpits and instructed the patient to move up the bed while she made effort to pull the patient up. She was doing this while the bed level is very low which is below her own knees.

She came back to the desk and received another verbal instruction to administer anti malaria injection to the same patient. She pulled a box out from the top shelf of the small shelf by the side of the nurses' desk, from the box she pulled 3 ampoules. She went to the desk after putting on gloves and collecting syringes and needles. She drew up the medication at the desk like every other person does and went over to administer. There were splinters of the ampoules left behind on the desk which another colleague nearly placed his palm on.

12:22

The Male RN came in and the nurse assistant told him verbally to go and administer anti malaria injection treatment to one of the patients in the opposite ward to the Nurses station because the temperature is high.

12:47

The last two occurrences prompted me to ask the doctor that is sitting next to me what is being documented in the sheet of papers that I see people writing in which is being started as each patient arrived? The MO said that the nurses document the vital signs and medications they administer to the patient. I asked him where the doctors write their prescriptions? He said they give verbal orders to the nurses so that the patients can get their treatment, but they document these orders in the computer system. In addition to this, the nurses then transfer the information documented on the paper, that is, vital signs and the medications given to the computer when they have finished giving the treatment. He said there has never been a problem with this system when I sked if he thought this is a safe practice?

The observation notes were substantiated by interview responses and some conversations, which revealed that many of the respondents believe that PS knowledge and practices are not as good as they should be due to certain circumstances. Some of these circumstances include issues in health governance, health financing, staff knowledge, political influences, and corruption.

Observation FMoH Week 3: 7/10/18
Conversation with Senior Administrator (HS) *When I mentioned the patient safety aspect of the study, he had a knowing smile on his face and shook his head. He said something like, "well, you know we are still far from ensuring patient safety in Nigerian Hospitals". I asked what he thought was responsible for the slow uptake of focus on PS in Nigeria Hospitals. He was silent for a while, and then he responded that the whole of the system is problematic, especially in the lack of knowledge in most areas of PS and lack of funding. He said he would like to advise me to extend my studies to general hospitals in other States of the country, and it is then that I would understand more what the condition of our hospitals are and the state in which they are in.*

Observation FMoH Week 3: 7/10/18
Conversation with Senior Administrator (N) *She referred to the 2001 Abuja declaration signed by the Union of African leaders who agreed to allocate 15% of their national budget to healthcare improvement but they have not lived up to that expectation. She said in Nigeria, following this declaration there was a health financing review where the federal government had pledged to allocate 1% of its gross revenue to improving healthcare services but this has not been fulfilled either. She explained extensively about the huge gap in knowledge and practice of PS both in the administrative and clinical institutions. She points out that there is massive decadence in Nursing practice in the country. In her opinion, the responsible factors for these include a chain of effects including faulty leadership, corrupt practices, lack of supervision at all levels. She believes that the country has a long way to go in ensuring every patient is treated appropriately and safely- this concern she says is based on the effect of lack of adequate funding released to healthcare institutions.*

Observation FMoH Week 3: 7/10/18
Conversation with Senior Administrator (TEM) *She believed that on one hand the FMoH is working hard to provide policies that would guide practice but on the other hand there is still a lot to be achieved in improving PS. She explained further that there is often a lengthy time spent before improvement plans that could benefit patient experiences are approved, regarding this she explained using the example of the divisional trauma and emergency policy that was developed but faced delay in getting it approved by the government which then meant there will be delay in implementing the policy in hospitals.*

Observation FMoH Week 3: 7/10/18
Conversation with Senior Administrator (ID) *"we all know that PS is still very problematic". "Although, the role of my department is mainly to inspect practice and institutions but, I think that practitioners may not be well informed of health policies that should inform their practice. I think the problem of funding within the institution contributes to a lot of the limitations that workers face which causes them limitations in their practice".*

Observation FMoH Week 3: 7/10/18
Conversation with Senior Administrator (eH) *"the limitation of whether health policies can work also is related to poor education system and poor governance".*

Interview Response WDH:8/3/2018
INT 13 GGH: *I think since we are aware, any staff should be punished because some people are just stubborn. Why wouldn't you wear your gloves to take patients' samples? Because some of these patients are very educated, they would even tell you that in between patients you did not even change your gloves and then the hospital also should also make sure that these things are well provided as at when due because the patients have come, they have paid these services so they should get the best of these services.*

Interview Response KPH: 8/20/2018
INT 20 KPHC: *Hmm, my suggestion to them is that you know all these policies, all those things, they really know them, but are they really working? They are not, because of finance, so we will just tell them to improve because in this clinic now, for the past three weeks, there is no safety box, you can imagine if you enter the injection room, they just use ordinary carton, and when you inject somebody, they will drop the syringe there, what about you, if you are able to take care of yourself, what about the cleaners, that they don't know anything about those things, they are the ones to carry them and go and discard in the process of carrying them, something can happen, the needles that are there can prickle them and it will become another thing.*

The significance of these findings lies in the belief that patients' care in hospitals is unsatisfactory. Ultimately, respondents strongly advocated for greater awareness about PS in clinical practice because patients are not getting the best they should if robust health policies that shape practice guidelines were in place.

Although these findings are substantial and could be said to provide good insight into the research inquiry, the outcome cannot be concluded at this point without reporting on the findings of the document analysis of the NNHP document. Stating the document analysis findings ensures the basis for the developed actor-network, which is explained afterward.

6.5 Identifying PS as an Actor in the 2016 NNHP Document

The content of the NHP document covered significant national health initiatives, it possesses a legislative authority that can command action, and it transmits as an immutable mobile at a physical level. However, it continues to be interrogated on its ties to PS in order to assess its impact on clinical practice as a means of ensuring safe service delivery. A review of its focus areas of health management covers clinical conditions but its ability to demonstrate a direct command to address PS as a strategy could not be established. Arriving at this summation is based on a number of things.

1. The policy document has no statements of a national strategy for PS management or the allocation of such responsibility to a designated institution within the FMoH. What is commonly seen in a national health policy document is a legislative assignment of key areas of health care strategy, such as PS, to a responsible department of health to ensure focused PS policies and practice guidelines, such as the universal guidelines for the core PS initiatives, for example, guidelines for safe surgery, infection prevention and control, drug management, blood transfusion management, hospital waste management etc (WHO, 2018).

In addition to this gap, certain policy roles are considered 'concealed policy roles' in the sense that the identified roles of the policies that establish priorities for public health and other health conditions do not specifically indicate PS strategies in clinical practice. For example, amongst other roles of the policy, public health and other areas of health priorities are **a)** The prevention and control of communicable diseases, such as HIV/AIDS, Malaria, Tuberculosis, and leprosy, Neglected Tropical diseases, Immunisation and Vaccine-Preventable Diseases, **b)** the prevention and control of non-communicable diseases such as cardiovascular diseases, diabetes mellitus, cancers, sickle cell disorders, injuries/emergencies, **c)** public health emergency preparedness, **d)** other health conditions, such as, Mental health, Oral health, Eye health, Disabilities, and **e)** health-related priority areas, e.g., Nutrition, food safety, water sanitation, the environment, chemical production, and medical waste.

Whilst all of these signify priorities to improve people's health, the statements of commitment to PS strategies that can make this achievable within the clinical practice areas are not visible in the document.

2. Furthermore, the document strongly reflects the major representation of significant players/stakeholders who were invited to participate and who are responsible for developing the NNHPs. Still, a gap was observed in the exclusion of the service users, that is, the

patients. The list of consulted stakeholders for the development of the document did not reflect patients' representation.

In summary, it is apparent that the NNHP is developed following acceptable standards for policy development, which is demonstrated in the process followed. Also, the NNHP conveys the meaning of providing safe services by healthcare providers to service users in Nigerian hospitals, but it fails to fully deliver the role of providing specific PS standards and clinical practice protocols in globally benchmarked clinical areas. These failures can be explained to be influenced by weaknesses in health governance and health financing. Because of this noticeable absence of PS as a focused strategy in the policy document, it can be established that there is no direct connection between the NNHPs and clinical practice.

To conclude, the relations and events between the research interviewees and the visited institutions resulted in the activity of identifying assemblages, entanglements, ruptures, flows, and discontinuities in the network (Latour, 2005). This tracing of activities narrates what can be expected of the experiences of a patient in a Nigerian hospital on a daily basis, from the standard of care they receive based on the quality of health financing, the clinical practices of the health care providers based on their knowledge and skills in PS practices, various communication processes, the influences of the internal clinical governance of each health care institution, and the impacts created by the directives on health policies from the national and regional governments.

This foregone narratives of the research findings and this conclusion is mainly the cumulative representation shown in the generated actor-network of the relational ties between the NNHP and PS in selected acute settings in Nigeria. This network is briefly explained below.

6.6 A brief description of the Actor-Network of the Relational Ties Between the NNHP and PS in Selected Acute Settings in Nigeria.

The actor-network in Fig. 19, p.148 is explained in a way that is general, non-structural, and objective in perspective (Guest et al., 2013). As shown in the network, the FMoH is identified as an actor whose agential nature is centered around coordinating national health affairs, as exemplified in its responsibility to develop the NNHP(s). In the attempt to explore the role of the NNHP in achieving PS, multidimensional activities were detected. In the first instance, it was noted that the primary actor, PS, is not directly influenced by the NHPs because PS is not identified in the policy document as a focus area of the NHPs. At best, PS could be said to be implied when consideration is given to the mentioned ten health thrusts covering the public

health categories and other health focus areas. The silence on PS in the NNHP document can be attributed to several activities created by the presence of **intermediaries,** such as the existence of other healthcare related Policies not stated in the NNHP document and **mediators,** such as actors that influence the pathway of NNHP to clinical practice which is expected to be significant in the assessment of the status of PS at the point of service delivery. The outstanding mediators are the NHP itself in considering its nature and ability to act in clinical settings, the political drivers in the existence and nature of the NHP document, the actant nature of healthcare financing and the mobility of the policy document. Identifying how they form relationships between the actors (PS and NNHPs) (Latour, 2005; Cresswell et al., 2010) is important, as this is the grounds on which the derailment of the path between PS and NNHP is critically discussed and communicated to the wider audience. A critical discussion about the intermediaries and mediators is essential because, firstly, the activities in the actor-network goes beyond simply explaining what is observed and, secondly, given that the natures of intermediaries and mediators is one of constant instability, it is important to critically understand how these entities influence clinical practice and the impact this could have on patient's outcome. Mediators are perceived as unpredictable because they have the nature of the rhizome in pointing to the spread of actors and locates where these actors might connect and the direction to which they might expand (Conley, 2015). In this nature, mediators challenge the direction of the research towards following the flows rather than simply defining the containers (ibid). On the one hand, it may seem that mediators form the main focus of unpacking the network; on the other hand, intermediaries cannot be ignored because they fall victim to the possibility of being distorted, and reshaped, such that they can become mediators and vice versa. Meanwhile, intermediaries are described as a black box, or an object that can be viewed in terms of inputs and outputs without any knowledge of its internal workings (Latour, 2005; Conley, 2015) and its key differentiating attribute to the mediator is that the outputs can be easily predicted based on their inputs (Latour, 2005). Mediators, on the other hand, transform inputs into unpredictable outputs (Latour, 1999). This means they can also transform actions, making something happen that is not necessarily related to what set it into motion (ibid). When these entities are critically unpacked, the current assertions about the relational ties between the NNHP and PS can be validated and reported.

Therefore, considering what transpired between NNHP and Clinical Practice, the flow of actions between mediators, such as policy process, political influence, health financing, and policy mobility, is interrogated. To follow the flow closely, actors are questioned to

continuously enrol them in the network and maintain their actant nature. The policy document is questioned about its influence on patient safety in clinical practice.

In setting up the controversies, the discussions commence about the relations between human actors (administrators, clinical practitioners, and patients) and non-human actors (PS, NNHP) as mediators and intermediaries and how these relations constitute immobility or mobility of the NNHP and how this might influence patient outcomes in health care services provided to them.

Consequently, in the next chapter the critical discussion is done where the first uncertainty to be unpacked is the attempt to translate mediators and intermediaries (Latour, 2007). This subsequently becomes the translation source of all other uncertainties that follow (ibid).

Conclusion

The study findings were interpreted and communicated based on the principles of ANT and its interpretive nature. In the process, all important actors were considered including the actant nature of the visited institutions and other objects of the study, that is PS and NNHP.

More importantly, the establishment of the qualifying standard(s) of a health policy document as a network element with strong properties of irreversibility, and effects that transcend time and place, in other words, establishing the exploration of translations that create the possibility of the NNHP in transmitting IM. Although the NNHP document was accorded the status of an IM, it became clear that it is a policy document without mobility, especially since it does not play any outstanding role in influencing the agency of PS in clinical practice. The findings identified the NNHP as an actor without agency. Therefore, the activity of interrogating the relational ties between PS and the NNHP which was identified within work processes, situations, and conversations identified mediators and intermediaries that became significant in the critical discussions that emerged in the next chapter.

Chapter 7: Discussion of the Research Findings

7.1 Introduction

This chapter builds on the work done through chapters two to six, demonstrating how the research goal is achieved through critical analyses of the research findings.

Previously, various sources of knowledge, including primary and secondary sources, have been consulted to understand how the NNHP influence healthcare service delivery to ensure PS in Nigerian hospitals and primary healthcare centres.

The secondary sources of data are instrumental in benchmarking the outcomes of the primary data and laying a foundation for evaluating the current status of affairs and proffering recommendations for improvement.

To evaluate the findings of this project, it is important to interrogate and translate the activities of the mediators and the intermediaries as they relate to the role of the NNHP where PS is concerned. As such, an immediate translation of the network can be explained as a situation where no concrete relational ties are identified between the NNHP and clinical practice. This was largely the opinion of the clinicians and the administrators, who believe this greatly impacts achieving PS practices in Nigerian hospitals, especially since patients' outcomes and experiences speak to this assertion mostly negatively. Nonetheless, the research findings cannot be explained away, and there has to be a level of unpacking the network connections that are deeper than what is seen or observed on the surface (Latour, 2004).

This chapter articulates the research findings through the three research objectives, including *objective 1:* To evaluate the *actant* nature of the 2016 Nigerian national health policy document *objective 2:* To determine the policy translation to clinical practice; and *objective 3*: To identify, analyse, and discuss the actant-networks that are significant in the relational activities between policy and practice in Nigerian clinical settings.

In Chapter 6, the research findings become the precursor for achieving critical discussions in exploring the three research objectives and ultimately presents the empirical knowledge that this research contributes to academia and the wider public.

Therefore, the basis on which the network is critically discussed is presented by unpacking each of the research objectives and a presentation of the evaluation and conclusion of the discussions.

7.2 The Path to Translating the Actor-Network

Latour's basis for translating associations is based on the position that one is not just explaining a phenomenon but discussing observed circumstances beyond the day-to-day description of such situations (Latour, 2004). Therefore, critiquing the entities that form the associations in a network becomes the primary agenda of the project.

Latour's style of translating a network often follows the critical discourse analysis approach. His critique of the actor-network illuminates his interest in drawing material and biophysical objects, humans, and language in the same analytical trajectory without eliminating differences (Eeden, 2017).

However, other scholars who use one form of critical discourse analysis (CDA) or the other have criticised Latour's collaborative work with Foucault in some ways. For example, while Koddenbrock (2014) pursues a repositioning of the critique of capitalism in the field of International Relations (IR), he describes Foucault and Latour's position on critique or critical analysis as one with limitations. Koddenbrock acknowledges the significant ways by which Latour and Foucault contribute to the work of critique, where Latour's perspective is seen as that which focuses on fluidity, contingency, the critique of the mess that the social world is made of, and his consideration of inanimate objects and what they do to enact multiple worlds we live in. While acknowledging Foucault's view of critique as a process of meticulously analysing how things came about and showing that the process is not inevitable but rather contingent and could be changed. Despite these acknowledgments, Koddenbrock (2014) believes that they both have a conscious focus on the small and contingent, and this has prevented a more totalizing strategy of critique from taking hold. Instead, Koddenbrock (2014) prefers to embrace the Marxian Dynamic Method of Concretisation and Critical Theoretical understandings of totality, which is more suitable to his agenda. However, Koddenbrock (2014) acknowledges that recent discussions of critique have often used the term without giving sustained attention to its different meanings and strategic usages, even though the adjective *critical* continues to operate as an important marker of distinction in a variety of scholarly fields. This position simply supports the view that critique is approached in many different ways, driven by different traditions and schools of thought. Just as Eeden (2017) decided to turn from a regular discourse analytical perspective to a radical empiricist sensibility and new materialist approach; an approach that has been pioneered in science and technology studies in the works of Bruno Latour, Isabelle Stengers, John Law, and Donna Haraway (ibid). Although this approach is not new, Eeden's choice is influenced by the recent

momentum and uptake gained by the approach with "the advent of the Anthropocene, the epoch in which mankind has become the predominant geological determinant, turning the biophysical sciences from politically "neutral" domain into one that stands today at the heart of political debates" (Eeden, 2017, p. 1).

Since the foci of the opinions illustrated above establish the flexibility in choosing how in-depth discussion can be approached and applied in a report, this current study will critically discuss the entities in the actor-network developed in Chapter 5 in order to draw on the many ways by which PS could be influenced either positively or negatively by the ability or the inability of the NNHP to impact clinical practice in Nigerian healthcare institutions.

The discussion takes into consideration the activities in translation, which Callon and Latour define as –

> …all the negotiations, intrigues, calculations, acts of persuasion and violence, thanks to which an actor or force take, or causes to be conferred on itself, authority to speak or act on behalf of another actor or force; 'our interests are the same', 'do what I want', 'you cannot succeed without me' (Callon & Latour, 1981, p. 279).

Although the ultimate goal is to critique the network to elucidate the activities that tell the nature of the NNHP and its relationship to achieving PS in healthcare service delivery, nonetheless it is not yet about a discussion but about getting a complete picture of all the angles in order to give substance to the actant (Latour, 2004). This means the discussions commence by evaluating the actant nature of the 2016 NNHP.

7.3 The evaluation of the *actant* nature of the 2016 Nigerian National Health Policy Document.

7.3.1 Taking Steps to Follow the Actor- the NNHP

The initial purpose of engaging the NNHP document was to enrol an actor into the network, in this case *the role of the national health policy (NHP)* in PS in Nigeria. This attempts to give the role of the NHP (the actant) the right to exist (Latour, 2004). In the search for this right to exist, several possibilities became apparent as various actors were enrolled in the network to determine the actant nature of NNHP. The examination of the policy document gave rise to the identification of human (the policymakers, stakeholders, clinical practitioners such as the Doctors, Nurses, Pharmacists and lab scientists and partners of the FMoH) and non-human actors (the policy document, the voices in the document, the policy mobility, the legislative power carried by the policy, the active role of the policy document, institutional

structures, discursive structures, written and unwritten policies, practices, infrastructures, etc.) and the various networks of relationship and interaction that radiate out from people and things (Latour, 2007). However, there remains criticism of the inherent challenge of the controversy about *who* or, more correctly, *what* is acting (Latour, 2004).

Sayes (2014) opines that this criticism stands out when it comes to the idea of object/subject, the term used by ANT to refer to a human or non-human actor. Since the main criticism persists about ascribing equal attention to human and nonhuman subjects, the *role of the NNHP* in influencing clinical practice to achieve PS is an abstract object (a nonhuman object/subject); therefore, it faces this challenge. According to Latour (2004), to address this criticism, the controversy about *just what it is that is acting* must be implemented at the same time as one introduces the controversy about *just what action is;* if not, the claim concerning nonhuman agency is immediately reduced to a mere argument about the causal agency of technical objects (Latour, 2005). This ANT's plural way of explaining what it means to speak of agency is influenced by the principles of intentionality, subjectivity, and free will; such that the recognition of the intentional action as a type of action is not meant to exclude all other forms of agency. Rather, ANT focus on offering something 'more' (ibid). The question then is- what is this 'more'? (Sayes, 2014). This "more" is the conception of agency as the minimal attempt to capture every entity that makes or promotes a difference in another entity or in a network (Latour, 2005). In that case, to examine an object for this attribute, all that is needed is to ask an entity two questions (ibid). The first question is to ask the entity if it makes a difference in the course of some other agent's action or not, and the second is to ask if there is any trial that allows someone to detect this difference. If the answer is yes to these two questions, then we have an actor that is exercising agency, whether it is a human or nonhuman actor (ibid).

It becomes crucial to find out the agential attribute of the NNHP by interrogating it based on the two questions stated above. To achieve the goal, the same ontological status was ascribed to both the human subject and the policy object as a starting point (Harman, 2009). Since it is established that for any concrete empirical scenario, one cannot, in principle, determine beforehand which actors will display agency (Latour, 2004), it was now a matter of "follow the dictum" (ibid) to see where the actors lead in exposing the actant nature of the role of the NNHP. In following the actor(s), the consultation of all spokespersons (interviewees, observation conversations, and notes) speaks differently of the actor (the role of the NNHP in PS) by presenting multiple natures of the policy. On the one hand, the role of the NNHP is professed as impactful at the clinical level as being influential to patients' experiences in

certain aspects of challenges facing service delivery, such as the poor financial status of the majority of patients. For example, there were substantial references to the National Health Insurance Scheme (NHIS) as beneficial to some patients, as previously mentioned in the research findings. Other opinions portray the NHIS as an entity intended for good but bearing limitations to the disadvantage of the user. More of the spokespersons' revelations relay a status of displacement of *the role of the NNHP as an actor* whose influence on clinical practice cannot be visibly identified. At the same time, other observations revealed the emergence of mediators and intermediaries who appear to be entities that overshadow the role of the NNHP in clinical practice. Interestingly, interplays of transformation of the mediators to intermediaries and vice versa became apparent as well. While this is another significant observation (to be revisited) in this discussion, the attempt to follow the enrolled actor cannot be abandoned. Therefore, the entrance of intermediaries such as the NHIS and other policies raises two significant issues: First, the identification of the inability of the entity of the NNHP to affirm its role in clinical practice. Second, the question of why the NNHP became displaced and retains only its actor nature when tracing its role in PS.

To answer these questions, a number of possibilities can be considered. First, is the consideration of how responsibilities flow in the development of health policies. Second, is to determine where the administrative conferment of the responsibility for establishing policies or directives for ensuring PS in clinical institutions lies. Although it is understood that health policy is shaped and determined by several factors (Fischer et al., 2007; Iyioha, 2015), there seems to be a similar pattern to how most national health policies are set up, especially when it comes to the flow of the allocation of legislative power to achieve the desired impact of the particular policy on a health agenda.

Two examples illustrate how we can view the process by which legislative directives for executing health policies are stated and how their relational ties to PS can be traced, as we summarily review these attributes in two health systems. The intention is to establish the agency of a NHP and their immutability.

This undertaking is to benchmark (setting a *categorical obligation* (Latour, 2004)) the status of the NNHP to highlight gaps that could help determine why it remains an actor in relation to PS.

7.3.2 Exploration of the Relational Ties Between National Health Policy and PS in Two Health Systems.

Since health policy is considered one area of law that affects virtually everyone in a given community (Walden University, 2023), we begin by examining how a national health policy is legislatively conferred to the responsible executors of the policy, especially in the area of PS and how this is executed in clinical practice.

7.3.2.1 Tracing the Administration of the NHP and PS in England, UK.

In England, the UK Parliament confers the responsibility of health management to the Department of Health and Social Care (DHSC) as a ministerial department (GOV.UK, n.d.). The DHSC perform many roles, but specific to this discussion is the responsibility to support and advise the ministers in shaping, developing, and delivering health policies (ibid). The main health policy is held in the Health Care Act 2022 (c.31), which consists of 7 PARTS and 187 subheadings. PART 4 is The Health Services Safety Investigation which covers issues of PS. The legislative responsibility for the provision of safe care to relevant institutions and departments is explained in subheading 135. The Secretary of State works through the Department of Health to provide Strategic Direction for the NHS and wider health and care system and holds all the national bodies to account for their operational and financial performance, thereby ensuring that the different parts of the system work properly together (NHS, 2013).

The health policy in relation to PS becomes operational through the actions of related institutions within the DHSC. The DHSC works with twenty-four agencies and partner organisations (GOV.UK, 2022). All these agencies have a duty to ensure PS. Still, the NHS, CQC, and the National Institute for Health and Care Excellence (NICE) take the lead in responding to the legislation on PS by developing clinical guidelines for healthcare professionals (ibid). The clinical guidelines set out core areas of PS focus on clinical practice, which include guidelines on safe surgery, infection prevention and control, medication safety, waste management, etc. (NHS, 2023). NHSE also has a dedicated PS strategy for publishing PS policies and clinical guidelines. The NICE supports the NHS and other hospitals through collaboration in the production of clinical guidance, standards and indicators, the British National Formulary, clinical knowledge summaries and life sciences (NICE, 2023). The CQC is the independent regulatory body that ensures that health and social care services provide people with safe, effective, compassionate, and high-quality care (CQC, 2023). The CQC

regulates healthcare service provision based on thirteen fundamental standards, namely: person-centred care, dignity and respect, consent, safety, safeguarding from abuse, food and drink, premises and equipment, complaints, good governance, staffing, fit and proper staff, duty of candour, and display of ratings (CQC, 2022).

At the hospital level, this sequence of responsibilities implies that at the point of healthcare delivery to the patients, clinical staff are guided through specific PS guidelines for each clinical task to deliver services to patients safely. In the NHS, clinical guidelines are an offshoot of the 2019 National PS strategy, which is set out to maximise the things that go right and minimise the things that go wrong (NHS, n.d.). The strategies cover the following; how it feels to work in the NHS, looking after and organising healthcare services, learning more about how to keep people safe, helping staff, patients, and families to make the NHS safer for everyone, making improvements in important parts of healthcare to keep people safe, and checking this strategy works (ibid). Summarily, it can be said that the strategy only achieves its goal of ensuring PS when two things happen. First, when the strategy is actioned by healthcare professionals who apply skills informed by evidence-based guidelines to perform patient care. Second, when their practice successes can be assessed through the reports of the monitoring and evaluation done by the CQC of the hospital's performance.

Being able to briefly explore the health systems in England to identify the relational ties between the national health policy and PS suggests that similar patterns should be seen in other health systems. Therefore, another health system is explored and presented below to support this assertion.

7.3.2.2 Tracing the Administration of the NHP and PS in the United States of America.

The next example takes a look at the relationship of the national health policy to PS in the United States of America. Administratively, the executive branch of the US Government controls the activities of the US Department of Health and Human Services (HHS) (USAGov, 2023). However, the development of laws, including the national health policy and the bill on PS, is performed by the three arms of Government- (the legislative branch votes on the evidence presented to pass a bill, the executive branch drafts rules and regulations to enforce the laws passed by the legislators, and the judiciary intervene to interpret the law or overrule it if there was a controversy) (Walden University, 2023; National Library of Medicine, 1995).

The HHS has the responsibility to enhance the health and well-being of all Americans through the provision of effective health and human services, fostering sound, sustained advances in

the sciences underlying medicine, public health, and social services (HHS, 2023). To achieve these responsibilities, the work of the HHS is directed by many laws by which it issues regulations to implement laws and develop policies and guidance for state and local governments, industry, and other organizations (CQC, 2023). Clinical practice is, therefore, directly influenced by the PS Act, which is documented in the Public Law 109-41-July 2005 with the title- Patient Safety and Quality Improvement Act of 2005 (GovInfo, n.d.). Effectively, all other national health agencies take directives from and collaborate with the HHS in achieving the core responsibilities as stated in the Act.

With this legal backing, the flow of responsibilities to achieve PS in the clinical areas comes from the central health department (HHS) and the national agencies to the clinical institutions (CDC, 2022). Although public health governance structures vary from state to state, the directives for maintaining standards of clinical practice to achieve PS within the HHS are expected of all the affiliated agencies (ibid). There are nine US Public Health Services agencies and three human services agencies. The agencies directly impacting coordinating clinical practice where the maintenance of PS is concerned include the AHRQ, the CDC, the National Institute for Health (NIH), and the Substance Abuse and Mental Health Services Administration (SAMHSA). The unique role of each of these agencies is clearly laid out in The United States Government Manual, which is the official handbook of the US Federal Government that describes agency activities and programs of the executive, judicial, and legislative branches of Government, as well as activities and programmes of quasi-official agencies and international organisations in which the United States participates as a member (GovInfo, 2022).

Although each of these agencies have specific roles, their common and main focus is to ensure PS (GovInfo, 2022). For example, the NIH, through the individual research-focused agendas of its twenty-seven (27) sub-departments made of institutes and centres, work to expand fundamental knowledge about the nature and behaviour of living systems and to apply that knowledge for improved health, longer life, and for reducing disability and illness (ibid). This knowledge helps healthcare professionals and health policymakers make decisions on healthcare provision and practices (ibid), while the AHRQ produces evidence to make healthcare affordable, equitable, more accessible, of higher quality and safer (ibid). It also works in collaboration with other agencies and partners to ensure support for healthcare systems and professionals to deliver care that is safe and of high quality and value(ibid). The agency achieves its goals by working through its core competencies of data and analytics, health systems research, and practice improvement. When it comes to the CDC, through the

efforts of its five sub-departments, it leads the national effort to promote and facilitate science programs and policies for identifying and responding to domestic and global public health threats (ibid). Although these agencies contribute various clinical guidelines used to guide the practice of healthcare providers in hospitals, the majority of these guidelines and protocols are developed and disseminated to healthcare facilities by the CDC (CDC, 2023). Apart from these HHS affiliated agencies, the monitoring and evaluation of PS practices and all that matter in healthcare service delivery are carried out by the JCAHO.

JCAHO is an independent, not-for-profit organisation that sets standards and accredits healthcare institutions in the US (The Joint Commission, 2023a). The commission establishes standards of practice for various healthcare sectors, such as ambulatory health, assisted living communities, hospitals, laboratories, nursing homes, etc. (The Joint Commission, 2023b). These yearly standards of practice are known as the National Patient Safety Goals (NPSG); they are developed based on information gathered about emerging PS issues from experts and stakeholders and designed to meet each healthcare sector's needs (ibid). The 2023 NPSG for hospitals identified eight goals to improve performance in achieving PS (ibid). These are: identify patients correctly, improve staff communication, use medicines safely, use alarms safely, prevent infection, identify PS risks, improve health care equity, and prevent mistakes in surgery (ibid).

At the hospital level, these strategies are actioned through the execution of practice guidelines, and performance is later monitored and evaluated by JCAHO for recommendations on improvement and acknowledgement of progress and successes of the set national PS goals.

These two examples provide the bases by which we might establish the relational ties between a national health policy and PS to examine possible patient outcomes in clinical areas. It can be said that when it comes to assessing the achievement of PS practices for effective healthcare service delivery and positive patient outcome, one would expect to effortlessly locate PS laws within a national health policy. Additionally, the health system’s structural responsibilities should clearly allow the identification of departments or agencies responsible for acting on health policy laws in effecting standards for ensuring PS practices. Finally, it should be clear that the practice guidelines and protocols direct clinical practice in ways that conform to the national standards of practice, and the regulation of clinical practice should be visible in the process.

In effect, such national health policies are actants because, as an entity, they are able to answer the two questions for this determination per Latour's standards. First, these NHPs make a difference because their legislative powers impact the actions of the health care departments/agencies who execute the implementation in the clinical areas. Secondly, the trials that allow someone to detect this difference include actions such as the annual evaluation of the policy, the reporting of the gap and the review of the policy.

It is also outstanding to realise that these NHPs maintain their immutability through the law and the enabling actions of the agencies that break the health policies down to guidelines and protocols for the use of the clinical staff.

On these premises, the standard by which the actant nature and the immutability of these NHPs are discussed are applied to the 2016 NNHP.

The next discussions, therefore, take the path of layering and unpacking various entities by first assessing the administration of the NNHP in relation to PS in the Nigerian context, the same as done in the two examples above, and the examination of the contributions of the identified mediators (i.e., Nigerian Health Policy, The Policy Mobility, Political Influences, and Health Financing) (see Fig 20, p. 150) to the status of the NNHP in the network.

The goal remains to articulate the status of the 2016 NNHP in influencing clinical practice to achieve PS in Nigerian Clinical institutions.

7.4 Unpacking the Mediators in the Network [Part A]- The NNHP and Policy Mobility as Mediators.

The emergence of the mediators is the first inclination that some path of connection between the NNHP and PS does not exist. Thus, the Nigerian Health Policy itself is examined on the basis of its legislative administration in connection to PS, especially in consideration of its mobility in clinical practice. In this section, the above is followed by critically discussing the political influences and health financing as mediators in the network.

7.4.1 Tracing the Administration of NNHP and PS in Nigeria.

Nigeria runs a presidential system of government with three branches, including the executive, legislative and judiciary (Ekpo, 2007). The country operates a three-tier type of government: the Federal, State and Local Government levels (ibid). The system of governance is complex, but when it comes to the health sector administration, the

responsibility falls on the Executive arm of the government, which the President leads. The President's elected Ministers work in different ministries, including the Federal Ministry of Health (Federal Republic of Nigeria, 2023). The National Assembly is the Legislative arm of the government responsible for making laws (International Centre for Nigerian Law, 2023); hence, they are responsible for raising the Bill to pass the National Health Act of 2014 into law.

The National Health Act of 2014 was developed as a framework for the regulation, development and management of a national health system and sets standards for rendering health services in the federation and other matters connected therewith (International Labour Organization, 2014). This document, therefore, provides the authorisation and the directives for developing a national health policy. Nevertheless, the directives in the National Health Act 2014 did not have specific headings to direct the expectations for PS in the NNHP document (See Appendix 6). However, it is noted that the stated regulations cover many pertinent areas for building strong health systems, but there is no distinct link to key health themes that are of clinical focus under the umbrella of PS except Part VI, which is the regulation on *Control of the use of Blood, Blood Products, Tissue, and Gametes in Humans* (National Health Act, 2014, p. 33). Likewise, the 2016 NNHP document provides a broad approach to health governance in the country, but there are no specific statements or directives in the key areas of PS that would have been useful in developing focused clinical guidelines for healthcare delivery and clinical practice. This identified disconnect between the NNHP and PS inspired the inquiries on how policies are developed and how they are applied in clinical practice, which was previously extracted from the interview data.

The responses established key information about multiple sources of clinical policies at the level of the FMoH, State management board, local health authority, at individual hospital level and based on individual clinicians' practical knowledge from their professional training. The conversations below are examples of this situation.

Conversations FMoH 07/10/2018

Member of staff, Trauma & Emergency Medical Response Division*. I asked the member of staff their opinion on the impact of health policies made in the FMoH on patients in our healthcare institutions. She believes that, on the one hand, the FMoH is working hard to provide policies that would guide practice, but on the other hand, there is still a lot to be achieved in improving patient safety. Explaining further that there is often a lengthy time spent before improvement plans that could benefit patient experiences are approved, regarding this she explained using the example of the divisional trauma and emergency policy that was developed but faced a delay in getting it approved by the government which then meant there would be delay in implementing the policy in hospitals.*

Conversations WDH 07/18/2018

Member of staff, Intensive Care Unit*.*

She states that the Anaesthetists head the ICU, and they develop departmental policies for the ICU. However, these policies are not adhered to, as she has observed in more than four years she has worked in the unit. For example, she states that they have a policy guiding the ICU admission criteria, but this is often not respected here in this hospital because there is no coordinated communication between the referring Doctors and the ICU Anaesthetist who are to accept or decline the patient.

Conversations WDH 07/16/2018

Member of staff, Clinical Administration*.*

I explained that I wanted to know how health policies formulated at the federal level get to the hospital and how these policies are used for patient care. She explained that this hospital and two others are located within the Federal Capital Territory (FCT), as such, the governing directives come from the FCT Health Management Board to the hospitals' management board. She states that the flow of information on health policies is in a continuum where the information originates from the FMoH to the health management board of FCT and then to the hospitals. Within the hospital, there are subcommittees that harmonise all information to be passed to various departments in the hospital. I asked how specifically these health policies are broken down as practice guidelines. She said they have various standards of practice, which they place at strategic places on each ward for all members of staff to see, examples she gave include an S.O.P that itemised what to do if the staff received a paediatric emergency, where to refer gynaecological emergency cases, how to manage patients coming in with respiratory problems etc. They also develop S.O.Ps in collaboration with the Health Management board for special needs, e.g., in the case of HIV and STI management or when there are any new health concerns. I wanted to get answers that could establish how national health policies are translated into this practice, so I asked how the committees link the SOPs to the National Health Policies giving an example of how the Department of Health in the UK Collaborates with hospitals and researchers in developing health policies for various sectors but how the relevant ones to clinical practice are passed to the National Institute for Health and Care Excellence (NICE). She states that there is no similar intermediary body as I have described between the FMoH and the hospitals, as far as she is aware. She only knows that national policies are passed to the Health Management board at the State level, and they then disseminate to hospitals such as theirs. In addition to these, certain policies are developed locally. For example, safety precautions are developed by the doctors, and various departments develop their own policies/standard operating procedures independently too.

So far, it is apparent that an *actant*, thus, is not a type of agent or a category of being but the result of a process of acquisition and testing of competencies, the gathering and concentration of capacities that result from assembling a multitude of entities and subjecting them to a test or trial of strength (Lezaun, 2017), which is what all of the above considerations have attempted. The outcome of the various perspectives is the realisation that the NNHP exist legally, but there is no information on its impact on clinical practice. However, before drawing a conclusion on its actant nature, the inquiry extends by revisiting the considerations of the immutability of the 2016 NNHP.

7.4.2 The Immutability of 2016 NNHP

In previous discussions in Chapter 5, an immutable mobile is explained as something that moves around but also holds its shape in two important ways (see Chapter 5). In other words, Immutable mobiles are those objects produced by inscription and transported back to the centre, and then combined with other such objects (Jones, 2005). On the one hand, it does so

in physical or geographical space. On the other, it holds its shape in some relational and possibly functional manner where it may be imagined as a more or less stable network of associations (Latour, 1987).

An example of how inscription is produced is illustrated by Jones (2005) in the example of map-making. Jones considers it a semiotic process that allows engaging with signs and symbols instead of directly touching the messy physical nature, considering that one would not go out and deal with nature every time there is a need to make a statement about nature (ibid). For this consultation to be easy, nature has to be scaled down and inscribed for it to be examined (ibid). When it comes to achieving positive patient outcomes, the process of developing PS policies and guidelines can be imagined similarly. In clinical practice, medical information and practice guidelines are developed and updated such that every time there is a need to treat a patient, the required information is already available and can be consulted, except in new and unfamiliar health conditions where the process of information documentation needs to be done. For instance, when a patient needs surgical intervention, for example, to remove an infected appendix, the surgeon is not just starting to figure out what is wrong with the patient. All information about appendicitis and its medical and surgical interventions has already been inscribed in a medical textbook which he had consulted many times for the knowledge he needs to treat any patient with this condition. He does not need to be a pioneer in the identification of this particular condition in each patient. Even this semiotic process is questioned on various competencies, such as the question of how to establish a non-arbitrary, meaningful connection between the physical world and the inscribed world on paper or even asking the question of whether a connection even exists- that is, how do we know that the map inscribed on paper is reliable? (Kaiser, 2005 in Jones, 2005). Latour (1987) confirms this is possible by coding every sighting of any land in longitude and latitude. Though further questions on the matter of the reliability of inscription persist, another that is considered is the criticisms of the concept of immutability in its application to the study of pictures, photographs, and diagrams in science (Jones, 2005). Kaiser questions the immutability of science diagrams because he believes little about the diagram is immutable. Instead, he thinks that if there are various types of diagrams that produce a state of plasticity (mutability) where the form and content of the diagram are not fixed, they cannot be transported or circulated securely. However, Latour's concern is only about the immutable inscriptions because their transport is usually a mechanical issue, for example, some mechanical connections ensure that a ship does not sink in the ocean or that the electric circuit does not break down (Jones, 2005). By implication, in the case of health policies, Kaiser

would be questioning the uniformity of the content of a policy, whereas Latour's concern is much more focused on how the content is ensured to be effective and upheld for use without becoming dormant or irrelevant in health care delivery. This could be what holds the policy text, such as the paper it is printed on, a digital device through online delivery of the information, or humans who transmit the text to others. Thus, going back to the example of the map - the map is immutable, while a person's drawing of the map on the sand is not (Jones, 2005). Essentially, by drawing a map on paper, the remote land is brought back to the centre while not actually taking the physical land (ibid). While Kaiser's question on reliability is already answered in earlier reference to Latour's opinion about maintaining the reliability of the map by ensuring the correct inscription of the longitude and latitude. The reliability of PS clinical guidelines backed by a NHP would be validated by the globally acceptable PS themes that require focus and the patient outcomes from its application that are peer-reviewed and scholarly shared widely. Latour (1987) further justifies the notion of immutability on the premise that "In a linear perspective, no matter from what distance and angle an object is seen, it is always possible to transfer it – to translate it- and to obtain the same object at a different size as seen from another position. In the course of this translation, its internal properties have not been modified" (Latour, 1987, p. 7). The foregone discussion has achieved an important finding of sociological grounds to explain the importance of the inscription of health policies and the belief in their validity and usefulness as a preamble to further interrogate its effectiveness.

Nonetheless, the effectiveness of the NNHP can only be assessed when its mobility can be established.

7.4.3 The Policy Mobility

The notion of the immutable mobile is presented as a way of thinking about long-distance control and, at the same time, the work that goes into moving scientific facts around, thereby producing their apparent universality (Latour, 1987). For example, if objects such as codes, information, people such as technicians, soldiers or bankers, technological bits and pieces such as ships or scientific instruments, texts such as orders, newspapers, or money orders are able to hold their relational shape as they circulate around the globe, then long-distance control is a possibility (ibid). The latter, then, depends upon such immutable mobiles (ibid). It depends upon a process in which networks of relationships are built up to secure immutability on the one hand and mobility on the other. These are considered durable materials - one that holds their relational patterns for longer (ibid).

The durable materials that hold their relational patterns for long in this policy document are attributed to the network between, initially, the driving force for the production of health policies which lies in the need for national health improvement by strengthening the health systems and the act of conversations that produced certain agreements in what needs to be done (NNHP, 2016). This network maintains its durability through the powers that confer authority over the policy document in its production and its establishment as health policies in its textual form. This power and authority come from the legislative influence that made this happen through the implementation of the National Health Act of 2014, which was the legal framework on which the NHP document came to be produced. In addition, the ratification and the enactment of the policy document happened in June of 2018 through the executive power of the office of the President of Nigeria that granted the authorised national use of the policy document. Nevertheless, when it comes to the mobility of the NHP to the clinical institutions with focused reference to influencing PS in practice, it forfeits its actant nature for obvious reasons. In the first place, we realise that the country's executive authority develops the NHP that possesses a wide coverage of many areas of health focus, but there is no outstanding attention on PS. This implies the impossibility of identifying a suitable technical department or division in the FMoH that is responsible for ensuring the administrative and clinical management of PS in healthcare facilities (human mobility). Furthermore, it is impossible to regulate structured PS strategies in clinical practice when there is none. Besides, if there was a PS standard for clinical practice, the national regulatory division would find it challenging to do its job due to a lack of funding, as demonstrated in the conversation below.

Conversations FMoH 07/10/2018

Member of staff, Inspectorate Division. *She began her discussion by informing me that her division's role is to inspect health institutions' performance and best practices from time to time, but the department had not been functional for a while. The reason being that the FMoH does not regard them as fund-generating departments. As such, they don't get the necessary financial support they should get. She states that this constitutes a negative impact on patient safety if the inspectorate body is sub-functional. Some malpractices cannot be monitored and corrected.*

The foregone discussions have enabled a determination of the difficulty of the mobility of the NNHP. Therefore, this requires a return to the attempt to answer the question of why the 2016 NNHP became displaced and retains only its actor nature when tracing its role in PS. This status transmits a significant possibility: the inability to translate the policy to clinical practice. This is discussed and evaluated in the next section.

7.5 Determining the Translation of the NNHP to clinical practice

The comparisons in tracing the role of the NHPs in relation to PS in the three health systems highlight the Nigerian status as predicted by Latour (2004). Though the NNHP fit in the existing structure, the essence of the actant can still change form at the same time as the existing structures are often also changing (ibid). In essence, the consultations with the spokespersons of the various existing structures (the status of NHPs in England and America) *Institutionalise* the NNHP in a legal system, but many changes occur to the different structures along the way by the entrance of mediators and intermediaries that distort the *role(s) of the NNHP* in relation to PS (ibid).

Apart from establishing the lack of mobility of the 2016 NNHP in relation to PS, the consultation of other health systems in exploring their national health policies to deliver guidelines for PS practices in clinical settings adds another spokesperson to the inquiry. This is achieved by ensuring that the number of spokespersons who participated in filling in the actant is not arbitrarily short-circuited (Latour, 2004). The point is to fulfil the need to see how the actor can 'coexist' with everything already existing by formulating this process as a *categorical obligation* (ibid)/*Obligatory passage point* (Callon, 1986), that is, making NHP functionally indispensable (Crawford, 2004). This is necessary because the assessment of the NNHP requires that it possess features, such as meeting the international standards expected of health policies especially the policies focusing on PS and the availability of specific clinical guidelines that fit prescribed standards.

As a result, what has been achieved is locating the hierarchy of the *role of the NNHP* within existing structures of NHPs in relation to PS through comparison with two health systems. This is illustrated in Fig. 22, p.186 as shown below.

Comparison of NHPs in Relation to PS in Three Health Systems

Country	How Health Policy is legislated	Policy mobility through Government Agencies	Transforming policies to practice guidelines/protocols. Examples of core PS standard of operation (S.O.P)	Examples of Policy-guided practice at the point of service delivery.	Healthcare Performance Regulators
England, UK	The UK Parliament ⬇ The Secretary of State Directs the Department of Health and Social Care. Maintenance of PS standards is upheld in the- *PS Policy in the Health Care Act 2022 (C.31), PART 4, No 135* ⬇ DHSC Directs Twenty-Four Agencies and Partner Organisations. ⬇ Most Prominent Agencies Actioning PS Agenda- The NHS, NICE, and CQC.	NICE NHS England	1. Safety- IPC policies-*Guidelines for treating patients with infectious diseases. 2. Blood Transfusion Policies. 3. S.O.P. for safe surgical practices.	*Guidelines for the care of patients with Influenza (Flu), Methicillin-Resistant Staphylococcus Aureus (MRSA) *Guidelines for administration of blood and blood products. * Guidelines on performing time out.	CQC (Functions can be verified through monitoring and evaluation reports of health institutions).
United States of America	The Three Branches of the US Government (Legislative, Executive, & the Judiciary). ⬇ The US Dept. of Health & Human Services Secretary directs the department. PS is *Enforced by –* *PS Act in Public Law 109-41, 2005* HHS works with Agencies Interpreting PS Laws into Clinical Guidelines for Practice. ⬇ Nine Agencies & Three Human Services. ⬇ Most Prominent Agencies Actioning PS Agenda- AHRQ, CDC, NIH, and SAMHSA.	CDC	Examples as stated above	Examples as stated above	JCAHO (Functions can be verified through monitoring and evaluation reports of health institutions).
Nigeria	The Executive Branch of the Nigerian Government- The National Assembly. ⬇ Develops the National Health Act, 2014. Instrumental to the development of the NNHP, 2016, by the- ⬆ Federal Ministry of Health	None	Some clinical guidelines exist independently (they are not organised under the categories of PS clinical guidelines but are focused on ensuring the safety of patients).	For Example: - Guidelines on Snake Bite management - Guidelines on Malaria management	Inspectorate Division. (Department is sub-functional due to lack of funding).

Figure 22: Comparison of NHPs in Relation to PS in Three Health Systems

What has been achieved is the provision of points of reference by which the NNHP has been examined. These points of reference are insights into why the role of the NNHP cannot answer the two questions that would determine its agency. First, the entity does not make a difference in the course of some other agent's action because, to start with, within the legislative administration of the NNHP, the strategic management for PS is not clearly stated therefore, there is no inclination to allocate the responsibility for its implementation to either human or nonhuman actors who could be influenced to trigger actions that would make the PS roles active in clinical practice. This gap also speaks to the problem of mobility of the policy. Secondly, since there is no PS ACT within the NNHP, the entity does not go through any trial that allows the opportunity to scrutinise its agency.

At this juncture, the statement of the 'coexistence' of this actor with the existing structures can be seen as the starting point of the translation and the critique of the actor-network

(Latour, 2004). However, the institution goes much further because the actor now belongs to the existing structures. It is therefore important to close the discussion (ibid) at this point because, according to Latour, from the moment an actor is institutionalised, the legality of the new reality is no longer questioned, but it should be noted that new actants will continue to emerge who will also exert influence on the now institutionalised actor. In essence, a phase is completed when it is determined that the NNHP remains an actor and can be located within the legislative and administrative health governance of the country. However, this is not a static situation, as things constantly change. Law (1990) articulates this well in his reference to learning about objects. First, learning that they may reconfigure themselves; second, different realities may be loosely rather than rigidly associated and third, learning that material semiotics does not have to imagine a single actor-network. This is the fluidity of the methodological process of ANT (Mol, 2010), yet it remains strongly instrumental in elucidating complex layers of information such as this (Law, 1992).

As pointed out, the network is not a static situation because the NNHP in itself is a mediator, and it coexists with mediators such as policy mobility, political influences, and health financing. So far, the unpacking of the entities of the NHP and policy mobility has been completed, and the political influences and health finances are to be critically discussed next.

7.5.1 The Entities of the Actor-Network Significant in the Relational Activities between Policy and Practice in Nigerian Clinical Settings.

The foregone discussions on the NNHP and its mobility as mediators in the network provide the lens through which other mediators in the network can be translated. It is important to establish and evaluate the activities of other entities and how they disallow the evolvement of the NNHP from an actor to an actant (Crawford, 2004).

The network influences that changed the course of the NNHP emerged to be multiple entities as identified, especially by interview respondents and some identified in conversations during field observations. General opinions border on certain political actions which are believed to be responsible for a chain of other situations that are not beneficial to achieving PS strategies in clinical settings. For instance, the interview respondent in the exemplar below believes that certain political actions necessary for ensuring positive outcomes on an agenda are lacking.

Interview: INT 2 FMoH 7/9/18

Interviewer (female): *And finally, so I can let you go, Sir, in all of this does your team encounter any limitations or challenges along the process of this health policy management continuum?*

INT 2 FMoH: *There have always been issues of challenges- First, the last policy we used took almost two years to come to play, in the process a lot of people were retired, some moved up so when you are calling people it's like as if you are starting afresh. Secondly, the issue of finance, most policies come to play when the financing mechanism is well defined not when because of budgetary allocation and what have you; you don't have the necessary resources to follow out the timetable you have set for yourself this at times also cause problems. Again, there is a mix of political issues with technical issues most of the time health is technical as well as political. The political master is the one to do what the electorate will identify with. You might not be technically correct but at times you need to marry these two. So the challenges are one finance, two the long drawn out policy process, three the… healthcare people and health policymakers and …intersectoral agencies because most times when you invite them for a meeting about policies they send their worst person, not somebody who understands the intersectoral nature of health policies and finally a lot of people need to be trained on how to draft health policies because like you said it has to go according to a particular framework which is used to remain focused in getting whatever you need. These are some of the challenges we grappled with.*

The impact of this lack of leadership politically is believed to be responsible for a number of issues, including finance, delayed policy processes, and incompetent representatives participating in health policy development. A respondent supports these views because they are of the opinion that the problem at hand is one of policy failure due to weakness in the authoritative actioning of various policies that the department requires to function adequately.

INT 8 WDH 07/25/18: *Right now the thing is what I was talking about is a different thing I was talking about a failure of the policy not the policy itself not an error in the policy but a failure in implementation of the policy not that the policy itself is flawed but even with regards to that they don't review these things as often as they should and so new medicines come up every day and disease conditions are switching and shifting so but when you have to be constrained lets be frank they have not gotten to the point of constraining us but let's assume we were having to be constrained then these medicines because they will tell you anyways they are trying to get everything that the majority of people need on the list not that its what everybody needs so the list never covers for everybody it attempts to cover for a majority of the people so the thing there is if it could be reviewed as frequently as it ought to for example NHIS scheme we had a pricelist as old as 2002 I think they finally did something in 2015 but it was actually a 2013 review that came out in 2015 and on that list the original 2004 list lacked a lot of stuff prices were all wrong now the new one that came agreed added a number of drugs that were now current but still obsolete because it was coming in 2015 and this was a 2013 review and I don't think they have any other one till now so that was a 2013 review came out in 2015 and in 2018 there is no new one I heard they are working on it anyway. So, it's about policies being dynamic there should be avenues for if we are not able to review all aspects of the policy as at when due, can we do some reviews in certain aspects, so we move on? Medicine is changing everyday stuff that we never knew about is all coming out, so we never had this level of kidney disease three, four, or five years ago.*

Other respondents spoke about similar concerns as seen in terms of the phrases used, such as impacts of corruption, lack of political willingness, financial constraints, workers' dissatisfaction, staff attitude, poor human and material resources, lack of appropriate infrastructures, poor governance and failing political system. Nonetheless, the most significant references point to the issue of health financing generally, including specific references to certain outstanding situations at the national, state, and local government levels.

These expressions identify political influences as a mediator in the network, especially in terms of its transformative activities in financial responsibility in the county's health systems management.

It is, therefore, worth noting some perspectives in the actant nature of politics in aspects of health policies in healthcare service delivery.

7.5.1.1 Politics as a Mediator

Politics, for better or worse, play a critical role in health affairs (Oliver, 2006), especially when the expectation is that legislated health laws should be recognised and respected by all (Tarantola, 2012). There are high levels of interest in the political analysis of health policy and policymaking, especially in unpacking how political economy, party politics, interest groups, and institutions obstruct or facilitate particular public health policies and outcomes (Greer et al., 2017). Consequently, the various insights on the potential for strong and actionable health policies are where visible and significant political presence is identified. Unfortunately, several concerns often crush these perceived potentials, which is also expressed in many studies.

Tarantola (2012) illustrates the highs and lows of the entanglement of public health policy and politics in the management of HIV/AIDs in the involvement of harm reduction approaches central to the management of all categories of public health conditions, especially where immediate solutions for cure are not available or where there is an absence of treatment with vaccines (ibid). The approach has been proven to be of choice aimed at minimising individual and collective negative impacts, with achieved successes evident, for example, in the decline in HIV prevalence and incidence in the last two decades, especially in cases related to sexual behaviours and amongst injecting drug users (IDUs). These successes are attributed to the role of public health policies in promoting measures preventing the use of unsterile equipment which has been the source of HIV, Hepatitis B and C spread (ibid). Studies that establish this evidence have also been instrumental in policy change, especially in adverse environments, by making sterile injection equipment available to drug users and switching from injection to less harmful forms of drug use, such as the oral administration of opiate substitutes, that substantially lowers risk and transmission of HIV (ibid). This harm-reduction approach has recorded positive outcomes for individuals, the community and public health because the evidence strongly supports structural changes that lower vulnerability to HIV and other blood-borne infections (ibid). Unfortunately, the boundaries of some health laws, their interpretation, and enforcement are inconsistent when what appears to be a logical link between public health rationale to policy, politics, and policing has many weak links (ibid). This concern is seen when law enforcement authorities have occasionally displayed greater understanding than policymakers and legislators that neither the ‘war on drugs’ nor HIV prevention are served well by occasional, random crack-downs on drug users or their deprivation of access to harm reduction methods (ibid). Moreover, desirable policy changes have been hampered by ignorance, neglect or denial within government and political circles

because even where good policies exist, they are either insufficient or not even supported by legislation or state capacity to enforce them (ibid). In Tarantola's opinion, the profitable thing would be to have evidenced, informed political agenda directed to induce public understanding and acceptance of these changes and support their permanence in existing or new legislation and regulations (ibid). But then, this is not the case, as a disconnect remains between such policies; as may be embodied in national HIV/AIDS strategies, on the one hand, and laws, decrees and regulations that prohibit its implementation on the other (ibid). Tarantola reports that ever since HIV emerged, policing has been blamed for creating obstacles to access by affected communities to prevention programmes primarily intended for their benefit. Despite these general challenges, the majority of Southeast Asian countries have had good tolerance for ground-breaking harm-reduction projects, even though they were not entrenched in or were prohibited by policies and laws (ibid). Even if this situation is believed to be present in many countries regardless of their level of development, the tolerance, which benefited a number of these projects, as fragile, unpredictable, and subjected to repeated setbacks as it was, has all allowed projects to gather the evidence supporting harm reduction approaches and combined with international advocacy to persuade policymakers that it is time for a change (ibid).

In this scenario, the actant nature of politics itself is very fluid in that it is either displaced by other entities, such as the reasonability of the law enforcement agents, or it is displacing an entity, such as the actions taken in harm reduction strategies in the provision of sterile and individual materials to IDUs through laws that prohibit these strategies with the resultant failure of the desired outcomes. Consequently, where ineffective laws disallow any interaction other than repression and coercion between enforcement officers and drug users, the interpretation of the law is left to those expected to enforce it. Such interpretation is dangerously flawed, however, by the lack of clarity about what comprehensive drug-related harm reduction should actually entail in given geopolitical and epidemiological contexts, the inadequacy of guidance and skills received by law enforcement officers, the misconceived incentives offered to stimulate IDUs' interventions, and abuses of power end up being associated with or translated to personal profits.

Meanwhile, some individual and general public health issues are political and require political decisions to impose restraints on individuals in circumstances that require compensating for externalities, that is, actions that produce significant effects that can sometimes be beneficial or harmful (Oliver, 2006). The only purpose for which power can be rightfully exercised over any member of a civilised community, against his/her will, is to prevent harm to them and

others, such as private actions including smoking, vaccination, driving while intoxicated, and sexual practices (ibid).

Further, Greer et al. (2017) assert many circumstances in which the status of politics can be considered in relation to the functionality of health policies. Sometimes policymakers might be the actors in the relations between politics and health policy because of the observation that many public health professionals consider engaging with the political system to be outside their area of expertise or mandate when the public health community limits itself to a technical health expert advisory role for political decision-makers. They tend to prepare advice that might never be requested for reasons that are not understood (ibid). In other words, health professionals appear to be shaping or encouraging the political responses to health policies and are not sensitive to the outcome, good or bad. Similarly, academics reproduce and further strengthen political disengagement by publishing analyses of health issues and policies that neglect the characteristics of the political system (ibid). For example, "Numerous 'calls to action' exist in the literature, alongside calls for 'political will', still, more articles identify problems but offer, at most, policy recommendations that go unheard beyond our paywalls, as if the politicians were to blame for not reading our journals and inferring what to do" (Greer et al., 2017. p. 40). Essentially, these actions show a weak understanding of politics by health academic professionals because there shouldn't be a demand for political will as a solution to policy problems just as health professionals would not, for example, call for 'individual will' as a solution to obesity (ibid). Although this is a problem of inadequate balancing of political knowledge needed to influence appropriate health policy formation and execution identified as ineffective performance at the level of public health leadership (both in academic and management sectors), equally important is the deliberations about the impact of the foundations of Nigerian legal institution as a political influence in the process of health policy development and implementation.

The perspectives on the foundation of the Nigerian legal system and its impact on health policy development are drawn from the critical analysis by Iyioha and Nwabueze (2015). The nature and background of Nigerian health policy development are believed to be constantly influenced in many ways because of the assertion that Nigerian health Law and Policy have a long history of transplanted colonial legal norms that have generally impacted health care legislation. For example, the general framework of medical professional regulation seen in the Medical and Dental Practitioners Act is an inherited British legal norm. Given this background, Iyioha & Nwabueze (2015) raised important questions, such as how would healthcare be governed if there were no colonial legal norms influences? Would there have

been health policies to guide healthcare practitioners? These questions would no doubt beget further questions perhaps, such as – who would be a health care provider and what type of health care services would be available? These questions came to mind when reflecting on the act of the mediator- the origin of the Nigerian health law and policy in shaping the nature of today's health policy. Health policy in Nigeria has journeyed through years of experimenting with different healthcare initiatives, policies, and developmental plans (ibid).

Iyioha & Nwabueze (2015) opined that framed around early colonial plans, the array of policies, initiatives, and plans, including the more recent National Health Insurance Scheme, have done little to address the myriad problems confronting the health system today. Iyioha and Nwabueze's views on this assertion stretch across salient aspects of the fabric of society and their relatable significance in matters of health care; these views are summarised in the following texts.

In Iyioha & Nwabueze's (2015) discussions, Systems challenges such as a shrinking health budget, rising healthcare costs, and out-of-pocket healthcare expenditures continue to plague health services delivery. It has been argued that many of these problems are debatably the extended corollaries of the 1960s political transition to independence when foreign medical professionals returned to the UK, leaving only relics of medical infrastructure and personnel in the local health system; also, arguably accountable for the perennial problems is a post-independence system that ties itself to transplanted norms that are the outcomes of different ideals, cultures, and visions. Whereas the institutional and operational framework, as well as the development of the Nigerian health system, is shaped by the traditional influence of economic and political dynamics, as well as by social, cultural, and religious factors. A country like Nigeria, with over 200 million people, well over 250 ethnicities and languages, and with sharp divisions between its Christian and Muslim and, in some cases, Traditional religious groups, has different priorities, interests, and needs from those of any Western nation. These needs and priorities are amplified by the economic and political factors prevalent in the country, as well as by Nigeria's social and cultural values. An example is the country's heavy dependence on alternative health resources. Not only is this dependence economically motivated to supplement the shortcomings of the biomedical system, but the practice is also deeply cultural and highly driven by religion. Thus, the Nigerian policymaker who intends to apply to the regulation of alternative health care delivery in Nigeria rules that are effective for the regulation of the UK or Canada's complementary and alternative health systems would need to ensure that the transplantation of rules from either of those systems to the receiving states recognise the unique needs and differences in purpose and vision of the

people to whom the law is to be applied. The policymaker or lawmaker would also need to recognise that the healthcare choices Nigerians are faced with are not between a private healthcare system that charges for a broad menu of high-quality services and a public system that offers essential services at little or no cost. Rather, all patients, consumers, and users, including the wealthy and the indigent, are confronted with a bewildering array of sources for healthcare, from medicine peddlers to traditional healers to highly trained specialists to civil servants setting up private practices of widely uneven quality.

Moreso, the diversity of ethnic and religious values in Nigeria has an outstanding recurrent element in the narrative on healthcare rights, given the role of social, cultural, and religious norms in either enhancing or impeding access to and delivery of health services. Indeed, a manifestation of the socio-cultural and religious norms on the effective delivery of health services in the country, especially specialised services such as abortion and reproductive and sexual health services, played out in a situation during the ethnographic fieldwork is narrated in the exemplar below.

Observation WGH: July 26th, 2018.

A visitor is standing by her patient, who is sitting on the edge of the bed. The visitor is said to be the patient's older sister. The visitor started to look through the patient's folder. One of the staff members went to tell her not to read the patient's folder because it was breaking confidentiality. The visitor got angry and claimed she had a right to the document because she brought the patient to the hospital, and this is her sister who lives with her. She then collected the paperwork and hid it in her bag. She said the doctor had to explain to her why the patient needed a blood transfusion. She was advised to leave the ward as the situation was affecting the patient, who is now crying. One of the Doctors went to speak with the patient to calm her down. The situation was later managed by one of the nurses who spoke to the relatives about confidentiality and the treatment plan, which required the family to assist the patient in buying necessary medications and the purchase or donation of a unit of blood to be transfused. The patient is still crying because, according to members of staff, she is reliant on her family for the hospital expenses. Some other family members arrived, who went to purchase medications. The patient was then transferred to the gynaecology ward. Afterwards, a member of staff informed me that the patient's sister wanted to confirm if the patient had an abortion and if that was the case, she was not going to pay the hospital bills.

The exemplar above demonstrates the multifactorial narrative about the nodal dynamics between culture, religion, and morality (Iyioha & Nwabueze, 2015). In the above scenario, the cultural standards support the older sister's authoritative behaviour over the younger lady, even though she is an adult, while the religious belief in the morality of the act of abortion gives the sister some 'type of right' to withhold financial support to her younger sister even in a serious situation of anaemia requiring blood transfusion. In this situation, there are multiple layers of problems, ranging from the ignorance of the older sister, who is arguably acting against the law by infringing on the patient's right to confidentiality and may not be morally right to threaten her sister with financial alienation unless allowed into the details of her medical history. On the other hand, it appears the government is failing in a number of ways here. First, the patient, who is a young adult and at an employable age, is jobless because of the unemployment crisis in the country and, because of this, she is dependent on her older

sister. Also, it was suspected that the patient had used the services of untrained personnel for her abortion and was now suffering from the complication, which eventually landed her in the public hospital where she now needs emergency treatment. Within this narrative, there are actions the government could embark on to safeguard vulnerable young adults like this patient and many actions that could be litigated by the government. For example, there could be a reporting and tracing procedure to identify quack practitioners through the hospital when women attend after such damaging procedures.

Indeed, the diversity of ethnic and religious values in the country has an outstanding recurrent element in the narrative on healthcare rights, given the role of social, cultural, and religious norms, in this case, in hindering access to and delivery of health services (Iyioha and Nwabueze, 2015).

Greer et al. (2017) also considered the influence of politics on reasonable public health policies, with a focus on the role of the government. Take, for instance, the debates on climate change, where public health evidence and expertise are opposed against power (ibid) where the US government has taken an anti-scientific stance, denying the well-established research on global warming or the significant implications the rise of the populist radical right could have for vulnerable groups, including hatred towards migrants, and policies of exclusion rather than inclusion that are entirely opposed to public health goals (ibid).

Moreover, evidence-based medicine is another perspective still dominant in today's clinical, as well as the public health, world, which assumes the primacy and purity of scientific evidence in informing health policy and health practice. The idea of generating scientific knowledge and producing immutable evidence was that scientific evidence would automatically and magically turn into solutions, be they appropriate and effective policies or better practices. Meanwhile, that idea has not been borne out by reality (ibid). There are different ways of generating, using, transmitting, and applying these different knowledge forms for the betterment of the world. Authors argue that knowledge is inherently political in its colourful diversity as it affects politics and is shaped by politics (ibid). Hence, although the power of politics in setting health policies into action becomes significant, a great challenge emerges when policymakers attempt to translate knowledge into action for the collective well-being of society. As such, although science can identify solutions to pressing public health problems, only politics can turn most of those solutions into reality (Oliver, 2006).

These perspectives create an actor-network where the relationship between politics and health policies is made and remade by mediators and intermediaries, more so, politics and health policy interchangeably act as a mediator or an intermediary too. This fluidity can be attributed to the view that politics is a central force in determining how citizens and policymakers recognise and define problems with existing social conditions and policies in facilitating certain kinds of public health interventions but not others and in generating a variety of challenges in policy implementation (Oliver, 2006). Meanwhile, governmental responses are influenced by the perception of the severity of the problem, responsibility for the problem, and affected populations (ibid). However, what often takes place involves restricted rationality, fragmented political institutions from concentrated interests, and fiscal constraints, which often lead political leaders to adopt incremental policy changes rather than comprehensive reforms, even when faced with serious public health problems (ibid). The relationship here is a friction of multiple activities that produce challenging circumstances in executing health agendas guided by policies. Nevertheless, these are not totally unmanageable because, for health policies to achieve their goals in any agenda for which it was created, policymakers need to understand policies and outcomes. Above this, they need a sophisticated understanding of political systems and institutions that shape the political processes and conditions for policy adoption (Greer et al., 2017). Moreover, it is essential that public health professionals understand the political dimensions of problems and propose solutions, whether they hold positions in government, advocacy groups, research organisations, or the healthcare industry (Oliver, 2006). This understanding can help leaders to better anticipate both short-term constraints and long-term opportunities for change (ibid). Nonetheless, to effectively gain access to policy decision-makers and influence their decisions, generating evidence of how political systems, institutions, and processes reduce the success or failure of public health advocacy and policies is a crucial first step. Indeed, without such intelligence, public health interventions are not likely to generate sustainable impacts (Greer et al., 2017).

When it comes to the political influences in terms of the NNHP, many of the perspectives discussed are elements seen in the interactions in the actor-network, as earlier mentioned. The significant perspective in terms of the NNHP borders on economic structures, with outstanding references to health financing. Again, economic structures as a political influence on health policy is also a global phenomenon and are discussed from a number of different impacts depending on circumstances in each community.

Greer et al. (2017) opine that economic structures also shape health options, given that public health policy analysts accept that determinants of health lie beyond the health system. They

also recognise that economic outcomes are often politically determined in the wider economy and structure of inequalities; however, in their policy analysis, they tend to focus on the government's tax and expenditure decisions (ibid). However, that perception is barely accurate if the differences in societies are not taken into consideration. For example, the idea does not adequately reflect life in decentralized economies such as in English-speaking countries and fails to reflect the strength of organised labour markets in shaping inequality, gender relations, and the nature of employment and education in other countries (ibid). Thus, for example, public health status and organisation depend on healthcare funding schemes (ibid); but in welfare states with a social insurance scheme, public health runs the risk of having public health primarily narrowed down to medicalized interventions in basic insurance benefits. Although an opposing view acknowledges that healthcare and welfare policies of nations, as well as the number of investments put into these areas, vary across countries. For example, the study that evaluated the healthcare investment efficiency and health competitiveness efficiency in 34 developing countries in Asia found that the establishment of an investment environment with a consolidated approach and management is an important factor that increases the efficiency of investments in healthcare and welfare sectors (Kim et al., 2020). This study was driven by the awareness that setting the investment directions for healthcare and welfare systems through policies and regulations by the government implies compliance at both national and societal levels (ibid). Moreover, because the budget for healthcare and welfare investments is usually constrained within the government's overall budget system, an investigation of the efficiency of investments in health and welfare was deemed essential and effected (ibid) which produced the reported result. Therefore, the political economy of public health, such as its relationship to social insurance and different kinds of labour markets, is a major area where publications research and applied education are important for public health professionals (Greer et al., 2017). WHO (2023) states that incorporating political economy analysis into health financing reforms processes can help policymakers develop more effective approaches to navigate political challenges that arise when introducing policy change. Additionally, it is important to evaluate the divide between public health and political science because health policy writers have a strong tendency to assume that enlightened health policies depend on 'political will' and that they can overcome inertia and industry lobbying or that framing (the understanding of forces that shape human behaviour in the policy process (Koon et al., 2016)) or policy entrepreneurship leads to the adoption of policies (ibid). That is not the case, as will and framing are not the only variables predicting political success. Even successful framing can produce perverse results: a focus on inequalities in health directed policy, attention not to the underlying social and economic

inequalities, but rather to public health interventions are never likely to reverse the inequalities of modern society (ibid). These challenges have led to global advocacy for health financing reforms. This is a huge topic in global health development because it is a core function of health systems that can enable progress towards universal health coverage by improving effective services coverage and financial protection (WHO, 2023).

Since health financing emerged as one of the main mediators in the actor-network, the discussion progresses to evaluate the conversations that speak to this entity.

7.5.1.2 Health Financing as a Mediator

Many things indicated health financing as a major actor to be considered in the network, mainly drawn from conversations with the administrators and clinicians, interview responses, and observations of the environment of the institutions visited.

The conversations and interview responses presented various perspectives on health finance, such as the structure of the budgetary disbursement in health institutions.

At the Federal ministries

Week 1:Tuesday 26th June 2018
FMoH.2 *came off the phone and greeted me again. He apologised for being on the phone but explained that he was responding to a WhatsApp group where the strategy for setting up a new budgetary system for the department was being discussed.*
He explained that the formal system that was in place was an "input and output" system where money was allocated from the federal government to the ministry. He states that the Director and the Permanent secretary usually allocate the funds to various departments to be used. He said the change now focuses on setting up a strategy-driven budget and outcome measurement oriented.
He said this change was the initiative of the minister for health, where some partnerships have been established to support this change process. He said the World Bank was consulted. There is a partnership with the Bill & Melinda Gates Foundation and Price Waterhouse Coopers (PWC). These various partners are collaborating in various ways on this project. For example, the PWC was consulted to do the needs assessment of the planning & statistics department so that a plan could be drawn up to ensure the change to a new system would succeed.

Hospital Financing

INT 7 WDH 07/20/18: *It is semi-autonomous, as it were, in terms of structure. We are not totally independent. We are still attached largely to the board and through the board to the secretariat, that is, the ministry FCT ministry. At the top, we have the health secretary, like the commissioner of health in FCT, who still has indirect control through the board's health management boards have a general manager of the board, we can have director of clinical services, then we have the medical director who oversees the day to day running of the hospital but a lot of things we have to get approval from the board in terms of expenditure there is a sealing which the MD must get approval for, and I would tell you it is a N100,000. He cannot sign any cheque above N100,000. N101,000, he has to get approval from the general manager when it is above N150,000, then the general manager must get approval from: the secretary of health, and then I think there is a limit too above that the secretary of health must get the minister's approval, but I won't know the specific amount now, but I know for medical director it is N100,000 for the general manager it is N350,000. I think above N2 million, the secretary of health must get approval of the minister for any purchase.*

Interviewer*: So, in that sense, do they release the funds to the hospital, or how does that happen? Do you just tell them what you need, and they sort it out?*

INT 7 WDH 07/20/18: *No, the money is still largely most of the time; the money still comes from within. We generate the money that we use, but we can't use it without....we generate it we warehouse it into various accounts. We have an insurance NHIS account and, a service account for different purposes.*

Although there was a popular acknowledgement of the efforts made by the government to establish the national health insurance scheme, significant opinions were expressed on the aspect of government failure in fulfilling national strategies on health financing, and a lack of funds to run health departments or to provide resources at clinical institutions.

Int 1FMoH 7/5/18 *So the next agency in the ministry is the national health Insurance Scheme because in other to see how we can ease the financial burden of Nigerians towards accessing health care, that was how the establishment of the national health insurance scheme came about and I think the percentage of enrolment of Nigerians is actually still below 8% and the reason is that because it is only the formal sector that has actually been enrolled into the national health insurance scheme so these are the only people that are actually enjoying the health insurance policy but I think most states are now coming up.*

Conversations FMoH 07/09/2018

Member of Staff, (Dept. of Hosp. Services) *She referred to the 2001 Abuja declaration signed by the Union of African Leaders, who agreed to allocate 15% of their national budget to healthcare improvement, but they have not lived up to that expectation. She said in Nigeria, following this declaration, there was a health financing review where the federal government had pledged to allocate 1% of its gross revenue to improving healthcare services, but this has not been fulfilled either. In her discussions, she also explained further what she meant about corrupt practices. She gave an example of some problems with the dissemination of policies. She states that when some policies have been developed and printed into documents, the appropriate stakeholders and divisional heads are meant to get these copies to the end users in their various institutions. Now here is the problem- because there is an approved practice that funding should be allocated for this to happen, officers who could have easily taken these copies in their cars so that it gets to the end users will refuse to do so. Instead, they will be budgeting for this, and when the budget is not covered, the policy booklets are left to rot away where they are kept in the Ministry of Health because of a lack of responsibility to ensure information dissemination.*

Conversations FMoH 07/10/2018

Member of staff, eHealth Division (Dept. of Hosp. Services) *"My division is relatively new, but it is not thriving very well due to lack of funding. I believe that this division can contribute a lot to patient safety if records are managed electronically because it reduces mistakes, and information can be held securely and retained for reference purposes. However, the lack of funding is preventing most of the initiatives in various divisions to be paralysed and unsuccessful".*

There were also observed indications of poor material resources, given the physical appearance of the institutions visited and the available facilities. At the FMoH, the dilapidated state of the office buildings was a concern, as one could see dark spaces in the ceiling due to the broken ceiling squares. The wall paints appeared faded, with dark marks in most areas.

The ceilings and some parts of the walls looked damp from stains from leaks from the rains. Also, on the walls and on the floors are loose electrical wires and the office rooms are crowded. This appearance was no longer a shock when it appeared to be the same situation in some of the other institutions. At the tertiary hospital, on entering the main office building, although a strong looking structure, the general appearance of poor maintenance was also showing here. There were loose electrical wires, peeling or faded wall paints, and puddles of water on some parts of the corridor/walkway. More concerning was the observed environment at the visited emergency departments (ED) at the clinical institutions. A common feature of all these EDs is the small spaces, use of worn examination couches, and sub-functional ED trolleys.

The rooms were crowded and not well ventilated. At one of the EDs, no hand-washing basins were seen in any of the emergency cubicles. A staff member confirmed none were available in the patient areas, instead using the sink in the staff toilet or the one in the patients' toilet. Many of the equipment appeared worn, with some not functioning properly. Safe storage of hospital supplies and some medications in some of the ED was also a concern, as things were left open to view on shelves without doors or locks on them.

The workspaces for doctors and nurses were often limited, and where electronic charting was done, the computers were not enough, struggling with consistent internet disconnection.

Clearly, healthcare delivery under these circumstances was bound to struggle to perform at a standard that would support PS strategies. To evaluate and understand health finance as a mediator, its status was interrogated.

7.5.1.2.1 Health Financing in the Nigerian Health System

Interestingly, information from the primary data of this study and others from secondary data sources validates many aspects of the report of the situational analysis done during the process of developing the 2016 NNHP, especially in terms of the status of health financing in the Nigerian health systems.

The report presents the various perspectives on the different initiatives the Nigerian government has developed and making efforts to execute in order to advance the country in socioeconomic growth, both at national and international levels. Nigeria is a signatory to several global initiatives and agenda on health and development, including their commitment to the Millennium Development Goals (MDGs) and the Sustainable Developmental Goals

(SDGs), the Abuja Declaration in the year 2000, where 189 heads of state adopted Millennium Declaration, designed to improve social and economic conditions in the world's poorest countries by 2015 (WHO, 2010; NNHP, 2016), the Rio Political Declaration on Social Determinants of Health in 2011, in which governments resolved to take appropriate action on the social determinants of health in order to create vibrant, inclusive, equitable, economically productive and healthy societies, the signing of a global commitment to Universal Health Coverage (UHC), the principles of Alma Ata, and the Ouagadougou Declaration on PHC (NNHP, 2016). These undertakings suggest a leadership with a strong desire for good governance of the country's affairs for every citizen's benefit. However, the expectations of the delivery of the government agenda to achieve these declarations are disappointing.

Health Financing in the Nigerian health system has been one of the leading priorities of the government because of the commitment to achieve universal health coverage (UHC) through improved primary health care services (NNHP, 2016). A response to another leadership call by the World Health Organisation (2023) in the Sustainable Development Goals (SDGs) 3.8.1 and 3.8.2, where all countries are encouraged to ensure all its people and communities receive the health services they need, which should be of sufficient quality to be effective while also ensuring that the use of these services does not expose the user to financial hardship (WHO 2023). Despite the pledge made by Nigeria to achieve the set goals, it mainly reported failures, as stated in the situational analysis of the country in the 2016 NNHP document (NNHP, 2016). It is reported that the new health policy being developed is to set new realities for achieving the unfinished MDGs and SDGs, especially since the analysis shows that the health system is underperforming across all the WHO health systems' building blocks (a description of health systems in terms of six core components: (i) service delivery, (ii) health workforce, (iii) health information systems, (iv) access to essential medicines, (v) health financing, and (vi) leadership/governance, (WHO, 2010), and there is almost a total absence of financial risk protection in the health systems (NNHP, 2016).

Furthermore, in the report of the UHC service coverage index (SCI) by country that was done in 2015 for monitoring SDG indicator 3.8.1, Nigeria scored < 45, which is the lowest score based on the measurement value range for the UHC SCI, which ranges from 22 - 86 across 183 countries (WHO, 2017). The indication of the SCI is significant because it is assessed to have better predictive standards for life expectancy calculations than the gross national income (GNI).

Moreover, at the Abuja declaration in April 2001, heads of State of African Union countries met and pledged to set a target of allocating at least 15% of their annual budget to improve the health sector (WHO, 2010), but a review of this declaration in 2011 revealed only three countries are on track with respect to the health MDGs, whereas 27 countries have no or insufficient progress (ibid). However, only Tanzania has achieved a capital declaration target of at least 15% (ibid). Meanwhile, Nigeria is one of the 15 countries not making sufficient progress because they spend less than US$ 33 per capita on health (ibid).

As of 2018, the responses and conversations with health administrators and clinicians while in the field made significant references to the participation of the Nigerian government at the 2001 Abuja declaration but without any significant progress following their pledge to improve health financing (see previous exemplar above). These assertions were corroborated in the revised 2016 NNHP document, where an extensive acknowledgment of the failings of the health systems in key areas of health indicators was discussed.

In the country's economic growth and development strategies for the period covering 2009 to 2020, the health sector, vision 20:2020, proposed to enhance access to quality and affordable healthcare through the establishment of at least one general hospital in each of the 774 local government areas (NNHP, 2016), but this is an inconsequential plan in the face of a plethora of problems.

The report on the country's economic performance decline is not encouraging. Referencing a world bank report published in 2012, Iyioha & Nwabueze (2015) emphasised that total healthcare spending as a percentage of Nigeria's GDP fell from 7.55% in January 2003 to 5.7% in January 2010, while total out-of-pocket expenditure on health services in Nigeria is at 95%. However, the country experienced a period of economic growth when the gross domestic product, GDP grew from 54.6 trillion Naira in 2010 to 80 trillion Naira in 2013, making Nigeria the largest economy in Africa (NNHP, 2016). The economy grew at a rate of 4.5 to 5% between 2010 and 2013 and by 6% in 2014, but with declining oil revenues and ongoing security challenges in the north-eastern part of the country, the gross foreign and fiscal reserves declined steadily from 2014, and the overall economic growth in 2015 was only 2.98% (ibid). Although the government intended to increase revenues in the short term by improving efficiency in government spending, and was optimistic in the medium term, with economic growth projected to rise to about 5.4% annually from 2017 to 2019 (ibid). This is expected to result from investments in non-oil sectors, especially in power works and

housing, planned to commence in 2016 (ibid). Given the recent economic reports on the country, it is not certain that these projections have been realised.

The International Monetary Fund (IMF) (2023) commended Nigeria's recovery of output losses sustained during the COVID-19 pandemic but recognise significant economic risks that could result from the higher oil prices, costly oil subsidies, elevated inflation, and external sector pressures. These could result in macroeconomic instability, impacting growth, food security and social cohesion, leading to extreme inequality and high poverty (IMF, 2023). These risk predictions may already be a reality as other reports present a worsening economic situation in the country. According to the World Bank (2023), in October 2022, headline inflation reached 21.1% year on year, which is its highest rate in 17 years, while food inflation was at 23.7%. On top of this is the crisis caused by the current policy of demonetisation being implemented, impacting poor and vulnerable households that rely on cash transactions (ibid). The IMF risk warnings also come from citizens' concern for the possible implications of the immediate past government's reliance on internal and external borrowing to finance its operations (Obadare, 2022). The data on the country's borrowing is astronomical and worrisome.

> The gravity of Nigeria's debt situation is captured by the following statistics. Between 1999 and 2021, local and external federal government borrowings jumped from N3.55 trillion to N26.91 trillion, an increase of 658 per cent. While much of that increase has taken place under the Buhari administration (for instance, it has overseen a 291.37 per cent rise in foreign debts alone), it is by no means the only culprit. While external debts declined from $28.04 billion to $2.11 billion during the Olusegun Obasanjo era (1999 to 2007), the debt rose under the successive Musa Yar'Adua and Goodluck Jonathan administrations. Under the latter, "the federal government components of the total public debt increased from N6.17 trillion in 2011 to N9.8 trillion in 2015," a 58.8% jump. With a total public debt stock of N 41.6 trillion, Nigeria's debt to GDP ratio currently stands at 23.27% (Obadare, 2022).

With this deplorable economic situation, it is no wonder that other challenges exist and persist. For example, the unemployment rate is currently estimated at 9.9%, with an under-employment rate of 74%. This will unavoidably impact people's standard of living, posing difficulties in the ability to afford basic daily amenities, not to mention being able to afford healthcare bills. The health statistics reflect the socioeconomic impact as relayed in various demographic health reports on Nigeria. In the Nigerian demographic and health survey 2013 by UNICEF (2014), the average life expectancy at birth increased from 46 in 2008 to 52.62 in 2013. The under-five mortality rates declined from 201 deaths per 1000 live births in 2003 to 128 deaths in 2013 (ibid). Whilst progress was recorded in the decline in infant and under-5 mortality rates, the neonatal mortality rate, at 37 deaths per 1,000 live births, has not declined

to the same extent. Meanwhile, the lifetime risk of maternal deaths indicates that the death of 1 in 30 women in Nigeria would be related to pregnancy or childbearing. However, in 2022, the report on the update on the context and situation of children in Nigeria stated that the situation of children, adolescents, and women improved over the past years. Nevertheless, the pace of progress will have to be accelerated to reach SDG targets by 2030 (UNICEF, 2022).

Furthermore, despite the significant progress in recent years, in the eradication of Guinea worm, control of Ebola virus outbreak and interruption of Polio virus transmission in the country, the major causes of disease burden are the prevalence of communicable diseases and an increasing burden of non-communicable diseases. Communicable diseases account for 66% of the total burden of morbidity, such diseases include malaria, acute respiratory infection, measles, tuberculosis, HIV/AIDs and neglected tropical diseases. Conversely, the incidence of HIV is currently on the decline, but the absolute number of affected persons still places a huge morbidity burden on Nigeria's resources (NNHP, 2016). Apart from these data that describe the status of vulnerable groups in the country and the disease burden, the health system itself possess inherent challenges that are substantial to understanding the limitations imposed on the functionality of the 2016 NNHP in respect of PS.

As previously mentioned, Nigeria’s health system is challenged in many ways, resulting in failure across all the six WHO health building blocks (WHO, 2010). Specific circumstances from the situational analysis of the country in the 2016 NNHP document are briefly summarized below.

These failures relate to issues of governance/leadership, health services, health financing, and human resources for health.

First, the issue of poor governance stands out, where poor coordination and harmonisation of agencies and partners working in the institution leads to the replication of functions and waste of resources. Observable outcome involves a lack of transparency in the budgetary process such that, while the federal budget appropriation is published, information on state budget appropriations is not usually available publicly, and budget execution is also not made public. Other leadership and governance problems relate to inadequate political will and commitment to health, as evidenced by low budgetary allocation to health and constant changes in the leadership of the Federal Ministry of Health and the State Ministries of Health. A high level of corruption and fraud is another major concern because this is made obvious by the inadequate level of accountability and transparency in effective coordination among the three

levels of government, as well as between the private and public sectors. Lack of effective mechanisms for engaging consumers in policy and plan development and implementation, and weak coordination and harmonization of donor aid.

Secondly, the multiplicity of health service management makes inefficiency possible. For example, the health services delivered through primary, secondary and tertiary health facilities by both public and private sectors, and their financial management leaves much to be desired because the availability of health facilities does not translate into the availability of quality healthcare services. What then becomes obvious is the limited availability of certain services to a large percentage of the population who also have to deal with the consistent disruption of healthcare services due to ceaseless industrial action by all cadres of healthcare providers in public facilities. Even though the private sector tries to ensure services are available, there is still poor integration of the private sector in the Nigerian health system; service users experience barriers to accessing health services due to the cost of services, distance to the health facility, and the attitude of healthcare workers. Moreover, the quality of health services is generally poor and does not instil confidence in the people, which led to some people seeking care outside the country. Nonetheless, the State Ministry of Health issues licenses to ensure that facilities comply with standards, but monitoring the quality of services provided by the private sector is limited. There is no institutional framework for regulating quality and standards (this was referenced in the interview response by an administrator in the regulatory department at the FMoH). While the National Health Act 2014 provides that health facilities are required to obtain certificates of standards, the requirement for these certificates is not specified in the Act. Regulations that would provide these requirements have also not yet been enacted.

What would impact the standard of services of these healthcare institutions more is the state of the human resources for health. Based on a 2012 record, Nigeria has a reasonable number of accredited training institutions and annually turns out good numbers of graduates. For example, as of 2012, there were 27 accredited medical schools, from which about 2300 students graduate every year. Also, there were 76 accredited schools of nursing and midwifery and 56 accredited colleges/schools of health technology offering training programs for community health extension workers and junior community health extension workers. Because of this, Nigeria is considered one of Africa's largest stocks of human resources for health. Yet, there is a significant loss of workforce of various categories annually. Apart from the national inequalities in the distribution of the existing health workers between the rural and urban areas and among geopolitical regions, there is a historical ‘brain drain’ in the form

of migration of health workers to high-income countries, causing a major setback in the attempt to build a strong health workforce (Adeoye et al., 2017).

Although human resources availability in Nigeria is among the best in the African region, as well as most countries in Africa, there is still a human resources shortage crisis. The crisis is said to have wiped away the survival gains achieved after a century of the most spectacular health advances in human history. The extent of the situation can be appreciated when the data on healthcare worker-patient ratio is considered. Yakubu et al. (2023) highlight the WHO recommendation for achieving health-related SDGs for the ratio of skilled health workers per population to be 4.45 per 1000, but as of 2018, Nigeria had 1.83 per 1000. Previously, the World Bank data on Nigeria reports a 0.4 per 1000 physician-patient ratio for January 2010: that is, four (4) doctors for every 10,000 patients. The same report indicates a 1.6 per 1,000 nurses/midwives-patient ratio and 0.1 community health workers per 1,000 patients. Now in 2023, the situation is deteriorating because Nigeria records higher healthcare worker migration to other countries, especially the UK, and Canada. The situation has worsened progressively evidenced in the data showing the migration of 36,467 Nigerian doctors to the UK between 2008 and 2021, where the steady increase was from 1,798 in 2008 to 4,880 in 2021; meanwhile, a larger trend was observed for nurses, where a total of 60,729 nurses migrated to the UK between 2002 to 2021 with a steady increase from 1,393 in 2002 to 5,543 in 2021. This is reflected in the report of The Migration Observatory, (2023) which states that, of the largest individual nationalities sponsored for the UK skilled worker visas in 2022, for doctors, Nigerian doctors constitute 15%, among the nurses, Nigerian nurses constitute 14% of that population, and amongst healthcare assistants, Nigerians constitute 14% in that group.

While skilled health worker migration constitutes a major concern for achieving PS in Nigerian acute care institutions other major challenges of human resources for health include poor management of staff remuneration, poor supervisory and logistic support, poor work environment, limited opportunities for continuing education, conflict of interest of healthcare staff and frequent strike actions (NNHP, 2016).

Above all that has been said, health systems require financing to tackle challenges adequately for desired positive service outcomes. Unfortunately, this health system sector is also affected by many problems. The earlier discussions about the status of the national economic situation are a precursor to the state of health financing. It is not surprising to note that, at the federal level, the total allocation from the Federal Budget to health rose from 3.9% to 6% between 2010 and 2012 but decreased again to 4% in 2013. Sadly, health financing in the country is

seriously impacted by gross underfunding of health, inadequate public health funding, low external funding (with the little external funding not being in sync with national priorities), incomplete and unreliable data on health financing, allocative and technical inefficiencies in health spending, very limited coverage with risk pooling mechanisms, and poor private sector investments in health.

Already the situational analysis report reiterates what is already known, including the prediction that given the status and trends of health financing in the country, Nigeria will not achieve UHC. Not only will this be the situation, but there will also be a ripple effect in all sectors of healthcare delivery, including the much-needed visibility of PS strategies in clinical practice.

Regardless of this seemingly, negative outlook on the Nigerian health systems, the FMoH continues to be optimistic about turning things around for the better. For example, the FMoH commenced the implementation of the recommendation of experts from the Presidential Declaration on UHC by establishing a central coordination platform in the FMoH with the intention of facilitating reforms in the NHIS. These action plans stated back in 2016 remain unactioned because similar agendas are still being discussed in 2021.

Egbo (2021) reports on the speech given by the Minister for Health, Dr O. Ehanire, on the 7th of December 2020, at the meeting where the agenda for Nigeria's health sector roadmap was presented with the title - the *Nigerian Health Sector Development in 2021 and Beyond.* The plan is to focus on the implementation of mandatory universal health insurance in collaboration with State governments and the federal capital city (FCT) administration, operationalisation of the Basic Health Care Provision Fund (BHCPF), recruitment and deployment of 50,000 community health extension workers, revamping Federal Teaching Hospitals across the country, Collaboration with private sector investors to establish high-quality hospitals in Nigeria, reduction of gaps in all health-related SDGs by at least 60%, reduction in the current imbalance between primary, secondary, and tertiary healthcare, active collaboration with the private sector to create a large number of well-paying jobs for Nigerian youths, and Contribution to the realisation of Mr President's June 12 promise to take 100 million Nigerians out of poverty in the next ten years. Again, although this can be considered a statement of hope, the reality of the economic status of the country puts some doubts on the possibility of achieving these plans. However, the report states that the implementation of BHCPF has begun with the appropriation and release of at least one per cent (1%) of the consolidated Revenue Fund as provided by the National Health Act of 2014, which is

believed to have set in motion the mechanism to fast-track achieving UHC for all Nigerians. Yet a significant positive outcome has not been achieved since the inception of the NHIS in 1999, and its actual commencement of use in 2005, the expected maximum improvement in the affordable cost of health care has yet to materialise (Ipinnimo et al., 2022). Less than 5% of the over 200 million Nigerian population have benefitted from this scheme (ibid). Ipinnimo et al. (2022) report that, the unemployed 33% of the population, the self-employed who constitute 81.37%, and skilled workers who constitute 3.4% have yet to be adequately covered by the scheme. Other concerns raised, although not exhaustive, relate to the scheme's inadequacy because of complaints from enrolled individuals about poor service delivery and problems with the non-payment of staff members of the scheme.

The wealth of literature accessed on the topic of health financing opened up much more insight into the state of the Nigerian health system. The findings cannot all be fitted into this discussion to prevent a derailment from the focus of the study but given that a health system's organisational and financing structure is a framework by which the health systems and healthcare delivery is operationalised (Nnamuchi and Metiboba, 2015). The functionality of this framework can be a predictor and measure of the success or failure of such health systems (ibid). This implies that with the analysis of the county's health financing, the current and future of healthcare in Nigeria is not in good standing, and a lot needs to be done to improve the situation. The World Bank (2023) suggests that expanding social protection may guard against rising poverty in the short run. Yet, in the long run, Nigeria will need to effect reforms to diversify its economy, catalyse private investment, and invigorate the creation of jobs that can spread the proceeds of growth to yield sustainable poverty reduction.

7.6 Conclusion

The foregone discussions are indicative of a poor health system which reflects the level of the financial commitment made by the government towards achieving many goals stated over the years.

When it comes to this research, the problem of health financing is tied to the lack of mobility of the NNHP (although it has also been established that the policy document is mutable when it comes to PS because there are no relational ties between the two) on the grounds of a lack of funds to disseminate the policy information and to ensure monitoring and evaluation of the policies if they were communicated to practitioners.

Respondents at the FMoH were of the opinion that the regional leaders charged with the

responsibilities of circulating the paper copies of the policy documents often fail to do so because they seek unavailable funding from the federal government to perform this duty. When the funds are not released, then the policy booklets remain in the FMoH. While the clinical respondents believe that policy communication in the hospital is either minimal or non-existent. This is evidenced in the previous references to interview responses indicating that policies in existence are mostly locally generated in each department or locally within the hospitals. The majority of the practitioners state that they have heard of the existence of the NNHP but have never seen it and are not aware of its content.

The few national policies that get disseminated are sometimes difficult to implement due to a lack of resources, such as equipment, staffing levels or a lack of knowledge. An example is the policy that states that all hospitals must not turn patients back on any grounds. However, most hospitals may not be equipped to manage certain cases. In this instance, the policy is not applicable to such a hospital, therefore putting staff in a difficult position in its implementation, as observed, one of the hospitals does not have a trauma centre or cardiac catheter laboratory, but it still receives patients with multiple trauma and head injuries and patients with chest pain (see exemplar in chapter 6).

Both the administrators and the clinicians agree that there are problems with the monitoring and evaluation of the NNHP. The policy administrators acknowledged their failings in ensuring regular monitoring and evaluation of the NNHP even though they recognise the need and are aware of the benefits of improving the quality of the policies and, in turn, improving practice and patient experiences. The clinicians state that, since they don't know or use most of the NNHP, they don't know how to monitor and evaluate it. However, their own local policies are not monitored or evaluated either.

In conclusion, it is apparent that the NNHP conveys the meaning of providing healthcare generally to Nigerian citizens, but it fails to deliver a significant role in PS strategic plans for clinical practice in acute healthcare institutions. However, the knowledge of entities that influence the destabilisation of the NNHP in relation to PS is a precursor for proffering actionable solutions to benefit from the possibility of mediators returning to being intermediaries in the path of the NNHP in relation to PS.

The next chapter will present suggestions for bridging the gap between the NNHP and PS for better clinical practice in Nigerian hospitals.

Chapter 8: Research Conclusion and Recommendations

8.1 Introduction

In this chapter, the research is brought to a conclusion, and recommendations emanating from the research outcomes are presented. Given the research outcome, there is a two-part recommendation to address the outcome of the research. In the two-part approach, one part addresses the emergence of the impact of the mediators, especially relating to issues that prevent the legislation of the PS Act within the NNHP. The second part is original to this research, in that three levels of actionable plans are recommended to ensure that the desired changes to the status of the NNHP in empowering PS governance in practice are achieved. Therefore, before the detailed discussions of the recommendations, a brief conclusion of the research is presented below.

8.2 Research Conclusion

This project has explored the relationship between the 2016 NNHP and PS in clinical settings. It has achieved the goal of understanding the role of the NNHP in legislatively controlling clinical practice and assessing the visibility of PS as a health strategy in terms of the global standards prescribed by the WHO and other health systems that lead the PS agendas.

This achievement has occurred through adherence to the ANT methodological process throughout this study. Latour's due process has been demonstrated at every stage, where the stepping stone lies in the ambition to make visible the unexplored perspectives within health systems in Nigeria, with a particular interest in the status of PS in clinical practice. The satisfaction of this ambition required a process of identifying all actors that could possibly be part of the controversy by enrolling them all into an actor-network; the "network is processual, built, and performed by the actants out of which they are composed" (Crawford, 2004, p. 1). What happens next is an activity of building the network such that each node and link is semiotically derived, making networks local, variable, and contingent (ibid). When it comes to the analysis of the network, the interest of the study is focused on the ways in which the network overcomes resistance and strengthens internally, gaining coherence and consistency, that is, how they stabilise, how they organise and translate network elements; "how they prevent actors from following their own proclivity (become durable); how they enlist others to invest in or follow the program (enrol); how they bestow qualities and motivations to actors (establish roles as scripts); how they become increasingly transportable

and “useful” (simplify); and how they become functionally indispensable” (as obligatory points of passage) (Crawford, 2004, p. 1).

This stringent procedure has led to the unveiling of the unseen status of PS within the Nigerian health systems, as reported in Chapter 7. However, summarily stated here, the study concluded that, while the 2016 NNHP, though it prioritised provisions for improving the health of the nation by focusing on general health issues such as reproductive, maternal, neonatal, child and adolescent health; communicable diseases (such as Malaria, HIV/AIDs, TB, and other neglected tropical diseases such as blinding Trachoma, Buruli ulcer, filariasis, leprosy, etc. (WHO, 2020)), it does not provide clear and specific directions for establishing PS directed clinical practice in the acute settings. While many agents are responsible for this disconnect between the NNHP and PS, the most prominent are the agential nature of the NNHP itself, its non-existent tangible presence in practice (that is, lack of policy mobility), political influences, and health systems financing.

Therefore, since the ultimate goal is to promote PS through avenues such as using policies to shape practice guidelines/protocols, the NNHP will benefit from considering how directives are shaped to have significance in directing the achievement of PS in hospitals and other acute settings. The following recommendations are put forward for the consideration of the FMoH if the invisible situation of PS in legislation and structure is to be addressed in order to see measurable PS outcomes in the Nigerian health systems.

8.3 Research Recommendations

Many studies that focus on solutions to challenges of health systems address many aspects that are also peculiar to the Nigerian situation. In this study, the particular issues are related to matters of health financing, which is significantly motivated politically, as identified in the assessment of the role of the national health policy in influencing core PS strategies in clinical practice. Given this circumstance, to achieve a stabilised actant network, the NNHP must achieve the status of immutability and must be mobile for it to be visible and actionable by healthcare professionals. But just how can this be realised, especially when the country is facing enormous financial decline? Several solutions have been proffered to address the Nigerian interrelated issues bordering on health financing influenced by some political entities resulting in the absence of policy infrastructure needed to aid PS in clinical practice. It is based on these challenges that the next sections offer recommendations to address these issues.

8.3.1 A Proposal for Health Systems Financing Solution in Nigeria

The discussions in Chapter 7 on the nature of the economic and political challenges in Nigeria appear to be complex and may not be solved quickly. Even the FMoH recognises that the country's health system is replete with complex problems, with an outstanding inequity in access to services due to socio-economic status (NNHP, 2016). However, the goals to turn things around have not yet been realised (ibid). Neither can the recommendations offered in this thesis resolve these complexities any time soon because whatever is offered is not from a pioneering standpoint but a review of suggestions that political economy discourses have previously offered. Nonetheless, the presentation of some of these suggestions may lend some changes should the Nigerian Government revisit these.

Reflecting on the economic situations that closely relate to achieving better health systems in Nigeria, a starting point could be to highlight some of the suggestions offered by the WHO in the 2011 review of the Abuja declaration because this is still relevant today given the lack of significant progress in achieving the goals for MDGs, SDGs, or UHC.

The WHO (2011) identified that, in the past ten years since the declaration in 2001, there had been progress towards increasing the availability of financial resources for health, at least in terms of dollar values, but there has not been appreciable progress in terms of the commitments the African Union governments make to health. The identified issues include, first, the concern that the absolute level of resources available for health needs is well below what is needed. Secondly, the lingering financial crisis in donor countries also means that these sources are likely to further reduce the dollar values of their disbursements until their economy starts growing again. This dire situation warrants the advice to the Nigerian government to consider the importance of developing new sources of funds and examine more critically how to improve the efficiency of health spending while always protecting the poor and vulnerable (ibid). Further, Nigeria, as a recipient country, needs to increase the priority given to health from general budgets and/or debt relief funds (ibid) because, from the analysis undertaken for the report for which solutions are being proffered, it was found that some countries need to increase their own investments in health, either through reallocation within their own general budgets or by making larger claims on their funds from debt relief (ibid). It is believed that ministers of health and ministers of finance can enhance governance of the official development funds flowing into the country for health because, as of the time of the report, as much as 50% of these funds do not flow through the government (ibid). As a result, external partners are frequently reluctant to report to the recipient government how

these funds are spent (ibid). This makes it difficult to know if these funds are being spent efficiently and if they are being spent according to national priorities (ibid). Besides, a considerable amount of the funds donors claimed to have disbursed may be spent before they even enter the country by external contractors with high transaction costs (ibid). It is therefore important that recipient governments such as Nigeria increase their capacities to track all health expenditures in the country, including donor funds, using internationally agreed methods (ibid).

The final key issue that was raised to be addressed is based on the report by the IMF's internal evaluation office in 2007, which revealed that, on average, for every dollar the IMF transferred to sub-Saharan Africa relating to its Poverty Reduction Global Facility from 1999 to 2005 only US$ 0. 27 was spent, while the rest was used for domestic debt reduction or building foreign reserves (ibid). This should not happen; instead, governments should ensure that external funds that flow through the government should be disbursed and spent according to the budget and purpose for which they are allocated (ibid). Although WHO recognise that it is certainly important to have prudent fiscal and monetary policies, the importance of discussing and debating about whether an increased proportion of the available aid could be spent to improve people's well-being was also emphasised.

These pieces of advice are worth actioning, but without authoritative political directives, the chances of achieving significant changes in health financing may remain slim. Influencing political response to this issue is popular in the field of public health, especially when radical changes are required in any health intervention. Some of these perspectives are considered next.

8.3.2 A Proposal for Political Action to Promote the Visibility of PS in Nigerian Health Systems.

The role of politics in health governance is influenced in many ways, where the influencers are either the government, civil society, or stakeholders in State matters, referred to by Dawes as the political determinant of health for which a framework (see Fig. 23, p. 213) is developed for easy understanding of related political issues that affect health (Dawes, 2020; Galea & Knox, 2016). This can influence health governance systems in making health decisions (ibid). Dawes believes that by understanding these determinants, their origins, and their impact on the equitable distribution of opportunities and resources, healthcare systems can be better equipped to develop and implement actionable solutions to close the health gap.

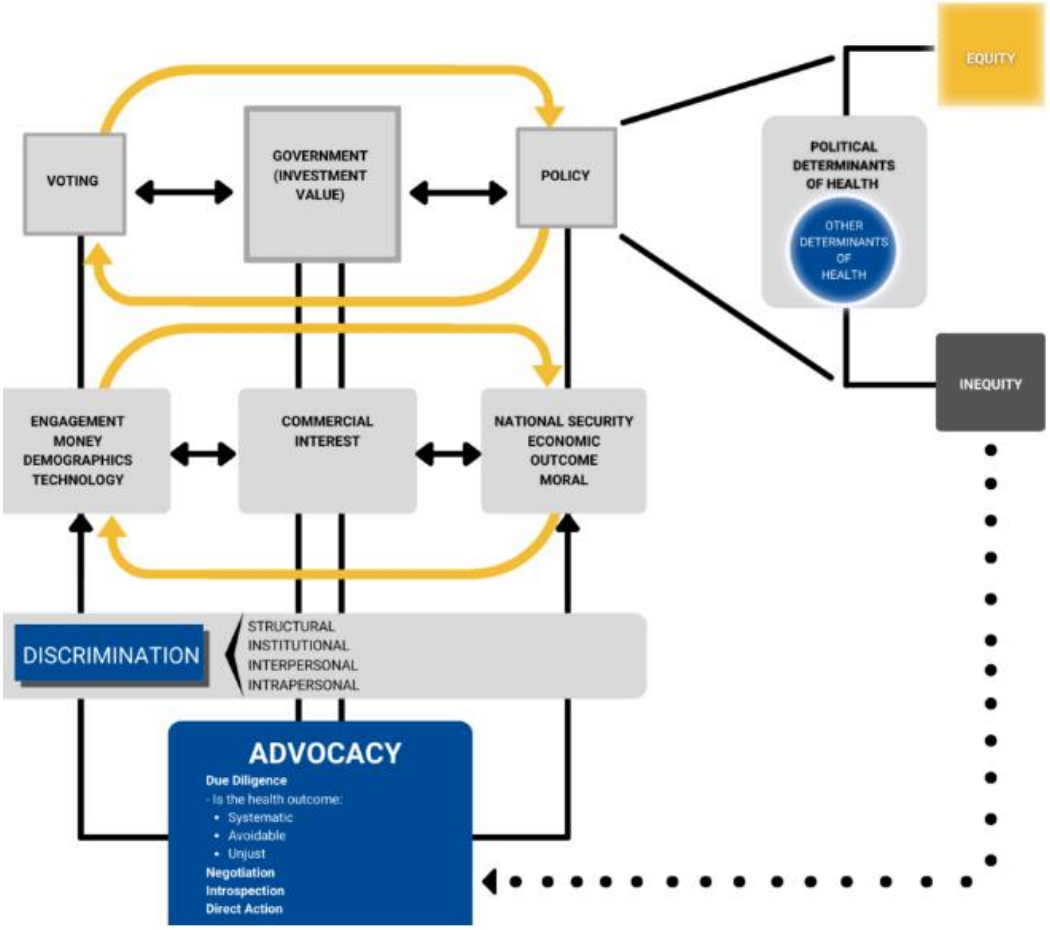


Figure 23 : Political Determinants of Health Model

However, even when authorities pay attention to the attributes highlighted in this framework, limitations to executing change plans abound in different ways. Some scholars perceive that civil society's drive to influence their expectations of government responsibility is seen as being motivated by deep-seated psychological constraints (Jensen & Peterson, 2017). This is believed to motivate citizens to view the sick and injured as deserving, which, in turn, leads to a belief that it is the government's responsibility to ensure adequate health care for everyone to such an extent that even if people think it is much more likely that they will become unemployed than sick, they remain more supportive of health care (ibid). On one hand, the societal position is considered a right, on the other, it is considered an act of entrusting all responsibilities of health to the government without considering some of the individual or collective responsibilities for health, for example, taking seriously the civil responsibility to vote especially on health-related matters (Galea & Knox, 2016; Borrell et al., 2007).

Moreover, even if the lay dedication to exacting some political influence in healthcare decision-making is not considered useful, public health practitioners and clinicians expect much more (Jensen & Peterson, 2017). One of the fundamental political responsibilities would be the act of balancing the sources of knowledge that produce evidence for making policy decisions for health agendas (Galea & Knox, 2016). From a different perspective, Greer et al. (2017) highlight the concern that public health practitioners cling to the idea that evidence for healthcare reforms shared with politicians should be produced according to rigid biomedical standards and then moved into practice. Meanwhile, such knowledge necessary to bring public health into politics and policy is knowledge about politics itself because this system shapes policymaking and policymakers and the practical skills of engagement (ibid). Healthcare professionals must be willing to understand policies and outcomes because a more sophisticated understanding of political systems and institutions that shape the political processes and conditions for policy adoption is required (Galea & Knox, 2016; Greer et al., 2017).

The importance of effectively gaining access to policy decision-makers and influencing their decisions, generating evidence of how political systems, institutions, and processes reduce the success or failure of public health advocacy and policies is a crucial first step (Greer et al., 2017). Without such intelligence, healthcare interventions will not likely generate sustainable impact (ibid). Moreso that research has indicated that political beliefs have split over into nonpolitical domains, including the health sector (Hersh & Goldenberg, 2016), where so many health issues are being politicised, and healthcare providers finding themselves thrust into the tense world of politics and policy (Lawrence, 2019). Given these critical perspectives, several key actions are required to achieve a positive impact on politics in the healthcare industry. The extensive scholarly work of Greer et al. (2017) speaks a lot about what is needed in the healthcare industry if it must attain strong positive political influence in healthcare governance. Here, they propose several key actions that healthcare professionals and public health decision-makers need to take. These include building political awareness amongst health practitioners through education, building a broader knowledge base in healthcare research, and funding the research. They stress the need for (a) a public health political science that will generate evidence on (i) the political options for public health appropriate to the characteristics of the constitutional order, and the political economy and (ii) the political techniques and strategic landscapes of interest, representation, and partisanship, (b) a political action repertoire for politically informed public health practitioners working at the nexus of different policy sectors; disciplines; and science, practice, and political arenas.

While in terms of education, the expectation is for detailed educational programmes in politics covering the broad landscape of politics, such as party systems and interest groups, one that teaches professional skills such as effective lobbying, media engagement, social media and the mechanics of consultation on how and when government solicits advice should be taught and made mandatory for public health and medical programmes. The authors also recommended that research about politics in public health should be held to the same rigorous standards as statements about epidemiology. In contrast, financial support for policy and political analysis in health research should be part of funders' portfolios if they are truly concerned about translational science, especially when compared with many areas of public health research, as good political research can be very cheap. Greer et al. (2017) recognise that political strategies are always context-dependent, which makes it hard to give general advice. Still, there are key attributes that health care professionals should work towards, to gain access to the political arena. First, acknowledge the experience of political professionals such as lobbyists, staffers, civil servants, and politicians. Secondly, securing the gains of making use of resources that are already available and gaining skills such as effective use of social media, organising techniques, testifying before legislators and input into public consultations. Finally, being aware that only those who persist can be in a position to seize an opportunity when such moments occur because politics and policy possess moments of frustration, as well as luck. In terms of understanding the systems that shape policy, research and practice in public health politics require an approach to identifying key political factors in particular countries or systems that shaped the development and use of both knowledge and political will. Ultimately, every political system deserves its own analysis for the benefit of those who work in it. Irrespective of one's status in a community, we all have a responsibility to participate in the political decisions that influence our health. Moreso, it is expected that healthcare practitioners' would have a higher involvement in political discussions that shape healthcare agendas.

8.3.3 Operationalising Policy Influenced PS Practice in Nigerian Clinical Settings.

To bring PS to the forefront of clinical practice in the Nigerian health systems, a significant turnaround of its health financing and all its interrelated political influences must be achieved. As it were, many aspects of the suggested solutions remain rhetorical, given the existence of other entities that prevent the actioning of the solutions for change, such as corruption (NNHP, 2016). Irrespective of these challenges, the core recommendations this research offers are based on the belief that there are achievable, practical actions that the FGN and the

FMoH can put in place to bring the tenets of PS to the forefront of the national health policy, including ways of ensuring its existence in all clinical practices across the country.

Firstly, it will be valuable if the FGN review and learn from the vast information about positive changes achieved in countries where PS has been prioritised by legislatively positioning it as an Act within their national health policies. Wherever PS is legislated, the expected overall goals are (i) to encourage healthcare professionals to improve the safety and quality of health care, (ii) to understand the underlying causes of hazards in the delivery of health care, and (iii) to share those results in all states within a protected legal environment, thereby minimising any risks related to patient care (Nash, 2011). However, achieving these goals has been challenging, especially in the space of severally discussed organisational PS cultures. Organisational PS culture refers to the actions of institutions that consistently minimise adverse events despite carrying out intrinsically complex and hazardous work by attaining high reliability through a commitment to safety at all levels, from frontline providers to managers and executives (Patient Safety Network (PSNet), 2019). The actions required from all levels of practitioners to build a strong organisational safety culture include a commitment to an acknowledgment of the high-risk nature of an organisation's activities and the determination to achieve consistently safe operation, a blame-free environment where individuals can report errors or near misses without fear of reprimand or punishment, encouragement of collaboration across ranks and disciplines to seek solutions to PS problems, and an organisational commitment to resources to address safety concerns (ibid). Unfortunately, fulfilling these required commitments has been a source of significant disruption in the path of the goals to be achieved. Complaints abound across all these areas where commitment is required, both from institutional staff members and at the organisational levels. In the meantime, organisational commitment is defined as the psychological attachment of an employee to the organization, which is a product of one or all of the types of commitments required for organisational success (Kumar et al., 2016). Affective commitment relates to an employee's emotional attachment to the organisation and its goals, continuance commitment relates to the cognitive attachment between an employee and his/her organisation, while normative commitment refers to a distinctive feeling of obligation to remain with an organisation (ibid). These attributes are important in evaluating employees' intention to quit or remain with an organisation (ibid). Contrarywise, studies have shown consistent complaints from nurses about the lack of a blame-free environment, and problems have been noted with a poor organisational commitment to establishing a culture of safety in many organisations (PSNet), 2019). There are many underlying complex reasons for the

underdeveloped healthcare safety culture, such as poor teamwork and communication, a culture of low expectations, and authority gradients (ibid). Furthermore, research also shows that individual provider burnout negatively affects safety culture perception (PSNet, 2019). This array of problems requires that organisational leadership must be deeply involved with and attentive to the issues frontline workers face, and they must understand the established norms and concealed culture that often guide behaviour (ibid). Together with organisational commitments and the importance of the intrinsic motivation of the workforce, a higher quality of healthcare service can be achieved (Kumar et al., 2016).

Should the FGN pay any mind to these existing workforce and organisational challenges and the suggested solutions in ensuring PS practices, then legislating PS could start with firm foundations on which measurable patient outcomes can be monitored and evaluated.

To this effect, this research recommends three levels by which the FGN and FMoH can place PS centrally in the health systems, confer legislative powers in PS administration and provide opportunities for operationalising PS at practice levels.

8.3.3.1 Level 1: Establishment of A Patient Safety ACT at the Federal Government Level.

In Chapter 7, the NNHP was subjected to a categorical obligation (Latour, 2004) which resulted in identifying gaps that were instrumental to determining its unchanged status from an actor to actant, in relation to making PS visible and functional in clinical practice. The main gaps were the complete absence of PS as an entity on the NNHP document (no legislative statement of PS) and the lack of mobility of the policy document itself, which would have been required to bring PS to the forefront of clinical practice. These gaps confirmed that the NHP could not be confirmed to be functionally indispensable (Crawford, 2004). Consequently, it failed to meet international standards expected of health policies, especially the policies focusing on PS and the availability of specific clinical guidelines that fit prescribed standards.

These gaps were shown in Fig.22, p. 186, which has been re-designed below, with suggestions on what the FGN and the FMoH need to consider for change in addressing the identified gaps.

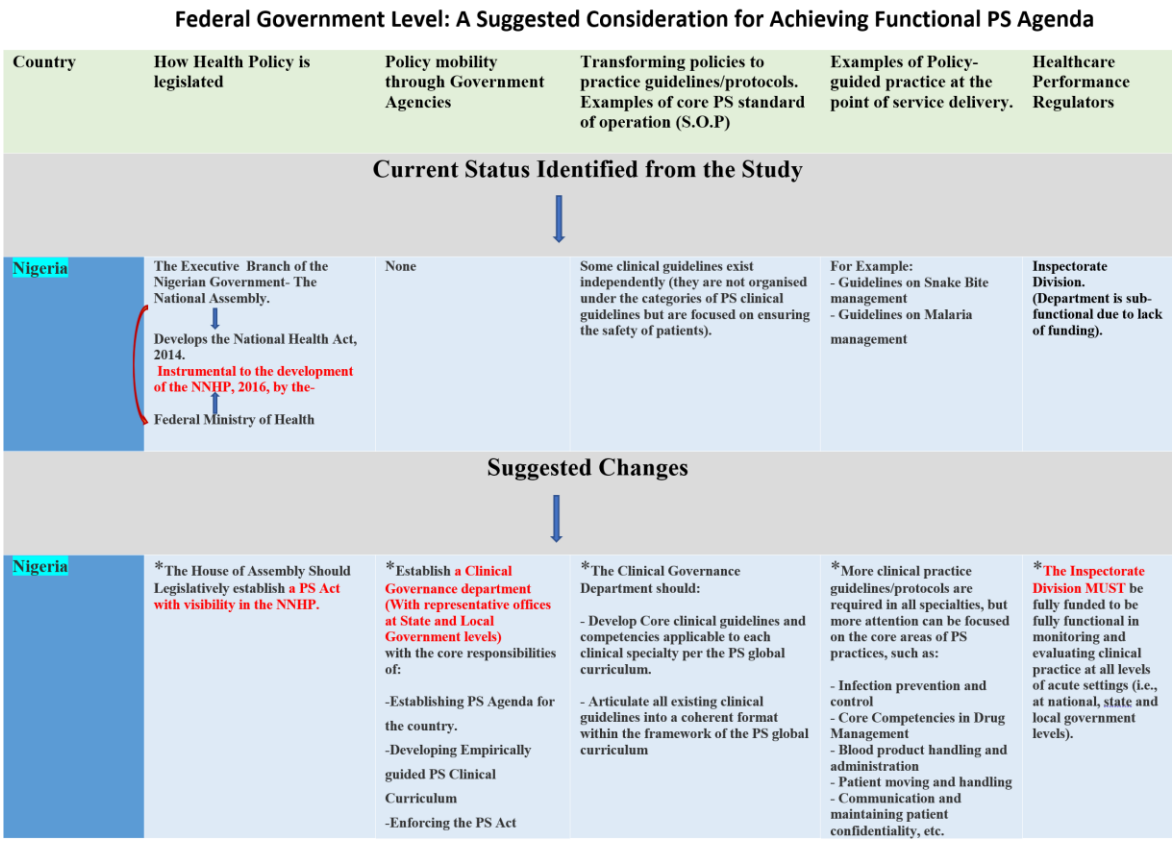


Figure 24: Federal Government Level: A Suggested Consideration for Achieving Functional PS Agenda.

The legislation of PS by the FGN is very important for Nigeria to align with the global agenda in ensuring that zero avoidable harm to patients is a state of rule of engagement in the planning and delivery of health care (WHO, 2021). Especially when in the contemporary global PS drive, vast tools are available to the public and private sectors to develop PS strategies for their communities. No institution needs to reinvent the wheel because a strong framework has been produced by the WHO for all responsible institutions to get guidance on establishing their PS legislative actions. Given the 35 frameworks of actions, which spells out responsibilities for governments, health care facilities, stakeholders, and the WHO secretariat (ibid), the FGN and the FMoH can easily bring PS to the forefront of health care legislation in the country. This is the basis on which, as shown in Fig 24 above, a PS Act needs to be enacted and a clinical governance department established to direct the actions of healthcare workers to conform to the statements and requirements for clinical practice as required by the Act. In addition to these responsibilities, it is of utmost importance that the Inspectorate Division is adequately funded to ensure they are able to monitor and evaluate PS agenda set

by the FGN and the FMoH. This will demonstrate government accountability and transparency. This action should be a shared responsibility across all levels of governance, but there is the need for specific leadership to continue to promote accountability. For this to happen the establishment of a clinic governance department is suggested.

8.3.3.2 Level 2: Establishment of a Clinical Governance Department at all Levels of Health Authority.

An enacted PS Act should therefore be operationalised through the FMoH by ensuring PS governance actions through a clinical governance department. This department should be significantly visible within the organogram of the FMoH, and there needs to be a strong representation at all levels of governance in the country. This recommendation is illustrated in the redesigned sub-section of the organogram of the Nigerian FMoH shown below.

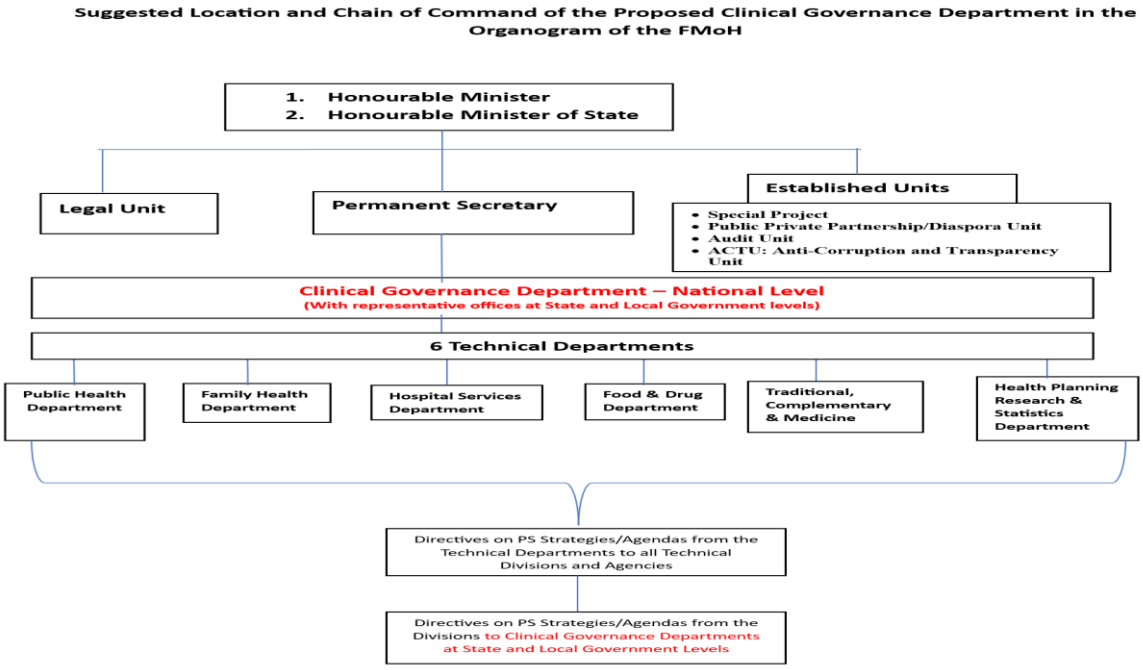


Figure 25: Suggested Location and Chain of Command of the Proposed Clinical Governance Department in the Organogram of the FMoH.

8.4 Level 3: Operationalising PS Agenda at the Level of Clinical Practice.

This section offers suggestions for action-oriented achievement of safer practices in Nigerian healthcare institutions. Initial suggestion continues to relate to offering recommendations on

actions to be taken based on the findings of this research. This is followed by the presentation of adaptable PS action plans proven globally to have yielded positive results.

Furthermore, operationalising PS practice guidelines in acute settings/hospitals will require hospital governance which should include a clinical education department that harnesses themed PS areas for mandatory training and skills development of universal clinical practice guidelines and speciality guidelines. Positioning the relevant governing and management teams to achieve this goal is illustrated below.

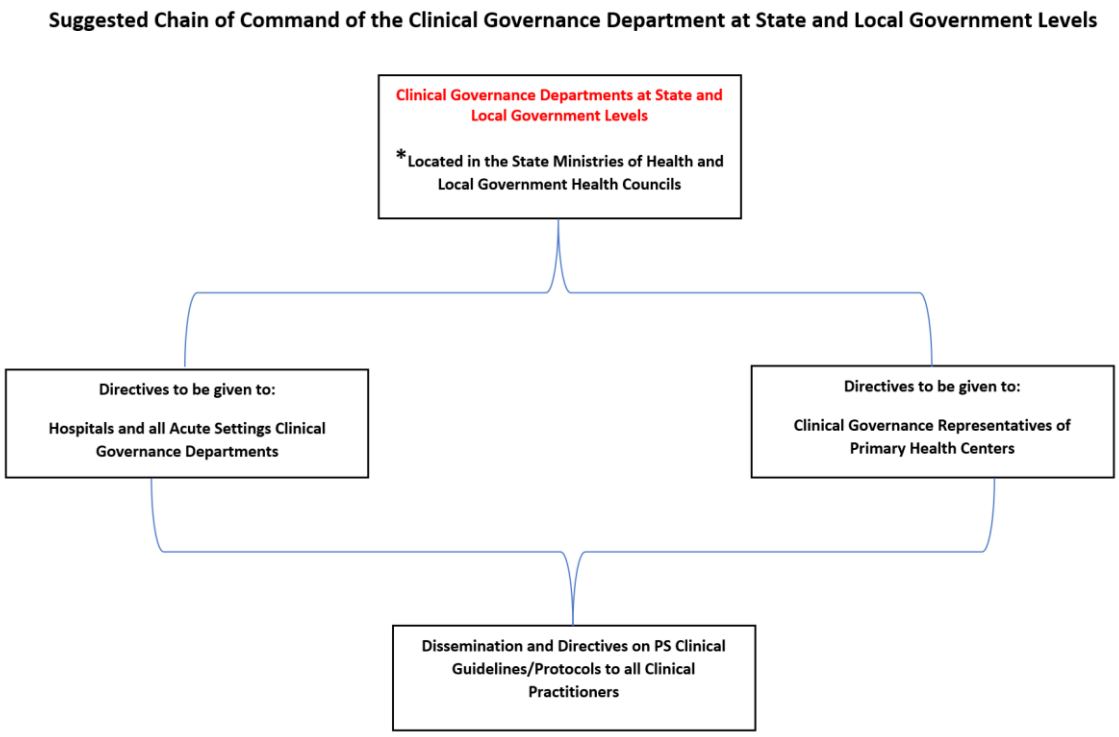


Figure 26: Suggested Chain of Command of the Clinical Governance Department at State and Local Government Levels.

Moreover, operationalising these suggestions would require the commitment of the FGN, FMoH and all hospital management boards at the national, state, and local government levels to pay close attention to global PS agenda implementation frameworks and adjust these to address the needs of the country's health systems.

Level 3. 1 Actioning PS in Clinical Practice.

At the hospital level, where clinical skills are responsible for PS, the ten (10) evidenced-based PS tips to prevent adverse events from happening which was developed by the Agency for Healthcare Research and Quality (AHRQ) has been used by many institutions. Nigeria can also benefit from adopting these tips in the day to day delivery of health care to patients (AHRQ, 2009).

The ten tips include the following practice guidelines:

i) practitioners must be vigilant in **preventing central line-associated blood stream infections** by taking the five steps of handwashing, use of full-barrier precautions, cleaning the patient's skin with chlorhexidine, avoiding femoral lines and removal of unnecessary lines as soon as possible;

ii) reducing the **potential for preventable readmissions** by assigning a coordinated discharge team who must ensure that the patient receives simple, easy-to-understand discharge instructions that contain a medication schedule, a record of all upcoming medical appointments, and names and phone numbers of a next of kin to be contacted should any problems arise;

iii) the **prevention of the most common cause of hospital death known as hospital-acquired venous thromboembolism** (VTE) by following the evidence-based guide to creating a VTE protocol;

iv) **e**ducation of patients about the safe use of blood thinners by providing them with educational materials such as short videos and booklets. This is very important, given that the use of blood thinners constitute one of the top causes of adverse drug events;

v) protection of health care workers by **limiting shift duration** to reduce the risk of fatigue which often is a precursor for making a medical error;

vi) working collaboratively by **engaging with a PS organisation**, which fosters opportunities to share information and experiences thereby preventing a repeat of mistakes made by others;

vii) application of **good evidence-based hospital design principles** improves PS and quality of care; for example, prevention of falls in well-designed patients' rooms and bathrooms, decentralised nurses station for better access to patients and prevention of infection spread in single patient room designs etc.;

viii) **monitoring and Evaluation of the hospital's PS culture** can be achieved by surveying the hospital staff to accomplish the goal of tracking the impact of interventions and changes over time;

ix) **establishing better PS and rapid response teams** and training them in the application of the Team Strategies and Tools to Enhance Performance and Patient Safety (known as TeamsSTEPPS) because this is very useful in improving effective communication of evidence-based techniques to improve practice skills. This can be highly beneficial to Nigeria because this tool kit can be tailored to any health care setting; and

x) ensuring **safe chest tube insertion** by remembering and applying the universal protocol known as **UWET** which stands for - Universal precautions (achieved by using sterile cap, mask, gown, and gloves); Wider skin prep; Extensive draping; and Tray positioning.

Level 3. 2 Actioning PS in Health Governance.

At the level of health governance, it is highly advantageous to review the outstanding WHO's (2011) guidelines for developing and transitional countries in improving PS. Presently and from the result of this research, it is no gainsaying to state that to make health care safer, knowledge must be translated into practice, and efforts to tackle patient harm must be scaled up (ibid). Countries are, therefore, encouraged to take decisive steps in the following seven areas of action that will help to alleviate the burden of unsafe care, thereby improving the quality of life for patients and reducing unnecessary costs to individuals and national finance. The seven focus areas highlighted below are to be taken seriously by clinical governance teams.

1. Everyone should be encouraged to participate in **raising PS awareness**, including health officials, policy-makers, stakeholders, donors, health care managers and patients too.
2. Despite PSR that is becoming visible in Nigeria, there is still a vast need for greater knowledge generation to **understand the endemic of unsafe care** at all levels of health care institutions. Therefore, there is need to invest in PSR across the country.
3. There is a need for increased commitment and more resolute action by the Government, organisations, and all who have the capacity to make change and make it happen on a large scale through strong **Leadership,** including within clinical practice.
4. **Coordination and collaboration** are essential to improving PS effectively, given that

no single stakeholder has the expertise, funding, research, or delivery capabilities to tackle the full range of PS issues. Therefore, Nigeria needs to buy into these potentials for improved PS by demonstrating transparency, coordination and collaboration between all relevant Government agencies and health care institutions in the country and internationally.

5. Building a **culture of safety** is the bedrock of improving patient care quality. To achieve this, all relevant health agencies and health care practitioners in the country must be supported to gain their commitment to improving and advancing knowledge. In addition, all who direct health governance must recognise that all health care systems have the potential to harm patients, recognise the systemic nature of unsafe care, foster a blame-free environment, and empower employees and patients to be part of the drive for change.
6. **Best practices** have great potential for contributing to making health care safer, they contribute to evidence-based decision-making and can accelerate progress and help identify cost-effective solutions. Nigerian health systems should eagerly adopt and promote best practices, especially that they stand to benefit since resources are scarce. Besides, they can learn from others and past experiences without reinventing the wheel.
7. The growing recognition of the significance of medical errors has increased the need for health care safety-focused **education and training** for health care professionals to ensure they learn how to deliver safer care. Invariably, PS science curriculum should be incorporated into all health care training programmes in Nigeria.

These seven priority areas for actioning PS agendas globally remains relevant because the focus is retained on the WHO Global PS Action Plan 2021- 2030 (WHO, 2021). However, the WHO require all countries to ensure all their PS agenda links to achieving the SDGs, especially SDG number 3: Good health and well-being (ibid), while being conscious of the interdisciplinary nature of PS that signifies a link to other SDGs such as Nos 1. No poverty, 5. Gender equality, 6. Cleaner water and sanitation, 8. Decent work and economic growth, 10. Reduced inequalities, and 12. Responsible consumption and production.

All these suggestions are relevant to the findings of the research. However, amongst the outstanding mediators in the wider actor-network (see Chapter 5) of the relational ties between the NNHP and PS, dissemination, monitoring, and evaluation of healthcare agendas appear to face significant challenges. Thus, when the influences of these entities are not addressed, then all efforts to act in accordance with all the recommendations stated above and

the possibility of achieving guided PS practices may not be realised. Consequently, these proposed changes must be adequately coordinated using a proven implementation technique.

8.5 Achieving the Research Recommendations Through Implementation Research (IR)

Amongst many approaches that could be explored, scholars in the field of implementation research (IR) see new opportunities that can provide desired goals. Theobald et al. (2018) state IR is very important to global health because it is an integrated concept that links research and practice to accelerate the development and delivery of public health approaches. IR involves the creation and application of knowledge to improve the implementation of health policies, programmes, and practices. This type of research uses multiple disciplines and methods and emphases partnerships between community members, implementers, researchers, and policymakers. IR focuses on practical approaches to improve implementation and to enhance security, efficiency, scale-up and sustainability and, ultimately, to improve people's health (ibid). There is growing interest in the principles of IR and a range of perspectives on its purposes and appropriate methods. However, limited efforts have been made to systematically document a review, learning from the practice of IR across different countries and technical areas. Bertram et al. (2021) identify that there are gaps between evidence-based interventions and their implementation because evidence-based practice though useful in establishing scientific foundations for practice innovations, its general description does not systematically address the context necessary to support their effective delivery outside of tightly controlled research settings. Nevertheless, the advent of IR has expanded into the healthcare field, where emphasis on evidence-based healthcare has, in turn, set the stage for an expansion of IR (ibid). The ten tips for preventing medical errors in hospitals by the Agency for Healthcare Research and Quality (AHRQ) in 2009, if followed strictly, is one of the many ways of implementing PS clinical guidelines in hospitals. Therefore, at the clinical level, the PS education curriculum should include the 10 tips for hospitals to be implemented by mentorship educational approach in clinical areas. Mentoring health care workers to gain clinical skills is only useful if practical engagement of the mentee is ensured, such as using the approach of showing the mentee how to do a task and then supervising the mentee in carrying out this task which is documented in a competency portfolio that needs to be signed off when a satisfactory number of practices have been reached which signifies that the health care worker can now practice the acquired skills independently.

Finally, all who are to drive these changes in the Nigerian health systems for the purpose of ensuring PS is visibly present in health care service delivery must be innovative and be abreast of global PS initiatives. This vigilance is what can sustain PS practices at all levels of health care delivery in the country.

Conclusion

In conclusion, this research achieved its set goals of evaluating the *actant* nature of the 2016 NNHP, determining the policy translation to clinical practice, and it succeeded in identifying, analysing, and discussing the actant-networks that are significant in the relational activities between policy and practice in Nigerian clinical settings. The findings established that

the 2016 NNHP, though it prioritised provisions for improving the health of the nation by focusing on general health issues it does not provide clear and specific directions for establishing PS-directed clinical practice in the acute settings. While many agents are responsible for this disconnect between the NNHP and PS, the most prominent are the agential nature of the NNHP itself, its non-existent tangible presence in practice (that is, lack of policy mobility), and the political influences and health systems financing.

To fulfil the ultimate goal of promoting PS through avenues such as using policies to shape practice guidelines/protocols, recommendations are documented to present them to the FGN and the FMoH. The recommendations suggest actionable plans that would benefit the conferring of a nature of agency on the NNHP to ensure the visibility of PS in hospitals and other acute settings. In the first place, the FGN has a role in legislatively instituting the PS Act, establishing clinical governance departments at all levels of health management in the country, improving the provision of health systems financing, and providing means for PS agenda monitoring and evaluation. Meanwhile, health care administrators and clinical practitioners have a part to play in driving safer care in all health institutions by nationally and internationally collaborating to develop PS educational and clinical skills programmes that would be adjusted to the needs of Nigerian health systems.

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Appendices

Appendix: 1 Fieldwork Calendar

Fieldwork Calendar 2018.pdf

Appendix: 2 FMoH Organogram

Appendix 3a and 3b

Appendix 3a. Research Interview Guide for Clinicians

Interview Guide for Healthcare Professionals (Clinicians)

Research Questions:
- What are the roles of policy in Nigerian healthcare service provision?
- How does policy contribute to healthcare service delivery and practice?
- What are the impacts of health policies on healthcare providers?

Basic information about the respondent:
Gender:
Occupation:
What is your job speciality?
How long have you been qualified in your speciality?
Current Job Role:
How long have you practised in this role?

Main Interview questions:

Part A
1. What is the structure of the hospital's administrative and management system?
2. Within this structure, which team ensures that clinical practice policies and guidelines are developed/produced?
3. What is your understanding of health policy?
4. Does Nigeria have National Healthcare Policies? If yes, what are the main themes in the Nigerian Health policy guidelines for hospitals, including your institution? And how do you access these policies?
5. How would you describe the process of health policy-making in Nigeria?
6. What would you consider significant in health policy as a branch in the field of health Governance? [most important to the success or failure of formulated health policies].
7. How does your institution develop its local clinical policies and guidelines, disseminate, implement, monitor and evaluate the effectiveness of the disseminated policies? [How does your institution/department monitor and evaluate the effectiveness of disseminated policies?].
8. What is the relationship of health policy to your clinical practice?
9. Please describe the areas of your practice(s) guided by health policies.
10. How do you think policies will impact service users? (i.e., the patients).
11. What are the roles of policy in Nigerian healthcare service provision?
12. What are the impacts of health policies on healthcare providers and their practice?

Part B
1. How would you define patient safety?
2. What are the significant areas of patient safety science?
3. How is this/this knowledge related to your area of practice?
4. What are the significant patient safety incidents that you think are common in your institution?
5. What are the factors contributing to the patient safety incidents that we discussed above?
6. What are your institutional/departmental strategies for promoting patient safety practices in your institution/department?
7. Has your institution shared its patient safety strategic plan with you? Please explain further in your response.
8. What is your perception of your own personal safety practices as a healthcare provider?
9. What are the things that influence and guide your practice?

Part C
1. What would be your suggestions for patient safety practice improvement and strengthening in your institution/department?
2. How would your knowledge of patient safety in relation to policy application be shared, improved and maintained in your institution?
3. What are your views about possible limitations or challenges along the health policy management continuum?

Appendix 3b. Research Interview Guide for Policy and Decision-Makers.

Interview Guide for Policy and Decision Makers (Administrators)

Research Questions:

- What are the roles of policy in Nigerian healthcare service provision?
- How does policy contribute to healthcare service delivery and practice?
- What are the impacts of health policies on healthcare providers?

Basic information about you:
Gender:
Occupation:
What is your job speciality?
How long have you been qualified in your speciality?
Current Job Role:
How long have you practised in this role?

Main Interview questions:

Part A

1. Kindly discuss the structure and the roles of the main health policy department(s) in the FMoH.
2. How would you describe the prominent health policy concepts significant to the FMoH's health policy management?
3. What would you consider significant in health policy as a branch in the field of health Governance? [benefits of health policy]
4. How does the FMoH make health policies? [Please explain briefly how your department processes the development of policies] – *Self note [Which of the policy theories or frameworks is used in the policy development process?]*
5. How do you disseminate the developed health policies?
   [What are your policy dissemination tools strategies, and how are these tools used?
6. How does your department monitor and evaluate the effectiveness of disseminated policies?
7. What are the roles of policy in Nigerian healthcare service provision?
8. How does policy contribute to healthcare service delivery and practice?
9. What are the impacts of health policies on healthcare providers?

Part B

1. In your position as an administrator within a health ministry, what are your views on patient safety?
2. How is patient safety science perceived here in the FMoH?
3. What are your perceptions of global views on patient safety incidences?
4. What are the leading patient safety incidents in Nigeria?
5. Do the patient safety incidents in Nigeria have a similar trend to the global trends? What are the indicators/reasons for your response? Which areas are significant for public health concerns in Nigeria?
6. How would you consider health policies in relation to patient safety practices in Nigerian hospitals?

Part C

1. As part of a health administrative team, what are your strategic plans for national patient safety practice strengthening and improvements?
2. What are the allowances created to facilitate both horizontal and vertical approaches to developing beneficial health policies in the Nigerian Health Systems?
3. Does your team encounter limitations or challenges along the health policy management continuum? Please explain further on your response.

Appendix 4a, 4b, 4c and 4d:

Appendix 4a. NNHP (older version)

National Health Policy Final copy.pdf (Command Line)

Appendix 4b. NNHP (newer version)

Nigerian National Health Policy 2016 Rvd.pdf (Command Line)

Appendix 4c. Overview of the National Health Policy 2016, and

NATIONAL%20HEAL
TH%20POLICY%20%

Appendix 4d. Federal Executive Council Memorandum

FEC Memo on National Health Policy.pdf (Command Line)

Appendix 5a: Thematic Analysis -Attride-Stirling 2001

<table>
<tr><th colspan="3">Thematic Network Data Analysis by: Attride-Stirling 2001</th></tr>
<tr><td colspan="3">Thematic networks: Guidance on systematize extraction of themes from the data
1. Basic Themes- This is the most basic or lowest order theme that is derived from the textual data.
2. Organising Theme: This is a middle-order theme that organises the basic Themes into clusters of similar issues.
3. Global Theme: A Global Theme is like a claim in that it is a concluding or final tenet.</td></tr>
<tr><td colspan="3">Stages of the Thematic Data Analysis Process
There are three main steps, but each have subdivision of the process to be completed.</td></tr>
<tr><td>Analysis Stage A: The reduction or breakdown of text.</td><td>Analysis Stage B: The exploration of the text.</td><td>Analysis Stage C: The integration of the exploration.</td></tr>
<tr><td>Step 1.Code Material
a) Device a coding framework.
b) Dissect text into text segments using the coding framework.
Step 2.Identify Themes
a) Abstract themes from coded text segments
b) Refine themes
Step 3.Construct Thematic Networks
a) Arrange themes
b) Select Basic Themes
c) Rearrange into Organising Themes
d) Deduce Global Theme(s)
e) Illustrated as thematic network(s)
f) Verify and refine the network(s)</td><td>Step 4. Describe and Explore Thematic Networks
a) Describe the network
b) Explore the network
Step 5. Summarize Thematic Networks.</td><td>Step 6.Interpret Patterns</td></tr>
</table>

Appendix 5b: Thematic Analysis

Thematic data analysis by- Braun and Clarke, 2006

Terms used in this Thematic Analysis Design

Data Corpus- refers to all data collected for a particular research project.
Data Set- refers to all the data from the corpus that is being used for a particular analysis. Data sets are chosen in two main ways dependent on whether the data is approached with a question or not.
Data item- would be an individual person interview, a particular media production, or particular website.
Data Extract- is an individual coded chunk of data, which has been identified within, and extracted from, a data item. Many of these will be taken throughout the entire data set, and only a selection of these extracts will feature in the final analysis.

Decision making prior to data analysis

-Determine what counts as a pattern/theme before coding
-Determine what size a theme needs to be
-Determine what proportion of the data set needs to display evidence of the theme to be considered a theme.
-Determine the level at which themes are to be identified: at a semantic or explicit level, or at a latent or interpretative level.
- At the semantic approach, the themes are identified within the explicit or surface meanings of the data and the analyst is not looking for anything beyond what a participant has said or what has been written.
- At the latent level, the analysis goes beyond the semantic content of the data, and starts to identify or examine the underlying ideas, assumptions, and conceptualisations, and ideologies that are theorised as shaping or informing the semantic content of the data.

-Determining the type of analysis to be done, and the claims to make, in relation to the data set
- Identified, coded, and analysed themes need to be an accurate reflection of the content of the entire data set. But depth and complexity is necessarily lost; however, a rich overall description is maintained. Can be a useful method when investigating an under-researched area, or with participants whose views on the topic are not known.
- Alternatively, provide a more detailed and nuanced account of one particular theme, or group of themes, within the data. This might relate to a specific question or area of interest within the data, such as in a semantic approach, or to a particular 'latent' theme across the whole or majority of the data set.

Doing Thematic Analysis: A Step-By-Step Guide

Steps	*Description of the process*
1. Familiarising with the data	Transcribing, reading and re-reading the data, noting down initial ideas
2. Generating initial code	Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.
3. Searching for Themes	Collating codes into potential themes, gathering all data relevant to each potential theme
4. Reviewing 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.
5. 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.
6. 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.

Appendix 6: National Health Act

National-Health-Act
-2014-Explanatory-M