BARRIERS TO ROUTINE IMMUNISATION AT ZWELIHLE CLINIC,
OVERBERG DISTRICT, WESTERN CAPE

by
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submitted in accordance with the requirements
for the degree of

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at the
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SUPERVISOR: Dr Makua

November 2014

In memory of Geneva.
DECLARATION

I declare that BARRIERS TO ROUTINE IMMUNISATION AT ZWELIHLE CLINIC, OVERBERG DISTRICT, WESTERN CAPE is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references and that this work has not been submitted before for any other degree at any other institution.

15 March 2015

________________________  ____________________
Claire Hugo               Date
ABSTRACT

Background: Although immunisation services are provided free at all public health facilities in South Africa, immunisation coverage remains variable and disease outbreaks still occur. The coverage rate in the Overberg district is recorded as 75.8%, below the national target of 90% (Western Cape Government Provincial Treasury 2013:2). The researcher wanted to understand what the barriers to accessing immunisation services were and how this might relate to other primary health care services.

Methods: The researcher visited 22 households and interviewed nine mothers who had brought their children to Zwelihle Clinic to be immunised and nine community health workers servicing the Zwelihle community in the Overberg district, Western Cape Province.

Findings: A key finding is that the data does not reflect the actual situation – children in the community either are immunised at other facilities or have left the catchment area, hence strong relationships between the facility and the community and an electronic patient tracking system become important. Findings impacting access to services include the attitude of administrative staff, waiting times and the impact of migratory communities.

Recommendations are made to improve the quality of data, provide training to administrative staff, improve patient education, reduce waiting times and improve the relationship between the clinic and the community in order to better track patient migration.

KEY CONCEPTS
Health systems strengthening; routine immunisation; primary health care
ACKNOWLEDGEMENTS

*Immunisation is the most precious gift that a health care worker can give a child.*
Department of Health 2012:11

My appreciation goes to the Overberg district and Zwelihle Clinic staff and community members for their time and their willingness to share. Also to Vera, Laura, Michelle and Vinny, to Dr Makua and, of course, to Marius.
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<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
</tr>
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<tbody>
<tr>
<td>AEFI</td>
<td>Adverse Events Following Immunisation</td>
</tr>
<tr>
<td>AIDS</td>
<td>Acquired Immune Deficiency Syndrome</td>
</tr>
<tr>
<td>ARV</td>
<td>Antiretroviral</td>
</tr>
<tr>
<td>CBS</td>
<td>Community based services</td>
</tr>
<tr>
<td>CHW</td>
<td>Community Health Worker</td>
</tr>
<tr>
<td>DHB</td>
<td>District Health Barometer</td>
</tr>
<tr>
<td>DHIS</td>
<td>District Health Information System</td>
</tr>
<tr>
<td>DHS</td>
<td>District Health Service</td>
</tr>
<tr>
<td>DMT</td>
<td>District Management Team</td>
</tr>
<tr>
<td>DoH</td>
<td>Department of Health</td>
</tr>
<tr>
<td>EPI</td>
<td>Expanded Programme on Immunisation</td>
</tr>
<tr>
<td>GoC</td>
<td>Grade of Confidence</td>
</tr>
<tr>
<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
</tr>
<tr>
<td>HRH</td>
<td>Human resources for health</td>
</tr>
<tr>
<td>MDG</td>
<td>Millennium Development Goals</td>
</tr>
<tr>
<td>NCD</td>
<td>Non-communicable diseases</td>
</tr>
<tr>
<td>NDoH</td>
<td>National Department of Health</td>
</tr>
<tr>
<td>NHI</td>
<td>National Health Insurance</td>
</tr>
<tr>
<td>NPO</td>
<td>Non-profit organisation</td>
</tr>
<tr>
<td>NSDA</td>
<td>Negotiated Service Delivery Agreement</td>
</tr>
<tr>
<td>PHC</td>
<td>Primary Health Care</td>
</tr>
<tr>
<td>PMTCT</td>
<td>Prevention-of-mother-to-child-transmission</td>
</tr>
<tr>
<td>RED</td>
<td>Reach Every District</td>
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<tr>
<td>RI</td>
<td>Routine Immunisation</td>
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<td>RTHC</td>
<td>Road to Health card</td>
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<td>SAG</td>
<td>South African government</td>
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<td>SIA</td>
<td>Supplementary Immunisation Activities</td>
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<td>UNICEF</td>
<td>United Nations Children's Fund</td>
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<td>UNISA</td>
<td>University of South Africa</td>
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<tr>
<td>VPD</td>
<td>Vaccine-preventable diseases</td>
</tr>
<tr>
<td>WBOT</td>
<td>Ward-Based Outreach Team</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organization</td>
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CHAPTER 1: ORIENTATION TO THE STUDY

1.1 INTRODUCTION

South Africa’s health care system is undergoing reform. The strategic health plan (2010 - 2013) lays out a number of key priorities including refocusing the health system on primary health care (PHC) (Department of Health, 2010:1) and this was reiterated in the National Strategic Plan 2014 – 2019 under Programme 4: PHC Services (Department of Health 2014:27).

The strategy to re-engineer PHC seeks to change health service delivery from a curative model (which puts pressure on tertiary services) to a preventative model; one that provides cost-effective PHC close to the community and its households (Department of Health [Sa]). Activities related to the PHC priority include massively expanding immunisation programmes; antenatal care; postnatal care; nutrition; and school health services (Department of Health 2010).

Immunisation is one of the most cost-effective health interventions available; preventing between 2 and 3 million deaths annually, as well as preventing debilitating illness and disability (World Health Organization 2012; Ngcobo 2008:9). Improving immunisation coverage plays a vital role in achieving Millennium Development Goal 4, a two-thirds reduction in child mortality by 2015, when compared to the baseline rates in 1990 (Day, Barron, Massyn, Padarath & English 2011).

The Expanded Programme on Immunisation (EPI) was launched in South Africa in 1995. Today the programme covers eight diseases: polio, diphtheria, tuberculosis, pertussis, measles, tetanus, pneumonia and diarrhoea (Day et al 2011). However, the country fails to consistently, and equitably, reach its targets of 90% coverage of fully immunised children.

This chapter provides an overview of the study including background to the research problem, the rationale for the research, and the purpose, objectives and the significance of the study. The design and methodological considerations of the study are also described in brief.
1.2 BACKGROUND INFORMATION ABOUT THE RESEARCH PROBLEM

The following section discusses the source of the research problem and provides context to the research problem.

1.2.1 The source of the Research Problem

During the conceptualisation phase of the research, the researcher was working at Gavi, the Vaccine Alliance, a global public-private partnership between the World Health Organization (WHO), the United Nations Children's Fund (UNICEF), donors, vaccine manufacturers, donor countries and developing countries. Gavi works to make vaccines affordable for the world’s poorest countries. It was within this context that the researcher became aware of the different considerations from the supply side of health care provision, including issues related to the quality of health care; the costs of drugs; and supply chain strategies. Equally important to consider was the demand side of health care – why communities and individuals choose to access services, and which factors prevent or promote health-seeking behaviour. Increasing globalisation and increased threats with regard to the spread of the disease, together with these considerations motivated the researcher to gain better understanding of issues related to the demand side of health care. This would led to recommendations in order to improve service delivery through targeted, patient-centred approaches.

1.2.2 Background to the Research Problem

This section provides an overview of the importance of immunisation within the context of primary health care, and insight into the current coverage within South Africa.

Immunisation is the cornerstone to primary health care services and high immunisation coverage can serve as a proxy for a functioning primary health care programme. Every year an estimated 1.5 million children under the age of five die as a result of diseases that could have been prevented by routine immunisation, i.e. 17% of total global mortality in children under five is preventable (World Health Organization 2013b:1).
Research into barriers to immunisation can provide insights into reasons why individuals and communities are not accessing other healthcare services. It may also highlight challenges within the healthcare system including limitations regarding the health workforce, use of appropriate technology and equitable distribution of healthcare – all principles of primary health care (Walley, Lawn, Tinker, De Francisco, Chopra, Rudan, Bhutta & Black 2008). The resources (including infrastructure and personnel) required for an effective and sustainable immunisation programme provide opportunities for better primary health-care services overall (Andre, Booy, Bock, Clemens, Datta, John, Lee, Lolekha, Peltola, Ruff, Santosham & Schmitt 2008).

Effective routine immunisation (RI) sees all children protected from common (infectious) childhood diseases through vaccination. These programmes, if robust, can boost the success of immunisation campaigns, assist in the introduction of new vaccines, and serve as a gateway for a number of other public health and community development interventions (Lafond, Kanagat, Sequeira, Steinglass, Fields & Mookherji 2012:1). Outbreaks of disease are useful in identifying geographical areas where communities are missed; highlighting inequitable access to basic healthcare, as well as other social services.
The District Health Barometer, which utilises data from the District Health Information System (DHIS), showed that immunisation coverage in South Africa for a fully immunised child was 94.0% in 2012/2013, below the 2011/2012 level of 95.2% (Massyn, Day, Dombo, Barron, English & Padarath 2013b:115). Only two of six districts in the Western Cape reached their target, and no districts in the Western Cape reached the national average of 94%. In the Western Cape governments Overberg district profile, the district is recorded as the worst performing in the province (Figure 1.2) (Western Cape Government Provincial Treasury. 2013: 18) and it is one of the three worst performing districts in the country for measles drop-out rate at 24.6% (Massyn et al 2013b:121).

Table 1.1 shows how full immunisation coverage varies among sources. For the purpose of this research, coverage of 75.8% was used.

![Population <1 year fully immunised](image-url)
Table 1.1 DIFFERENCES IN IMMUNISATION COVERAGE REPORTED BY DIFFERENT SOURCES

<table>
<thead>
<tr>
<th>Source</th>
<th>2011/2012</th>
<th>2012/2013</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Western Cape Government Provincial Treasury</td>
<td></td>
<td></td>
<td>Overberg district: 74.4% 75.8% Worst performing district in the province; population &lt;1 year fully immunised in the province 87.8% (2011/2012) and 89% (2012/2013)</td>
</tr>
<tr>
<td>Regional Development Profile – Overberg district</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>District Health Barometer</td>
<td>75.1%</td>
<td>82.5%</td>
<td>6th (2011/2012) &amp; 14th (2012/2013) worst performing district out of 52 districts in the country. SA average was 95.2% in 2011/2012 and 94% in 2012/2013.</td>
</tr>
</tbody>
</table>

(Western Cape Government Provincial Treasury. 2013: 18; Massyn et al. 2013b:66; 116)

It is thus evident that opportunities exist for the Overberg district to increase its immunisation coverage for fully immunised children, particularly in the Overstrand sub-district which has variable coverage ranging from 75.9% in 2012/2013 to 80% in 2013/2014, which is on an average with the rest of the district but below the national target of 90% (Western Cape Government Department of Health 2014:55). The Zwelihle clinic serves 21% of the sub-district’s population, this being the largest percentage for the population of 86 093 people in the sub-district (data provided by the District PHC Manager).

1.3 RESEARCH PROBLEM

The following section discusses the research problem.

South Africa’s 2013 country report on progress to the Millennium Development Goals (MDGs) suggests that South Africa is on track to meet the targets on all three indicators for MDG 4:
- 4.1 Under-five mortality rate
- 4.2 Infant mortality rate
- 4.3 Proportion of 1-year-old children immunised against measles

This is due largely to its prevention-of-mother-to-child-transmission (PMTCT) programme and the introduction of the pneumococcus and rota virus vaccines which were added to the country’s EPI programme in 2009 (Lehohla 2013:64). The country fails to consistently and equitably reach its target of 95% immunisation coverage, with coverage rates between districts varying from 69.6% to 118% (Massyn et al...
The risk of infection amongst susceptible individuals in a population is reduced by the presence and proximity of immunised individuals – this concept, known as herd immunity, requires a significant proportion of the population to be vaccinated, and can effectively stop the spread of a disease in a community (Fine, Eames & Heymann 2011:911). Whilst the actual percentage required for herd immunity is not prescribed, a 90% threshold is used as the guideline.

Research by Wiysonge, Nthombenhle, Prakash, Madhi, Shoub, Hawkridge, Shey and Hussey (2012a) presented challenges to coverage as identified by EPI managers in South Africa. The identified challenges included the low capacity of healthcare workers, poor demand from caregivers and weak health systems (including financial and human resources).

These challenges to coverage were coupled with other barriers to immunisation including the literacy and fertility rates of the child’s parents as well as their socio-economic status (Wiysonge, Uthman, Ndumbe & Hussey 2012b). The Overberg district and its Overstrand sub-district fall below the national target rates and thus the purpose of this study was to explore barriers related to the immunisation of children living around the Zwelihle clinic in the Overberg district.

1.4 PURPOSE AND OBJECTIVES OF THE STUDY

In this section, the purpose of the research and the objectives of the study are presented.

1.4.1 Research Purpose

The purpose of this study was to explore the barriers related to the immunisation of children living around the Zwelihle clinic in the Overberg district, Western Cape Province, South Africa.
1.4.2 Research Objectives

The objectives of the study were:
1. To explore factors that impact on access to immunisation services, from the perspectives of community healthcare workers and community members.
2. To provide recommendations for the development of district EPI programmes and strategies.

1.5 RESEARCH QUESTION

The research question that was formulated was:
What are the barriers to accessing immunisation services from Zwelihle clinic, in the Overberg district, Western Cape Province, South Africa?

1.6 SIGNIFICANCE OF THE STUDY

The following section discusses the significance of the study.

Tracy (2010:845-846) refers to the significance of a study as the ways in which the research will contribute to our understanding, bringing clarity and making visible what is ignored or hidden, and thus deepening understanding. This can provide a significant contribution conceptually/theoretically, practically, morally, methodologically, and/or heuristically. The present investigation provides practically significant research whereby the findings have framed and shed light on a problem within the Overberg community with the expectation that decision makers will adopt the findings and plan appropriately (Tracy 2010:846).

District-specific information regarding barriers to accessing immunisation, as well as other PHC services, is often based on assumptions that result in poor coverage and an additional burden on the health system. This study was important as it unpacks these assumptions against the reality of the community served by the clinic. It is expected that the results of this study will inform district-level planning and the design of health service delivery to respond to the challenges and perceptions of the
community in working to promote and provide patient-centred services, rather than facility-centred services.

This study has built on other research in the area, with a unique focus on district level care. It can contribute to enhancing the evidence base in addressing this public health challenge and the design considerations of provincial, national, and regional programmes and policies. It furthermore assisted the researcher in gaining better understanding of the challenges within the district health system and the communities it serves.

1.7 DEFINITIONS OF TERMS

**Diphtheria Tetanus Pertussis** (DTP) 3 vaccine indicates a fully functioning immunisation system that ensures that a child receives the three doses of the vaccine at the recommended intervals. It is regarded as the best indicator of the reach of national immunisation programmes (GAVI Alliance 2012).

**District Health Barometer** (DHB). This is a tool designed to assist in making functional information available for monitoring progress in health service delivery at the district level. It is linked to district, provincial and national strategic plans in that it measures similar indicators (Health Systems Trust 2011).

**District Health Information System** (DHIS). The DHIS is a system used for deriving a combination of health statistics from various sources, mainly from routine information systems used in the public sector to track health service delivery in sub-districts/municipalities, districts, provinces and nationally (Department of Health, 2011c).

**Immunisation**: Defined by the WHO as a “process whereby a person is made immune or resistant to an infectious disease, typically by the administration of a vaccine” (World Health Organization, 2013b).
Primary health care (PHC) is essential health care that is made available to individuals and families in their communities, with their full participation, and at a cost they can afford (World Health Organisation, 1978).

Road to Health Card (RTHC) is a card which records the immunisations and growth care of infants from when they are born to the age of five. It is issued to mothers when their baby is born in both government and private hospitals (Western Cape Government, 2014:1).

Routine immunisation (RI) is the sum of human and logistical activities/events to ensure the regular delivery and uptake of vaccines and the monitoring of their positive and adverse impact (Chaturvedi & Chaturvedi [Sa]).

Supplementary immunisation activities (SIAs) are used to reach children who have not developed sufficient immunity after previous vaccinations, or who have not yet been immunised (Trostle, Steinglass, Fields, Favin & Ballou, 2003:55). In the current research, the terms SIAs and campaigns are used interchangeably.

United Nations Children's Fund (UNICEF) is a United Nations Programme that provides long-term humanitarian and developmental assistance to children and mothers in developing countries. It is one of the members of the United Nations Development Group and its Executive Committee (Wikipedia, 2013).

Vaccine: This refers to “any preparation intended to produce immunity to a disease by stimulating the production of antibodies” (World Health Organization Regional Office for South-East Asia, 2013).

World Health Organisation (WHO) is the directing and coordinating authority for health within the United Nations system. It is responsible for providing leadership on global health matters, shaping the health research agenda, setting norms and standards, articulating evidence-based policy options, providing technical support to countries and monitoring and assessing health trends (World Health Organization, 2013a).
1.8 RESEARCH DESIGN AND METHOD

The following section discusses the research design and methodology including the study site and population, sampling and data collection and analysis.

1.8.1 Research design

The research design is a plan which assists the researcher in obtaining answers to his/her questions and assisting the researcher to respond to challenges as they may arise in the study. Exploratory and descriptive qualitative research was undertaken as the researcher explored and described barriers to immunisation coverage, while seeking to identify salient factors to improve immunisation coverage.

1.8.2 Study site

The site target population is the entire population of cases in which the researcher is interested (Polit & Beck 2012:273). The site for the study was Zwelihle, in the Overberg district in the Overstrand sub-district.

1.8.3 Study population

The site target population comprises the entire population of cases in which the researcher is interested (Polit & Beck 2012:273). This target population included all community members within the Zwelihle clinic catchment area that should have been accessing immunisation services, as well as the healthcare workers employed by the clinic to provide and support routine immunisation services.

1.8.4 Sample and sampling technique

Non-probability (i.e. non random selection) purposive sampling was employed whereby the researcher requested access to facility-level data regarding the provision of immunisation services, i.e.:
- Community health workers (CHW) tracking children who should have been accessing immunisation services at the clinic, but who had not come for immunisation at the appropriate times;
- Caregivers who brought their children for vaccinations at the clinic; and
- Caregivers, tracked by the CHW, who have not brought their children for vaccination.

The three groups were requested to participate in the research using non-probability sampling techniques. Nine CHWs were interviewed; nine caregivers who brought their children to be immunised were interviewed; and 20 expected defaulters were tracked; two of whom were actual defaulters.

1.8.5 Data collection

Semi-structured face-to-face interviews and focus group discussions were conducted with each of the three groups and data was recorded by the researcher and transcribed by a professional transcriber. A Xhosa translator was available on request.

1.8.6 Data analysis

The researcher qualitatively assessed the data and highlighted the emergent themes, relationships and trends. The data were coded and recurrent themes were grouped together and analysed.

1.9 ETHICAL CONSIDERATIONS

The University of South Africa and the Western Cape Government provided ethical clearance for the study to proceed. Approval was further provided by the PHC Supervisor, the Medical Manager of the district hospital as well as the Operational Manager and nurses of Zwelihle clinic.
1.10 STRUCTURE OF THE DISSERTATION

The dissertation is presented as follows:

- Chapter 1: Provides an introduction and overview to the study.
- Chapter 2: Presents a literature review of studies on similar themes.
- Chapter 3: Presents the research design and methodology used in the research. Measures taken to ensure validity and ethical practice are presented.
- Chapter 4: Presents a discussion on the research findings.
- Chapter 5: Presents conclusions, recommendations and limitations of the research.

1.11 SUMMARY

This chapter has presented an overview of the study including an introduction, background to the problem, the research aim and research question and the significance of the study. Key terms have been defined and the research design, method and the structure of the research paper have been introduced.
CHAPTER 2: LITERATURE REVIEW

2.1 INTRODUCTION

The literature review that follows explores the key terms mentioned before: *health systems strengthening; routine immunisation;* and *primary health care*. An inductive approach was followed and the majority of the literature reviewed was compiled in the last five years. It unpacks key documents and critical considerations to promote the effective management of EPI programmes and provides insight into EPI performance in the country, the Western Cape Province and the Overberg district.

2.2 HEALTH SYSTEMS

The World Health Organisation (2014) defines a health system as consisting of “all the organisations, institutions, resources and people whose primary purpose is to improve health”. In order to strengthen a health system, it is necessary to address key constraints, tackling health worker staffing; infrastructure; health commodities; logistics; tracking progress; and effective financing.

An effective health system should provide equitable access to people-centred care for improving the health of individuals, families and communities whilst allowing people to participate in decisions affecting their health and the health system. It should defend and protect people against severe financial consequences of poor health, and provide protection against what threatens one’s health (WHO 2010). This requires strong direction, collaboration, leadership and investment. Six building blocks for a health system have been defined in order to provide direction for leaders to consider in the policy development and implementation of health care globally.

The WHO (2010) defines these building blocks as:

2.2.1 Leadership and governance

Leadership and governance entail ensuring that health authorities take responsibility for the health sector, including its challenges and consequences; defining transparent
and inclusive processes and regulations; promoting integration with other sectors; and providing mechanisms to channel donor funding aligned to a country’s priorities (WHO 2010). In South Africa, inefficient district health services have limited the country’s ability to manage and deliver effective PHC (Naledi, Barron & Schneider, 2011:20). Whilst the National Health Act mandated provincial government to establish appropriate governance structures (e.g. district councils and clinic committees), compliance has been slow and formal accountability mechanisms are weak. In 2008 a survey of district management teams (DMTs) showed inconsistent establishment of DMTs and human and financial resource allocation. Much of the decision making was still centralised, inhibiting innovation and ownership; disempowering leadership; and fragmenting services through vertical programmes. This has resulted in inconsistency between provincial and national level programmes, and community and facility-based functions. Sub-district/municipal management teams require strengthening; particularly as most district populations are greater than the WHO recommendation of 250 000 – 500 000 people and increased coordination is required at national and provincial levels (Naledi et al 2011:20).

2.2.2 Health information systems

Robust health information systems are necessary in order to measure progress; track financial investments; track trends in access to and quality of service delivery, including human resources, financing, technology and infrastructure. These information systems require the effective implementation of a monitoring and evaluation plan, as well as arrangements to ensure that information is accessible to all stakeholders (WHO 2010). Despite significant expenditure, South Africa’s health information, communication and technology (ICT) and health information systems (HIS) are not meeting the country’s requirements, thus failing to provide data and information for decision-making purposes and failing to facilitate accurate monitoring and evaluation of the health system’s performance. This is largely due to the lack of an overarching technology policy framework and its support regulations to inform ICT procurement and management processes (The Presidency 2010:19).

PHC promotes a population-based approach responding to the size, geography, burden of disease and related risk factors of a defined community. Accurate data need
to be available to design local-level interventions. South Africa struggles with inadequate investment in health information systems; lack of a data driven culture; and lack of mechanisms to share data and good practices between the various levels of the health system. A 2009 assessment scored South Africa at 48% for data management and 39% for information use in implementation and action (Naledi et al 2011:22). This is particularly relevant in the context of this research which has found that the data displays poor coverage, which is not a reflection of reality.

To respond to this, the Negotiated Service Delivery Agreement (NSDA) aims to develop a framework for a comprehensive and integrated monitoring and evaluation system, alongside the development and enforcement of norms and standards and systems to be defined for use across the country. The DHIS is to be strengthened and an Electronic Health Record is to be put in place for the country. Data quality is to be strengthened through improved oversight at sub-national levels, including through performance agreements (The Presidency 2010:32).

2.2.3 Health financing

Health financing to ensure that sufficient funds are available to provide health services and share financial risk amongst population groups is necessary; as is a financing governance system to ensure efficient use of public expenditure (WHO 2010). The two tiers of South Africa’s health system sees the high income minority being served by a large private sector with 48% of total health care funds flowing via medical schemes and 52% of funds directed towards the public sector. This fragmentation, alongside out-of-pocket expenditure and other funding intermediaries, has resulted in the country failing to harness economies of scale and strategically negotiate the procurement, purchasing and provision of health services (The Presidency 2010:16).

In South Africa, there was a notable increase in public expenditure on PHC and DHS between 2004/2005 and 2010/2011, particularly for district management services at clinics and community-based services with a per capita expenditure increasing from R232 in 2005/2006 to an estimated R386 in 2010/2011; a 66% increase largely attributed to the increase in funding following the introduction of the Occupation Specific Dispensation (OSD). Notwithstanding significant investments in
infrastructure, most provinces still lack sufficient infrastructure and equipment, which impacts negatively on service delivery and staff retention (Naledi et al 2011:21). Despite this increased expenditure, the NSDA asserts that the public health care system remains under-funded, combined with inefficient utilisation of available resources, including overspending by provinces that result in non-availability of medicines, high accruals and non-payment for critical items. The need for improved financial management, reporting and accountability processes, as defined by the Public Finance Management Act (PFMA) has resulted in most provinces receiving qualified audits (The Presidency 2010:16).

The country’s financing system is to be overhauled with a new financing mechanism by means of National Health Insurance (NHI) that considers the health needs of the national population and utilises key indicators based on demographics and epidemiological profiles to make resource allocations to health facilities. The system is based on the principles of universal coverage providing access to a pre-paid and defined basket of services.

2.2.4 Human resources for health

Human resources for health (HRH) strategies seek a workforce that is responsive to the needs and expectations of the populations which it serves. This is essential to ensure sufficient numbers; appropriate incentives, norms and work environments; and regulatory mechanisms to ensure adequate deployment and cross-sectoral cooperation (WHO 2010). Despite the aforementioned OSD, HR planning in the country fails to retain, train and appropriately deploy staff (Naledi et al 2011:21). In support of this, the NSDA confirms that there is inappropriate and inadequate production and deployment of HRH professionals, which is combined with poor HRH planning, management and performance monitoring and evaluation. Health care workers are incorrectly placed and unevenly distributed and training institutions have failed to provide the adequate numbers required. Whilst policies exist to manage human resources, these are poorly monitored and not applied effectively, thereby aggravating poor accountability and performance management (The Presidency 2010:17).
2.2.5 **Essential medical products and technologies**

Access to quality health care is inextricably linked to access to affordable essential medicines, vaccines, diagnostics and technologies. A regulatory system to ensure safety is necessary, alongside standards to guide the provision of care and effective supply chain management (WHO 2010). The country successfully negotiated a 50% reduction in certain antiretroviral (ARV) drugs in 2010; national mechanisms to negotiate frameworks have otherwise been insufficient. Lists of essential laboratory tests at all levels of care – primary, secondary, tertiary – have been developed by the National Department of Health (NDoH), but are scantily implemented (Naledi *et al* 2011:22).

2.2.6 **Service delivery**

Service delivery includes the provision of a package of standardised services, accessible to patients, with mechanisms to ensure quality, by holding providers accountable and providing opportunities for patient feedback (WHO 2010). Naledi *et al* (2011: 20) points to key challenges to service delivery within the South African context which include the increasing pressure of non-communicable diseases (NCD) on health systems. Whilst NCDs in South Africa form part of the core package of PHC services, these are poorly detected, managed and monitored in the health system. The gap between policy formulation and implementation furthermore has resulted in inequitable service delivery evidenced by poor supervision of PHC services.

Poor oversight extends into governance of clinical care and many regional hospitals fail to deliver services through outreach teams as part of the PHC platform, thus further hindering the delivery of preventative care (Naledi *et al* 2011:20). Similarly, the NSDA highlights that the health system has failed to facilitate community participation and intersectoral collaboration in service delivery, resulting in poor access to health care, poor quality healthcare and ineffective resource management. Patients “get lost in the system”, there is poor resource allocation between and within provinces and there is no clearly defined ‘basket’ of services that are responsive and available to community needs (The Presidency 2010:15-16).
These building blocks are critical components of a system, though it is the multiple relationships and interactions between these blocks that create the system and achieve the overall outcomes of improved health; responsiveness; social and financial risk protection; and improved efficiency. Whilst useful in creating a common language, the framework of building blocks does not give justice to the complexities of the health system and fails to consider the demand side of the system and the dynamic interactions between the blocks (Mounier-Jack, Griffiths, Closser, Burchett & Marchal 2014: 278).

2.3 PROGRESS TO MILLENIUM DEVELOPMENT GOALS

The Millennium Development Goals (MDGs), agreed to by the world’s leaders in 2000, identify key objectives to be achieved by 2015. The three key indicators of MDG 4: Reduce Child Mortality are under-five mortality rate; infant mortality rate; and the proportion of 1-year old children immunised against measles (United Nations Statistics Division, 2008). The latter indicator serves as a proxy indicator for the functioning of the health system (Day et al 2011) as well as an indicator for socio-economic development in a country and disparities within a country’s sub-groups (Lehohla 2013:61).

Progress has been made globally, with child mortality decreasing from 12 million in 1990 to 6.9 million in 2011. The rate of decline has accelerated from 1.8% per year, in the 1990s to 3.2% per year during the period 2000 to 2010. Despite these improvements, 19 000 children under the age of five die every day and MDG 4 will likely not be achieved globally (Bamford 2013:50). This is further exacerbated by the fact that the disparity in mortality rates has increased, meaning that, whilst mortality rates are decreasing globally, child deaths are concentrated in the poorest communities, with approximately 50% of deaths occurring in five countries alone – India, Nigeria, the Democratic Republic of Congo, China and Pakistan (Bamford 2013:50).

Table 2.1 presents South Africa’s progress with regard to the MDGs, displaying that the country is on track to meet MDG 4, i.e. there has been a decrease in under-five mortality, infant mortality and the incidence of pneumonia and diarrhoea; largely due
to the country’s prevention-of-mother-to-child-transmission (PMTCT) programme and the introduction of the pneumococcus and rota virus vaccines which were added to the EPI programme in 2008 (Lehohla 2013:64; Baker 2010:18; Bamford 2013:51).

**Table 2.1 SOUTH AFRICA’S PROGRESS TOWARDS MDG 4**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>1994 baseline (or nearest year)</th>
<th>2010 baseline (or nearest year)</th>
<th>Current status (2013 or nearest year)</th>
<th>2015 Target</th>
<th>Target achievability</th>
<th>Indicator type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 5 mortality rate (per 1 000 live births)</td>
<td>59 (1998)</td>
<td>104 (2007)</td>
<td>20</td>
<td>20</td>
<td>Likely**</td>
<td>MDG</td>
</tr>
<tr>
<td></td>
<td><strong>48 (2007)</strong></td>
<td><strong>38 (2010)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Immunisation coverage under one year of age (%)</td>
<td>66.4 (2001)</td>
<td>93** (2009)</td>
<td>92.8 (2011)</td>
<td>100</td>
<td>Likely</td>
<td>Domesticated</td>
</tr>
<tr>
<td>Diarrhoea incidence under 5 years of age (per 1 000 children)</td>
<td>138.0 (2001)</td>
<td>130.0** (2009)</td>
<td>102.1 (2011)</td>
<td>No target</td>
<td>NA</td>
<td>Domesticated</td>
</tr>
<tr>
<td>Pneumonia incidence under 5 years of age (per 1 000 children)</td>
<td>21 (2003)</td>
<td>100.0** (2009)</td>
<td>83.2 (2011)</td>
<td>No target</td>
<td>NA</td>
<td>Domesticated</td>
</tr>
</tbody>
</table>

*Mortality estimates from Census 2011 not available yet; **Estimates based on mortality data from the Civil and Registration and Vital Statistics Systems (CRBS) data; ***Following the introduction of the PMTCT programme and the introduction of the pneumococcus and rota virus vaccines, there has been an accelerated reduction in infant and under-5 mortality rates: 12, changed from 98.3 (2009); 13, changed from 95.3 (2009); 14, changed from 132.6 (2009); 15, changed from 102.1 (2009). (Lehohla 2013:63).

South Africa’s MDG 2013 progress report presents recommendations to reduce child mortality. These include examination of socio-economic factors; empowering women through maternal education; integrated planning to ensure all influencers are tackled simultaneously (e.g. transport, supply chain, sanitation, health); and improved monitoring on the registration and causes of death, thus facilitating better designed interventions and tracked progress (Lehohla 2013:68-69). This is supported by numerous studies on reasons for low immunisation coverage which ascribe poor coverage to mothers’ education (Sanou, Simboro, Kouyate, Dugas, Graham & Bibeau 2009:2; Ndirangu, Bärnighausen, Tanser, Tint & Newell 2009:1383; Machingaidze, Rehfues, Von Kries, Hussey & Winge 2013:2; Lars, Jackson, Engebretsen, Zembe, Sanders, Sommerfelt & Tylleskar 2011:6; Sharma, Mahajan & Velhal 2013:3); socio-economic conditions (Sanou et al 2009:2; Ndirangu et al 2009:1383; Lars et al 2011:6);
access to healthcare facilities (Sanou et al 2009:2; Ndirangu et al 2009:1383); and the way in which services are provided (Sanou et al 2009:2).

With reference to the recommendation of improved monitoring on the registration and causes of death (Lehohla 2013:68-69), the Health Data Advisory and Coordination Committee (HDACC) was appointed in order to improve the quality of health outcomes data. It recommended that child mortality data should be monitored through the Rapid Mortality System (RMS); providing quick access to limited data on deaths and adjusting for deaths not registered (Bamford 2013:50). The HDACCC baseline and targets are presented in the table below, supporting the earlier table on MDG progress and displaying year on year reductions - resulting in achieving and exceeding the 10% reduction target (Bamford 2013:51; Baker 2010:18).

Table 2.2 UNDER-FIVE MORTALITY RATE IN SOUTH AFRICA DURING THE PERIOD 2009 - 2011

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>Target (2014)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under-5 Mortality Rate (USMR)</td>
<td>56 per 1 000 live births</td>
<td>53 per 1 000 live births</td>
<td>42 per 1 000 live births</td>
<td>50 per 1 000 live births</td>
</tr>
</tbody>
</table>

(Bamford 2013:51)

The top five illnesses killing children between the ages of one and five are largely preventable: acute respiratory infections (primarily pneumonia) (28.9%), diarrhoea (20.7%), septicaemia or bacterial infection (16.2%), Tuberculosis (7.1%) and meningitis (6.6%) (Bamford 2013:50). Integrated management of child health is important and thus Bamford (2013:50) highlights a number of interventions that are most likely to save lives. These include exclusive breastfeeding for six months; prevention and case management of malaria; Vitamin A supplementation; case management of severe acute malnutrition, child pneumonia and diarrhoea; and routine immunisation. Access to immunisation services are thus critical in the prevention and promotion of child health, and understanding the reasons for caregivers’ not accessing services has the potential to save approximately half of the children who are currently dying.

*The Global Strategy for Women’s and Children’s Health* was launched in 2010 to encourage progress in the achievement of MDGs 4 and 5 focusing on maternal and child health (Bamford 2013:53). Following this, the *Commission on Information and*
Accountability for Women’s and Children’s Health was designed by the WHO emphasising improvements on tracking resources and improved oversight of results and resources in order to monitor progress against the strategy. The 11 health indicators that were tracked included three immunisation related indicators: Under-five Mortality (U5M); DTP3 coverage; and antibiotic treatment for childhood pneumonia (Bamford 2013:54). The United Nations Children’s Fund (UNICEF) contributed to revitalising the commitment to child survival through the strategy A Promise Renewed with the aim of ensuring that under-five mortality rates are below 20 per 1 000 live births in all countries by 2035 (Bamford 2011:54).

2.4 SOUTH AFRICA: AN OVERVIEW OF THE HEALTH SYSTEM

The world’s global health leaders signed the Declaration of Alma Ata in 1978, thereby reaffirming the definition of health as: a state of complete physical, mental and social wellbeing, and not merely the absence of disease or infirmity (Declaration of Alma-Ata 1978:1). The declaration emphasises that primary health care is reflective of the economic, political and socio-economic status of a country and requires intersectoral coordination (e.g. housing, education and agriculture). It promotes maximum community involvement and individual self-reliance, relying on local health workers and referrals to address the health problems of a community through promotive, preventive, curative and rehabilitate services (Declaration of Alma-Ata 1978:1-2).

Health care in South Africa was historically delivered by a fragmented health system divided along racial lines and focusing on the provision of tertiary, or hospicentric services. Naledi et al (2011) characterise three distinct periods of health since democracy:

The period between 1994 and 1999 was defined by post-apartheid reconstruction including the amalgamation of the fourteen (14) previously racially divided health departments into one national health system; and removal of all fees for PHC for pregnant women and children under six within the public sector.

Between 1999 and 2004 the legacy of apartheid constraints continued alongside the mounting burden of HIV resulting in increasing morbidity, mortality and tension between the South African Government and civil society. This antagonism limited the
government’s ability to leverage civil society, hindering the promotion of intersectoral collaboration – a key pillar of PHC – thus further weakening the health system. In 2003, the Kopanong Declaration was adopted, with the resolve to build partnerships and develop concrete strategies to improve equitable resource allocation. It was not until the National Health Act was promulgated in 2004 that South Africa committed to establishing a decentralised health system based on the principles of equity, efficiency and participation. Chapter 5 of the Act identified district health services (DHS) as the key mechanism for the delivery of PHC services.

From 2004 there has been concerted efforts to scale up PHC programmes, starting with the introduction of the antiretroviral (ARV) programme in the same year. The programme was considered a morale booster for healthcare workers who had not been able to treat the innumerable HIV-related deaths they were confronted by and also saw a trebling of funding, which resulted in increased remuneration for healthcare workers; increased life expectancy; and renewed collaboration between civil society and government. The Birchwood Declaration in 2008 re-established the country’s commitment to the Alma Ata Declaration and called for a re-engineering of PHC within the country. Whilst laudable, many key objectives were not achieved including strengthening the roles and accountability mechanism of the district management team (DMT). Patients continued to bypass the PHC clinic structure and access primary care at tertiary institutions, placing an unnecessary and unmanageable burden on the country. Immunisation is a cornerstone to PHC service delivery and thus understanding the reasons for patients wanting to bypass primary care is necessary as this has the potential to increase access to immunisation, and strengthen DHS.

2.5 SOUTH AFRICA

2.5.1 Key documents and strategies

The Negotiated Service Delivery Agreement (NSDA) was signed by the Minister of Health and other Cabinet members and Provincial Members of the Executive Council in 2010. The agreement is a charter reflecting key sectoral and intersectoral partnerships linked to particular sectors of government. It has twelve (12) outcomes, each linked to a number of outputs to be delivered during the period 2010 to 2014. For
health, Outcome 2 *(a long and healthy life for all South Africans)*, four (4) outputs have been identified, highlighting the need to strengthen the health system in order to improve maternal and child survival rates. These outcomes involve: i) increasing life expectancy; ii) decreasing maternal and child mortality; iii) combating HIV and Aids and decreasing the burden of disease from tuberculosis; and iv) strengthening health system effectiveness (The Presidency 2010:4).

With reference to the current study, the NSDA acknowledges that vaccine-preventable diseases comprise a key area of influence in achieving Outcome 2 and that the EPI programme at national and provincial levels is currently under-resourced for effectively preventing outbreaks of disease. Routine immunisation should be supported by campaigns in order to maintain high coverage. Careful stock and cold chain management is required to ensure that the appropriate human and material resources are available (The Presidency 2010:12-13). Table 2.3 presents the baseline and targets for NSDA Output 2.

Table 2.3 NSDA INDICATORS, BASELINE AND TARGETS FOR OUTPUT 2: DECREASING MATERNAL AND CHILD MORTALITY

<table>
<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Output 2: Decreasing maternal and child</td>
<td>Child mortality rate</td>
<td>104 per 1 000</td>
<td>20 per 1 000</td>
</tr>
<tr>
<td>mortality</td>
<td>Infant mortality rate</td>
<td>52 per 1 000</td>
<td>18 per 1 000</td>
</tr>
<tr>
<td></td>
<td>Diarrhoea incidence &lt; 5 years</td>
<td>132.6 per 1 000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pneumonia incidence &lt; 5 years</td>
<td>102.1 per 1 000</td>
<td></td>
</tr>
</tbody>
</table>

(The Presidency 2010:42-44)

The NSDA was strengthened by the establishment of ministerial mortality committees including the *Committee on Mortality and Morbidity in Children* (CoMMiC), which collates and interprets data and reports to the NDoH on service delivery gaps and provides recommendations, a number of which impact on immunisation services, i.e.: develop a national child health strategy; develop a framework for the delivery of essential healthcare services; strengthen community-based care services; strengthen existing child survival programmes (including EPI); strengthen training in paediatrics; put in place regional paediatricians; strengthen data systems; and identify key drivers to sustain the actions required to improve child health (including the establishment of district and provincial child health forums) (McKerrow 2012: 29 - 31).
The National Maternal, Newborn, Child and Women’s Health and Nutrition (MNCWH&N) Strategic Plan was approved in 2012. It outlined a plan to improve health and decrease mortality rates of women and children; children were to be accessed through schools and households through community health workers. Clinical support at district level was to be improved through the district clinical specialist teams. Structural improvements as well as improvements in HRH, accountability mechanisms and monitoring are required to see real gains (Bamford 2011: 49).

The Campaign for Accelerated Reduction in Maternal and Child Mortality in Africa (CARMMA) was launched by the African Union in 2009 and in South Africa in 2012. It has six priorities focusing on women and children, which include improving immunisation and vitamin A coverage; improving implementation of key family practices, including diarrhoea management at home; strengthening implementation of IMCI in all PHC facilities; and strengthening clinical skills for the management of severe diseases, including pneumonia and diarrhoea in referral facilities (Bamford 2011:55). Also in 2012, the Buffalo City Declaration came into being. This arose from the National Early Childhood Development (ECD) conference that called for increased recognition of the critical years between birth and two years and the need for an inclusive, holistic, integrated approach to the provision of services to children (Bamford 2011:57).

The mechanism to achieve the objectives defined in the aforementioned documents is the National Health Insurance, the National Core Standards focusing on the quality of care, and the PHC re-engineering model. This model sees services delivered through three streams: district clinical specialist teams (DCST); school-based teams; and ward-based outreach teams (WBOTs).

The National Department of Health’s 10-Point Plan (Health Systems Trust 2010a) assists the country in meeting the Millennium Development Goals (MDG) and monitors improvements in the health system. The plan links to the six building blocks of health system strengthening (HSS) as described in Table 2.4. These will be discussed further under Chapter 4: Research Findings.
<table>
<thead>
<tr>
<th>WHO HSS pillar</th>
<th>10-Point Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership and governance</td>
<td>1. Provision of strategic leadership and creation of a social compact for better health outcomes, including the promotion of unified action across the different levels of the health sector. The Ministerial Advisory Committee on Health serves to oversee the aforementioned six pillars of the healthcare system.</td>
</tr>
<tr>
<td>Health financing</td>
<td>2. Implementation of National Health Insurance (NHI) promoting universal health coverage</td>
</tr>
<tr>
<td>Service delivery</td>
<td>3. Improving the quality of health services through measuring standards against actual practice and filling gaps. The implementation of quality improvement plans (QIPs) is necessary for all districts.</td>
</tr>
<tr>
<td>Health financing</td>
<td>4. Overhaul the health care system and improve its management by putting in place robust financial management systems and monitoring provincial expenditure patterns. District management teams (DMT) will be created in all of South Africa’s 52 districts in order to develop and monitor District Health Plans. Furthermore, a Hospital Management Training Programme will be provided to hospital CEOs to strengthen the management of hospitals.</td>
</tr>
<tr>
<td>Human resources for health</td>
<td>5. Improved human resources planning, development and management ensuring all provinces have human resources plan in order to serve the service delivery objectives</td>
</tr>
<tr>
<td>Service delivery</td>
<td>6. Revitalisation of physical infrastructure will be undertaken by assisting provinces in planning preventative maintenance and the establishment of Public-Private-Partnerships to facilitate the construction and refurbishment of health facilities.</td>
</tr>
<tr>
<td>Service delivery</td>
<td>7. Accelerated implementation of the HIV and AIDS and Sexually Transmitted Infections (STI) National Strategic Plan and the increased focus on Tuberculosis (TB) and other communicable diseases to ensure the implementation of existing treatment guidelines and to strengthen prevention interventions.</td>
</tr>
<tr>
<td>Service delivery</td>
<td>8. Mass mobilisation for the better health for the population sees provincial health promotion plans focusing on nutrition, physical activity, tobacco control, alcohol and substance abuse control, and safe sexual practices. The aforementioned 18 priority districts will have a special focus on improving maternal, neonatal and child health.</td>
</tr>
<tr>
<td>technologies</td>
<td>10. Strengthening research and development in attempts to generate key reliable information to improve health planning, service delivery and monitoring outcomes.</td>
</tr>
</tbody>
</table>
2.6 PRIMARY HEALTH CARE RE-ENGINEERING

A major policy development stemming from the fourth point of the 10-Point Plan, for *overhauling the health care system and improving its management*, is the PHC re-engineering strategy based on the aforementioned NSDA. PHC re-engineering is a key mechanism to the success of the NSDA, shifting PHC from a curative, vertical, individually orientated system to a proactive, integrated, and population-based approach (Naledi *et al* 2011:23).

According to Naledi *et al* (2011:23), key principles of this strategy include:

- Population based service delivery, based on the priority health needs of a defined community, and inclusive of preventative, promotive and quality care.
- A focus on health outcomes aimed at reducing morbidity and mortality from major causes of ill-health
- Integrated, efficient and well-supported PHC teams that are accountable to communities
- A well-functioning DHS
- Increased attention to the social ‘upstream’ determinants of health

There are three main types of facilities within a district – hospitals, community health centres and clinics. These have defined catchment populations and should have appropriate HR norms and standards to allocate resources. Each clinic has a ward-based outreach team (WBOT) responsible for approximately 6 000 people (approximately 1 200 households) (Naledi *et al* 2011:24).

Three streams are designed to provide PHC services:

- District clinical specialist teams which are multi-disciplinary and are largely made up of doctors and nurses
- Ward-based outreach teams that consist of at least one professional nurse (PN) and six community health workers (CHWs) whose responsibility it is to screen, assess and refer clients to PHC facilities; provide information and education on key health priorities; provide psychosocial and adherence support; provide basic home treatment; and undertake community assessments and campaigns in collaboration with other team members; function as the bridge between
patients and facilities and facilitate a continuum of care – preventative, promotive, curative and rehabilitative – between the home and the facility (Naledi et al 2011:24). Health promotion practitioners and environmental health practitioners may also form part of this team (Department of Health 2011:3). These teams can serve to educate communities on the benefits of immunisation and support during supplementary immunisation activities, and help to track children who have defaulted on their immunisations.

- School-based teams led by nurses, focusing on the lowest socio-economic areas and crèches.

These community-based streams are designed to be patient-centric, and are further supported by strengthened, decentralised decision-making powers to DMTs and facility managers. The DMT is responsible for the budget and resource allocation, including the contracting of private providers. Performance management, using accurate data for management and creating enabling environments for communities and healthcare workers also form part of the DMTs ambit, and are critical elements to the success of the programme and improved health outcomes (Naledi et al 2011:24).

2.7 IMMUNISATION

A successful EPI relies on commitment and continuous support from community leaders, politicians and decision-makers, health professionals, the public and the media. (Department of Health 2012:107)

2.7.1 Introduction

This section looks at what is required within a country for an effective immunisation system and considerations for decision makers i.e. those planning for, providing and accessing services.
2.7.2 Global Expanded Programme on Immunisation (EPI) performance

Since the launch of EPI in 1974, 53 African countries have had significant increases in immunisation coverage. Significant gains remain to be achieved, e.g. the DTP drop-out rate was less than 10% until 1990 and has drastically increased to 60% in 2010 (Machingaidze, Wiysonge & Hussey 2013:1).

Furthermore, one-fifth of these countries were not able to implement auto-disposable syringes and sufficient safety and waste disposal measures in 2010. This, combined with resource-constrained settings and insufficiently trained staff, results in children often not getting immunised, or failing to get immunised in a timely or optimal fashion (Machingaidze et al 2013). Sufficient equitable coverage is required to ensure herd immunity. Herd immunity refers to an instance where vaccination coverage levels in a community are sufficiently adequate for unvaccinated persons to be protected owing to the larger number of protected individuals preventing the transmission of the infectious agent (Department of Health 2012b:21).

2.7.3 Political will and financial resources

Many countries are not able to fund their immunisation programmes and are largely supported by donor funding rather than government funding. Twenty-six of the 53 African countries report that at least half of their routine immunisation vaccines were self-funded in 2005; by 2010 only 15% reported on routine vaccines being self-funded. Whilst new and underused vaccines have been slowly introduced into African countries, these vaccines remain expensive and without donor funding, an estimated 1.5 million children will continue to die each year from vaccine preventable-diseases (VPDs) (Machingaidze et al 2013:1).

Decision makers, including those government departments related to allocating resources, e.g. the DMTs, Provincial and National Departments of Health, and the Treasury, need data at population level in order to identify and provide the additional immunisation activities required. Ndirangu, Bland, Bärnighausen and Newell (2011: 1) describe the methods typically used to estimate vaccination coverage as:
- cross-sectional population-based surveys, e.g. demographic and health surveys (DHSs) (which determine the percentage of children vaccinated within a certain geographic area by collecting information from the caregiver);
- administrative data (often unreliable owing to poor estimates of the size of the target population);
- demographic surveillance systems (DSSs) which through individual and household surveys - track the demographic and health indicators of individuals in well-defined areas longitudinally; and
- clinical cohort studies which document the immunisation status of children through follow-ups which are used to estimate coverage.

Research shows that the DHS and DSS data have a near-perfect match to maternal recall suggesting high confidence in the accuracy of these data sources and implying that these sources can be used for policy and planning decision making (Ndirangu et al 2011:7).

### 2.7.4 Creating demand

In order to ensure full immunisation coverage, both government officials (who allocate resources) and caregivers (who access services) need to fully understand the value of vaccines (Department of Health 2012b:108). Caregivers need to know the date and time of the next immunisation; the outstanding doses; and how to manage possible side effects. The importance of the date and completing the EPI schedule on time should be explained, the caregiver should be provided with a written reminder and the date should be written on the Road To Health Card (RTHC). Risk-benefit communication should be used to ensure that caregivers are fully aware of the implications of the programme. At the same time, the healthcare workers are encouraged to have positive attitudes about immunisation. To support targeted communications with the caregivers, each province and district should prepare an integrated community strategy on EPI (Department of Health 2012:109-110). Alongside this, Machingaidze et al (2013:3) highlight that issues of immunisation awareness; demand for immunisation; increased levels of trust in the health system; access to vaccines; and adequate human resources and immunisation monitoring need to be tackled in-country alongside the global issues of vaccine supply, financing and sustainability.
2.8 SOUTH AFRICA: IMMUNISATION

2.8.1 Introduction

This section covers the history of EPI within the country and provides insight into South Africa’s EPI performance to date.

The Expanded Programme on Immunisation (EPI), introduced into apartheid South Africa in 1974, continues to face a number of challenges. The country has had significant gains since democracy, including the elimination of neonatal tetanus (2002); the interruption of the wild poliovirus (2006); and the introduction of hepatitis B (1995), Haemophilus influenzae type B (1999), rotavirus (2009) and streptococcus pneumonia (2009). Further EPI-SA performance is now monitored through the DHIS, thus enabling access to routine immunisation coverage data (Department of Health 2012:12). The country’s coverage rates remain low; measles outbreaks remain frequent; and community knowledge of vaccines is low (Wiysonge et al 2012a:2).

Under the principles of Global Immunisation Vision and Strategies (GIVS), EPI-SA, the immunisation programme of South Africa, has taken the lead in the African region in introducing new vaccines in efforts to provide additional protection for children.

In South Africa, the Reaching Every District (RED) strategy was adopted in 2006 and is still being implemented (Department of Health 2012:12). This is a WHO recommended strategy which focuses on district health care and has five operational components, namely re-establishing outreach services (to improve access); supportive supervision (for on-site teaching, feedback and follow-up with health staff); community involvement (engaging communities as partners to promote and deliver health services); proper planning and management of resources (both human and financial); and data management and use of data for monitoring programme performance (for continuous self-assessment and improvement) (Ngcobo 2008:12; WHO 2008:13). In order to reach every child there has been an increasing focus on Reaching Every Community, hence the RED strategy may soon be rearticulated as the REC strategy (Department of Health 2012b:125).
The South African health system consists of one national and nine provincial (sub-national) EPI managers, i.e. one per province. Immunisation is provided free through public health facilities. Research by Wiysonge et al (2012a:4) highlights that interventions focused on human resources including interactive educational meeting/workshops; performance management and supportive supervision could improve EPI performance alongside parent reminder and recall systems; conditional cash transfers; mass media interventions; interactive communication tools; and the effective use of community health workers. These interventions need to consider the local context (including availability of resources and level of priority) and ensure strong partnerships between the multiple stakeholders, including policymaker-implementer and researcher.

For example, MomConnect was launched in South Africa in August 2014. This is a free service using mobile phones to send expectant and new mothers information on their pregnancy and their baby’s health (up to 1 year old), including information on immunisation; oral rehydration during diarrhoea; check-up periods at the clinic; and breastfeeding (Western Cape Government 2014c:1).

2.8.2 SA Programme

Ten vaccine-preventable diseases (VPDs) are targeted in EPI-SA. The long-term goal is to control and eliminate some of these VPDs, with three of these being EPI diseases currently targeted for elimination, i.e. poliomyelitis; measles; and neonatal tetanus (NNT). These are of highest priority and national systems for case-based surveillance with laboratory support are available to support the incidence of these diseases. The other EPI diseases are diphtheria, pertussis (DTap), tuberculosis (BCG): hepatitis B (HepB), haemophilus influenzae type b (Hib), rotavirus (RV) and pneumococcal (PCV) infections (Department of Health 2012b:14). A Fully Immunised Child (FIC) is defined as a child between 9 months and one year, who has received all scheduled vaccines (BCG, OPV 0 & 1, DTap-IPV//Hib x3, Hep.B x3, Measles x1, RV x2 and PCV x3).

Despite the absence of drug interactions between EPI vaccines and anti-retroviral drugs, HIV-positive children with symptomatic HIV infection should not be vaccinated with BCG, OPV, Rotarix, or the Measles vaccines. The National Department of Health
“Vaccinator’s Manual” clearly outlines the guidelines for children who have missed scheduled doses, as well as how to conduct an immunisation session (Department of Health 2012b:37-43).

The strengthening of school health services and the re-engineering of primary health care provide further opportunities to expand immunisation coverage (Department of Health 2012b:11).

2.8.3 Monitoring of Expanded Programme on Immunisation performance in South Africa

Two elements are used to calculate coverage: the numerator (number of doses administered) and the denominator (target population, supplied by the DHIS using figures from Statistics South Africa). The EPI-SA programme has no influence on the denominator. WHO-introduced Data Quality Self (DQS) Assessment Audits query whether the data fairly reflect programme performance. These audits involve reviewing data at different levels – from facility, through sub-district/municipal, district, province and national – using the daily capture registers, tally sheets, weekly and monthly summaries, and compare recorded figures at one level to figures at a level higher. Ngcobo (2008:13) highlights that a Data Quality Self-Assessment conducted in a district in the Western Cape identified numerous discrepancies reflecting both under- and over-reporting levels (Ngcobo 2008:13).

To measure the effectiveness of an immunisation programme, immunisation coverage under 1 year is tracked. It is calculated by dividing the total number of children under one year who received all vaccines by the total population of children under one year of age. Rates over 100% refer to poor data quality (e.g. underestimating population denominator, over counting children immunised, including campaign data) or including migrant children (Gerritsen 2013:115). For EPI-SA, immunisation coverage refers to children under one year who have received vaccines against the following diseases: measles, polio, diphtheria, whooping cough (pertussis), tetanus, hepatitis B, haemophilus influenzae type b (Hib), tuberculosis, pneumococcal diseases and diarrhoea caused by the rotavirus (Department of Health 2012b:11).
2.8.4 Expanded Programme on Immunisation Performance in South Africa

In order to achieve many of the targets related to child health, full coverage of preventive services (including immunisation, growth monitoring and promotion, regular de-worming, and vitamin A supplementation) is necessary; children need regular access to PHC services. Research into interventions that would have an impact on decreasing child mortality has shown that focusing on reducing intra-country inequities by prioritising the most marginalised communities is more effective (and cost effective) in reaching complete coverage, i.e. focusing on the hardest to reach communities first will result in improved access and coverage for all communities (Bamford 2011:53).

Table 2.5 highlights the intra-country discrepancies of access to immunisation services with Limpopo having the worst immunisation coverage of under one-year olds at 70.3%, approximately 30% shy of the target of 90%. In addition, almost half (25 of the 52 districts) in the country fall below the South African average of 95.2%. The Western Cape does not reach its immunisation coverage target, but is on track with limited fatalities caused by diarrhoea and pneumonia – both VPDs. Across most provinces, mothers are not going for their postnatal visits within six days of delivery, which can impact on access to services and opportunities for health promotion to mothers by health workers.

<table>
<thead>
<tr>
<th>Province</th>
<th>Mother postnatal visit within 6 days rate</th>
<th>DTaP-IPV/Hib 3 - Measles 1st dose drop-out rate</th>
<th>Immunisation coverage under 1 year (annualised)</th>
<th>Measles 2nd dose coverage (annualised)</th>
<th>Child under 5 years diarrhoea case fatality rate</th>
<th>Child under 5 years pneumonia case fatality rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastern Cape</td>
<td>54.6</td>
<td>-0.3</td>
<td>72.3</td>
<td>67.6</td>
<td>6.9</td>
<td>5.7</td>
</tr>
<tr>
<td>Free State</td>
<td>83.9</td>
<td>6.8</td>
<td>86.6</td>
<td>80.0</td>
<td>4.5</td>
<td>3.1</td>
</tr>
<tr>
<td>Gauteng</td>
<td>86.9</td>
<td>3.5</td>
<td>99.0</td>
<td>95.1</td>
<td>3.5</td>
<td>2.5</td>
</tr>
<tr>
<td>KwaZulu-Natal</td>
<td>71.0</td>
<td>8.1</td>
<td>85.8</td>
<td>77.0</td>
<td>3.2</td>
<td>3.2</td>
</tr>
<tr>
<td>Limpopo</td>
<td>72.3</td>
<td>18.6</td>
<td>93.3</td>
<td>73.5</td>
<td>5.2</td>
<td>4.7</td>
</tr>
</tbody>
</table>
Table 2.6 similarly displays immunisation coverage in the Western Cape Province highlighting significant inequities in the province and the failure of the majority of districts in the province to reach the national target of 90% and the country’s average of 95.2%. There has been much debate on the quality of the denominator: when the DHIS population denominator is used the target of 90% coverage is achieved, but Census 2011 data indicate that the country average is below the target (Gerritsen 2013:115).

The current data are as referenced by the DHIS; the Census 2011 population data show a large variance in 2011/2012 data i.e. the DHIS data for the Central Karoo is 73.6% as opposed to 66.2% in Census data; similarly the Overberg district DHIS data indicate 75.1% whilst the Census denominator is closer to 68% (Gerritsen 2013:119). This raises concern that the country’s immunisation coverage rate is poorer than is reflected, which impacts planning and resourcing.

<table>
<thead>
<tr>
<th>District</th>
<th>Mother postnatal visit within 6 days rate</th>
<th>DTaP-IPV/Hib 3 - Measles 1st dose drop-out rate</th>
<th>Immunisation coverage under 1 year (annualised)</th>
<th>Measles 2nd dose coverage (annualised)</th>
<th>Child under 5 years diarrhoea case fatality rate</th>
<th>Child under 5 years pneumonia case fatality rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cape Town MM</td>
<td>108.3</td>
<td>-1.3</td>
<td>89</td>
<td>70.6</td>
<td>0.1</td>
<td>0.8</td>
</tr>
<tr>
<td>Cape Winelands DM</td>
<td>34.5</td>
<td>-2.4</td>
<td>81.1</td>
<td>71.9</td>
<td>0.3</td>
<td>0.2</td>
</tr>
</tbody>
</table>
The measles vaccine is provided in two doses; the first dose at nine months and the second dose at 18 months. The measles drop-out rate refers to the percentage of children who received the first, but not the second dose. Not receiving both doses can result in the child being compromised with regard to the disease and can lead to outbreaks. The 2012/2013 District Health Barometer showed the Overberg district as the third-worst performing district in the country with a 24.6% drop-out rate (Massyn et al 2013b:123). Table 2.6 shows that the district has not yet reached the target with 71.9% coverage (28.1% drop-out rate) for 2013/2014, according to the Department of Health (2014a:55-61).

2.9 OVERBERG DISTRICT

2.9.1 Data

In line with the RED strategy, the following factors are important to note (Department of Health 2012b:13):

- Annual operational plans should include EPI goals and the related resource requirements (both human and financial) and timeframes. These goals and plans should be established reflecting on current EPI performance as the baseline.
- National EPI targets should inform, and be set at, provincial, district, sub-district/municipal and facility level
- EPI goals and plans should be communicated at all levels i.e. from national, through provincial, district, sub/district and facility.
Massyn (2013:406) presents the following highlights (Table 2.7) in the District Health Barometer 2012/2013 regarding the *Overberg district*:

Table 2.7 KEY STATISTICS DESCIRIBING THE HEALTH INDICATORS IN THE OVERBERG

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2012/2013</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical scheme coverage</td>
<td>~ 20.3%</td>
<td></td>
</tr>
<tr>
<td>Proportion of district health expenditure</td>
<td>5.2%</td>
<td>Decreased from 6.2% in 2011/2012</td>
</tr>
<tr>
<td>Proportion of district health expenditure on PHC</td>
<td>55%</td>
<td>Stable</td>
</tr>
<tr>
<td>Percentage of district health expenditure on district hospital services</td>
<td>39.7%</td>
<td>Increased from 37.5% in the previous year</td>
</tr>
<tr>
<td>PHC supervisor visit rate (fixed clinic/CHC/CDC)</td>
<td>93.8%</td>
<td>Above the provincial rate of 79.6% and the national average of 76.9%</td>
</tr>
<tr>
<td>Immunisation coverage under one year</td>
<td>82.5%</td>
<td>An increase from 75.1% in the previous year but below the provincial (89%) and national (94%) coverage and higher than the aforementioned province’s recorded 75.8% (Western Cape Government Provincial Treasury 2013:18).</td>
</tr>
<tr>
<td>Measles 1st to 2nd drop-out rate</td>
<td>24.6%</td>
<td>The second highest in the province and almost 8% above the national average of 17%. This is lower than the province’s recorded value of 28.8% in 2013/2014. (Department of Health 2014:60)</td>
</tr>
<tr>
<td>Vitamin A coverage in children aged 1-59 months</td>
<td>45.6%</td>
<td>The second lowest in the province</td>
</tr>
<tr>
<td>Under-five incidence of pneumonia</td>
<td>123.9 cases per 1 000 children</td>
<td>A decrease from 18.2 cases per 1 000 children but seventh highest in the country and well above the provincial and national incidence of 63.0 and 66.8 per 1 000 children respectively.</td>
</tr>
<tr>
<td>Antenatal 1st visit before 20 weeks</td>
<td>71.9%</td>
<td>Stable. Second best in the province and above the national average of 44%. This is particularly interesting, as women are accessing timely antenatal care, suggesting that access is not necessarily the problem, however they are failing to access services for their children as evident in the poor immunisation coverage rate, poor Vitamin A coverage rate, high measles drop-out rate and relatively high incidence of pneumonia. (Massyn 2013: 406)</td>
</tr>
</tbody>
</table>

Data provided by the district shows an estimated PHC utilisation rate for Zwelihle clinic at 2.6 as calculated in Table 2.8 with an average of 12 159.75 per quarter and between 15 and 25% of PHC headcount for clients under 5 years.
Table 2.8 CATCHMENT POPULATION, PHC HEADCOUNT AND ESTIMATED PHC UTILISATION RATE FOR THE FACILITY

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catchment population</td>
<td>18 624</td>
</tr>
<tr>
<td>PHC headcount</td>
<td>48 639</td>
</tr>
<tr>
<td>Estimated PHC utilisation rate</td>
<td>2.6</td>
</tr>
</tbody>
</table>

(Data provided by District PHC Manager)

Figure 2.1 PHC headcount at Zwelihle Clinic for the period 2013/2014 distinguishing < 5 years and >= 5 years and older

(Data provided by District PHC Manager)

Key indicators for the clinic are described in Table 2.9, including the total number of fully immunised children under one year at 412; this contributes to the district’s immunisation coverage of 75.8% (2012/2013).

Table 2.9 KEY HEALTH INDICATORS OF ZWELIHLE CLINIC

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Total (2013/2014)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHC Professional Nurse clinical work days</td>
<td>1 120.5</td>
</tr>
<tr>
<td>PHC client seen by professional nurse</td>
<td>20 861</td>
</tr>
<tr>
<td>Antenatal 1st visit total</td>
<td>409</td>
</tr>
<tr>
<td>Immunised fully under 1 year</td>
<td>412</td>
</tr>
<tr>
<td>Measles second dose</td>
<td>286</td>
</tr>
<tr>
<td>Number of CHWs associated with the clinic</td>
<td>+ 12</td>
</tr>
<tr>
<td>Number of PNs/EN providing immunisation services</td>
<td>+ 2</td>
</tr>
</tbody>
</table>

(Data provided by District PHC Manager)
Zwelihle clinic has the following staff complement: two Clinical Nurse Practitioners (CNP); two Enrolled nurses/assistants (EN/A); two Auxiliary Services Officer Health Promoters (AS HP); two Cleaners; and two Administration clerks (AC). Two CNPs are typically tasked with immunising children. This is task-shifted depending on the needs within the waiting room. The professional nurse workload is estimated at 18.6, i.e. 20 861 (PHC clients seen by professional nurse) / 1 120.5 (PHC professional nurse clinical work days) = 18.6 which equates to an average time spent with a patient as 25.78 minutes i.e. (((1 120.5 (PHC professional nurse clinical work days)*8)*60) /4) / 20 861 (PHC clients seen by professional nurse) = 25.78 minutes per patient, which is a considerable amount of time. This is adequate with reference to the average nurse’s clinical workload of 25.3, which was the average recorded on the DHIS during the period 2000 to 2009 (Health Systems Trust 2010b:1).

2.9.2 Summary

This chapter provided an overview of the key policies and strategies that drive immunisation coverage as well as the necessary resources and political will required to ensure that services are sufficiently provided, and the communities engage in the design of the delivery, the consumption and the monitoring thereof.
CHAPTER 3: RESEARCH DESIGN AND METHOD

3.1 INTRODUCTION

Chapter 3 presents the research design and methodology followed in the research, including insight into the sample and sampling methodology, data collection, data analysis and related ethical considerations.

3.2 PURPOSE AND OBJECTIVES OF THE STUDY

The purpose of this study was to explore the barriers related to the immunisation of children living around the Zwelihle clinic in the Overberg district, Western Cape Province, South Africa.

3.3 RESEARCH CONTEXT

This section presents the research setting in which the study was undertaken.

3.3.1 Research Setting

The Overberg district recorded a total population of 258 176 people in 2011 (4.4% of the province’s population); half of whom were female. More than fifty-four percent of the population is coloured, with 25.9% being African, 19.1% white and 0.3% Indian/Asian. The literacy rate for 14 years and older is 81.1% (Western Cape Government Provincial Treasury 2013:2) and immunisation coverage is 75.8% (2012/2013) (Western Cape Government Provincial Treasury 2013:18).

The province has 435 primary healthcare facilities, 34 district hospitals and five regional hospitals of which 44 primary healthcare facilities and four district hospitals are located in the district. Zwelihle clinic is one of the seven clinics in the Overstrand sub-district (Western Cape Government Provincial Treasury 2013:15). Data for the fourth quarter of Q4 2013/2014 shows the Overstrand PHC headcount as 171 473 with a professional nurse workload of 20 and a doctor workload of 17 (Western Cape Government Department of Health. 2014: 15)
Figure 3.2 presents the structures of district health services in the sub-district.

The community healthcare workers, half of whom come from the community and the other half of whom come from the Eastern Cape, describe the community as having high levels of substance abuse (both drugs and alcohol) by both genders and by both adults and teenagers. They furthermore describe the community as having high levels of employment, and fair access to secondary education. Similarly, Zwelihle clinic is within walking distance for the community, and is situated opposite the police station and next to a number of creches and a community centre (from which the community-based services are provided and the community health workers are coordinated).

3.6.2 Study Population

The target population for the study included all community members within the Zwelihle clinic catchment area who should have been accessing immunisation services; as well as the healthcare workers employed by the clinic to provide and support routine immunisation services.
3.3.5 Health outcomes

The Western Cape Government’s Provincial Treasury working document (2013:19-21) records no maternal deaths in the district with 80.2 deliveries per 1 000 to women under 18 years in 2012/2013; a decrease from 94.6 per 1 000 in 2010/2011. In fact, the district has one of the lowest total deliveries to women under 18 years old, with the Overstrand sub-district recording the highest number of termination of pregnancies (TOP) at 10.6 per 1 000 population, higher than the district average of 5.8 per 1 000 population.

The District Health Barometer, which utilises data from the District Health Information System (DHIS), showed immunisation coverage in South Africa for a fully immunised child was 94.0% in 2012/2013, below the 2011/2012 level of 95.2% (Massyn et al 2013b: 115). Only two of six districts in the Western Cape reached their target, and no districts in the Western Cape reached the national average; the Overberg district was the second-lowest performing district in the Western Cape. Its coverage is recorded at 82.5%, making it the 14th-lowest district in the country (Massyn et al 2013b:116). This figure is higher than that presented in the province’s regional development profile for 2013, which records full immunisation at 75.8% (Western Cape Government Provincial Treasury 2013:18-19).

The District Health Barometer states that the measles drop-out rate is 23.1% in the Western Cape; making it the worst performing province with two districts from the province in the bottom three with Cape Winelands at 25.9% and Overberg at 24.6% (Massyn et al 2013b: 121). Further research within the Western Cape showed that measles immunity was recorded as 94.0% after the measles campaign in 2010, against 61.5% prior to the campaign, proving that the routine services had failed to reach adequate herd immunity in the population (Bernhardt, Cameron, Willems, Boulle, Coetzee 2013). The measles outbreak in South Africa between 2009 and 2011 saw three provinces (Gauteng, KwaZulu-Natal and the Western Cape) account for the largest proportions of cases missed (Ntshoe, McAnerney, Archer, Smit, Harris, Tempia, Mashele, Singh, Thomas, Cengimbo, Blumberg, Puren, Moyes, Van den Heever, Shoub & Cohen 2013).
3.4 RESEARCH PARADIGM

Qualitative exploratory research was undertaken as the researcher’s aim was to identify issues relating to immunisation, thereby to identify salient factors to improve immunisation coverage. Joubish, Khurram, Ahmed, Fatima and Haider (2011:2083) refer to qualitative research as an enquiry process for understanding a social or human problem which is based on building a complex, holistic picture formed with words and reporting detailed views of informants and conducted in a natural setting. Joniak (2002:3) highlights that qualitative inquiry presupposes that reality is socially constructed by each individual and that the qualitative researcher values participant’s own interpretations of the data.

3.5 RESEARCH DESIGN

Polit and Beck (2012:487) describe qualitative research as an emergent design which evolves as the study unfolds, with the researcher having the ability to reflect, make decisions and change the course of the research on the basis of realities encountered during the study. It involves the ‘why’, not the ‘how’, through the analysis of unstructured information (interview transcripts, open-ended questions, correspondence, feedback forms) as it seeks to gain insight into people’s attitudes, decisions, behaviours and motivators (Joubish et al 2011:2082). The qualitative paradigm was used in this study as it was necessary to gain understanding of the experiences of the community health workers and community members in order to understand the reasons for low immunisation coverage in the Overberg district. This emergent research design requires intense reflection by the researcher as s/he is the research instrument and needs to have the ability to be flexible to respond to emerging information, view the research problem in its entirety and ensure that his/her personal biases do not influence the research findings (Polit & Beck, 2012: 487).
3.5.1 Descriptive Design

Qualitative descriptive studies seek to present a comprehensive summary of events in their commonplace scenario, and are particularly useful when uncomplicated descriptions of phenomena are required (Sandelowski 2000:334). The goal of this type of research is to present as straightforward descriptions of participants’ experiences as possible. It is a dynamic, reflexive process which allows new themes to emerge, requiring the researcher to remain close to the raw data, tackling the data in the analysis and interpretation and ensuring depth in order to generate new insights (Polit & Beck 2012:505).

3.6 RESEARCH METHOD

Polit and Beck (2012:733) define the research method as the “steps, procedures and strategies for gathering and analyzing data in a study”. This section describes the population, the sampling approach, and the processes of data collection and analysis.

3.6.3 Sample and Sampling

Non-probability sampling refers to the range of sampling techniques available in qualitative research. With non-probability sampling, the probability of being selected for the study is unknown, and the sample is not intended to be statistically representative (Ritchie & Lewis 2003:78). Mixed sampling methods were used. The researcher interviewed all mothers who brought their children to be immunised at the facility. These mothers were selected because of ease of access i.e. convenience sampling. Purposive or criterion-based sampling refers to the sample units being selected because of particular features which the researcher wished to study. In this instance, the members of the sample were purposively selected to represent a population with regard to access to, and uptake of, immunisation services and the researcher went to households which the clinic referred to as possible immunisation defaulters. Opportunistic sampling was used in the community where the researcher interviewed caregivers with small children at home (Ritchie & Lewis 2003:78).
Non-probability sampling is particularly useful for small-scale, in-depth studies such as this study and it is considered a practical and cost-effective model. The disadvantages are that transferability of the study is limited, as with much qualitative research (Polit & Beck 2012:517).

3.6.4 Criteria for Inclusion

The researcher requested access to facility-level data regarding the provision of immunisation services regarding the following groups:

- Community health workers (CHWs) who track children who should be accessing immunisation services at the clinic, but who have not come for immunisation at the appropriate times. Two CHWs focused on newborn babies and immunisation services. The researcher interviewed all available CHWs (n = 9) in a focus group discussion prior to the commencement of their daily activities, and shadowed the two CHWs responsible for immunisation during their rounds. Convenience sampling was used as all CHWs available were interviewed.

- Caregivers tracked by the CHW, who had not brought their children for vaccinations. Data on defaulters were provided by the facility i.e. purposive sampling. The researcher and the CHWs tracked the children and their caregivers and undertook spot checks on Road to Health Cards of other children in the community, or those living at the addresses provided by the clinic, but where the defaulters were not found. The latter reflects opportunistic sampling whereby the researcher took advantage of available encounter as they arose during the research (Ritchie & Lewis 2003:81).

- Caregivers who bring their children for vaccinations at the clinic. The researcher shadowed a nurse providing EPI services for one full day. The researcher requested permission to interview these caregivers. Convenience sampling was undertaken owing to the ease of access of these caregivers and their availability during the study period.

The sample size was not pre-determined but based on the aforementioned sampling procedures. Interviews were conducted until data saturation occurred i.e. there was consistent messaging from the CHWs, as well as the caregivers within the clinic. Of
the 22 households visited, only two caregivers, gave varied responses hence data saturation was achieved as no new information was emerging.

3.7 DATA COLLECTION

Data collection, ‘the gathering of information to address a research problem’ (Polit & Beck 2012:725), was conducted using semi-structured interviews with representatives of each of the aforementioned groups.

3.7.1 Data Collection Process

Positive rapport was developed with the interviewees prior to commencing the interview. The purpose and importance of the research was described to each participant, and the consent form was explained before the interview commenced. Some interviewees only signed the form after the interview.

Semi-structured, face-to-face interviews were conducted by the researcher, a social worker by training who is a public health professional. In semi-structured interviews, also known as standardised interviews, the interviewer asks the key questions in the same way each time, and probes for further information in a more structured manner than in unstructured, in-depth interviews (Ritchie & Lewis 2003:111).

A topic guide which covered the areas that the researcher wanted to cover had been prepared and the researcher encouraged participants to talk freely (Polit & Beck 2012:573). This topic guide (AnnexE), the data collection instrument, was approved by the University of South Africa and the Western Cape Health Research Committee.

The survey was open-ended with neutral questions and was conducted in a largely consistent fashion between interviews. The approach was flexible and the researcher altered the sequence of the questions and the way in which the questions were asked in order to be cognisant of previous discussions that may have taken place before the formal interview started (e.g. in the consulting room whilst the immunisation was being administered) or to allow for simpler translation and interpretation based on the language ability of the interviewee.
The phases of the interview included orientation to the researcher and the research, the working phase in which the discussion took place; and the termination phase at the end of which the interview was closed. The questions were intended to be clear and easy to understand and the interviewee was not rushed to respond, but allowed to take time to answer thoughtfully. Many of the caregivers displayed some level of discomfort, which could be attributed to the language or the underlying power dynamic between healthcare professionals and patients that might have resulted in the interviewee feeling intimidated, unable to decline to participate, or uncomfortable to ask questions of the researcher and about the research. Interviewees were reminded that the interview was optional, there were no right or wrong answers, and that they could take their time to respond. A translator was made available upon request and referrals were made if the researcher could not answer any of their health-related concerns.

The interviews served to explore the attitudes and experiences of the participants. The discussions took place in English, at the following locations, with a Xhosa translator available on request:

- Caregivers who brought their children to the facility for immunisations were interviewed at the clinic. The researcher shadowed the nurse providing immunisation services, sitting in the consulting room whilst the child was immunised. During this period rapport was developed between the caregiver, the nurse and the researcher and the researcher and/or the nurse described the research. The caregiver was asked if she was interested and willing to be part of the research and then accompanied the researcher to a consulting room next door to be interviewed. A Xhosa-speaking translator was made available on request; this was a community volunteer provided for by the facility.

- Caregivers who did not bring their children to be immunised where traced by the community health workers. The researcher joined the Community Based Services (CBS) team in their morning meeting and was allocated to one or two community health workers who were responsible for tracing children who had not been immunised or had defaulted on their immunisation, as well as following up with newborn babies and providing services such as advice on breastfeeding and nutrition. These community health workers served as Xhosa-English translators. These interviews took place in the homes of these caregivers.
- Community health workers were interviewed in a focus group discussion after their morning meeting. The researcher sat in on the meeting prior to explaining the research and commencing the interview.

All interviews were recorded, and no-one was be identified by name on the recording. The recording was password protected in electronic format. The recorded information remains confidential, and no one besides the researcher, the supervisor and the transcriber has had access to the recordings. The recordings will be destroyed 12 months after collecting the information.

Semi-structured interviews in qualitative research may see the researcher exposed to a variety of issues within the healthcare facility, beyond the scope of the topic because of the potential influence of the research design and the researcher. As such, the researcher sought to respect the autonomy and anonymity of the participants who participated in the research as volunteers following full disclosure from the researcher. Similarly the researcher frequently reflected on the research with her supervisor to ensure that the qualitative nature of the research was not impacting the findings of the study (Polit & Beck 2012:537). The caregiver was referred to the nurse or community health worker with regard to matters beyond the study.

Numerous advantages and disadvantages to semi-structured interviews may have been experienced in a study: the researcher and interviewee may develop positive rapport but this could be a disadvantage depending on the skill of the interviewer/researcher. The results of the interview may have high validity as interviewees are encouraged to talk to the researcher in detail, however the interviewer may give off unconscious signals that influence the interviewee. Whilst complex questions and issues can be clarified and probed, it is difficult for the interviewer to replicate the interview, thus threatening the reliability of the study. Further there is no way for the interviewer to know whether the interviewee is responding genuinely, thus threatening the validity of the study. The sample sizes tend to be small and difficult to analyse, and to generalise further. The interviews are easy to record (Sociology Central [Sa]:1).
3.7.2 Data Analysis

Defined by Polit and Beck (2012:725) as the systematic organisation and synthesis of research data, data analysis in qualitative research is a labour intensive activity which requires the researcher to reduce data into key themes; identify patterns and trends and code the data (Polit & Beck 2012:557). The process has been defined as “fitting data together, of making the invisible obvious, of linking and attributing consequences to antecedents”. It is “a process of conjecture and verification, of correction and modification, of suggestion and defense” (Polit & Beck 2012:557). All interviews were transcribed by a professional transcriber. The transcript was recorded verbatim (Mabuza, Govender, Ogunbanjo & Mash 2014:1) and the researcher used the software package Atlas.ti 7 to support data management and organisation.

3.8 ETHICAL CONSIDERATIONS

Orb, Eisenhauer and Wynaden (2000:93) highlight the ethical principles of autonomy, beneficence, and justice as key considerations that a researcher needs to address in balancing the needs and goals of the research, in light of the rights of the research participants. The researcher ensured that these principles were considered throughout the life cycle of the study.

3.8.1 Ethical Approval

UNISA and the Western Cape Government Department of Health provided approval for the researcher to conduct the study. Access to the study site was facilitated by the Primary Health Care Sub-District Manager and the Operational Manager of the facility, Zwelihle clinic.

3.8.2 Informed Consent

As mentioned before, consent forms were provided to all participants and the forms were explained verbally to them. Richards and Schwartz (2002:137) highlight that all participants should be informed in writing and verbally of the following issues: the purpose and scope of the study; the types of questions to be asked; how the results
will be used; and the method of maintaining anonymity. Participants were also informed that the interview would be recorded to ensure that their views were accurately captured. The contact details of the researcher and the supervisor were made available to each participant should s/he have further questions.

3.8.3 Remuneration

Participants were informed that no remuneration would be available for participation in the study and this was written in the consent form.

3.8.4 Privacy and Confidentiality

Polit and Beck (2012:156) state that most research with people can involve interruption in the personal lives of interviewees and the researcher should try to limit this intrusion. In order to do this, the study was conducted at a location convenient to the interviewees (typically the home or the clinic) and a translator was available upon request. It is important to note, that many of the caregivers who were interviewed at the facility had been sitting in the queue for many hours before being seen by the healthcare worker and undergoing the interview. Participants were asked if they would participate willingly; one candidate declined as she had to go to work, the others obliged, although they may have felt pressured to do so as a result of the aforementioned relationship between healthcare worker and patient.

3.8.5 Anonymity

Participants were informed that the research was confidential and anonymous. Their names were not revealed during the recorded interviews or in the research report.

3.9 MEASURES TO ENSURE TRUSTWORTHINESS

Researcher subjectivity and bias can be limitations in qualitative research (Joubert & Ehrlich, 2007). This bias can be related to the researcher’s bias and the researcher’s ability to source an appropriate sample, as well as community bias by which the first participants will have a strong impact on the sample.
3.9.1 Credibility

The study was conducted in a way that enhanced the credibility of its findings through (Shenton 2004):

- Peer debriefing between the researcher and supervisor to allow for external checks;
- Well-established research methods adopted and documented as presented in this report;
- The researcher developed early familiarity with the culture of the participants and participant organisation both through consultation of appropriate documents and preliminary meetings with the relevant stakeholders, including the healthcare professionals providing immunisation services;
- Iterative questioning of the participants in the interviews;
- Tactics to ensure honesty in the respondents’ information, e.g. allowing participation in the research to be optional, and encouraging transparency throughout the research process.

3.9.2 Dependability

Dependability, which signifies that similar results would be obtained if the study were to be repeated in the same context with the same methods and with the same participants (Shenton, 2004) can be problematic in qualitative research and in using purposive sampling, because the sample is not random and therefore not necessarily representative of the broader population. The processes within the study have been reported in detail, including details on the research design and implementation, the operational details of data gathering, and a reflective appraisal of the project which serves to evaluate the effectiveness of the processes of inquiry that were undertaken.

3.9.3 Conformability

This concept of conformability serves to ensure that the findings of the study truly reflect the experiences and ideas of the participants, rather than the preferences of the researcher, and/or community bias (Shenton, 2004). To ensure this, the
researcher has clearly documented the audit trail of research processes and decisions, whilst reflecting on possible personal predispositions to ensure that these did not impact the results of the research. This is especially important in qualitative research in semi-structured interviews as there is a risk of researcher bias (Joubert & Ehrlich, 2007).

3.4 SUMMARY

Chapter 3 presents the research design and methodology including the context of the research, the process of data collection and analysis as well as the ethical considerations.
CHAPTER 4: ANALYSIS, PRESENTATION AND DESCRIPTION OF THE RESEARCH FINDINGS

4.1 INTRODUCTION

Discussions on the research design, the methodology, ethical considerations and measures to ensure trustworthiness have been presented in the previous chapters, and the context for the study was provided. Chapter 4 presents the research findings under the themes and categories that resulted from the analysis of the interviews, and was contextualised with desk-top research.

4.2 DATA ANALYSIS

Polit and Beck (2012:725) define data analysis as the systematic organisation and synthesis of research data. In qualitative research, the first phase of data analysis is open coding whereby the researcher looks for distinct concepts and categories to form the basis of the research. Open coding focuses on the text and then proceeds to the second phase of coding, axial coding, which utilises concepts and categories to contextualise the data and ensure that the researcher has considered all different aspects of the data (Biddix 2009:1).

4.2.1 Recording data

The study and its purpose were described in the consent forms, as well as the ethical considerations related to confidentiality and these issues were explained to all participants. Permission was requested to audio-record the interview, and the recordings were then transcribed by a professional transcriber.

The process undertaken by the professional transcriber included: converting the file from MPEG4 into MP3 format and then importing it into Olympus Transcription Module. A word document was created and the transcriber used an Olympus footswitch, which allowed easier control of play, pause, rewind and fast forward. The interviews were listened to through headphones while the transcription was done. First a rough copy was created whereby everything that the transcriber heard was typed.
The recordings were then listened to for a second time and more detail was inserted. When the recording was not clear, the recording was listened to at least four times, and then empty brackets were used if it was inaudible, or a guesstimate was placed in brackets. The researcher reviewed the transcriptions a number of times in order to ensure accuracy and promote familiarity with the data.

4.2.2 Coding

The collected data were coded according to themes and categories. ATLAS.ti was used to support the open and axial coding process. The three main themes which emerged were:

1. Personal considerations
2. Facility considerations
3. Data quality

The researcher followed the following process in the analysis (Ruggunan [SA]; Mabuza et al 2014:1-13):

- Familiarisation with the topic and data including taking notes of key ideas, recurrent themes, own reactions and commentary on the data and methodology issues;
- The data was then read and listened to numerous times and codes were developed in an inductive process, some of which were then merged or removed later in the process in order to define the themes and categories.
- The themes and categories were then presented, supported both by literature and by quotes and observations from the research.

4.3 OVERVIEW OF THEMES AND CATEGORIES

The purpose of the research was to understand barriers to immunisation, by exploring the reasons why the immunisation coverage from the Zwelihle PHC catchment population was so poor. In summary, nine mothers who brought their child for immunisation were interviewed, as well as two defaulters, two relatives of expected defaulters and one focus group of nine community health workers. A total of twenty-two (22) households were visited, twenty (20) of which were expected defaulters, and
2 (9%) defaulters were identified. Six (27%) of the caregivers had moved and four (18%) had given the wrong address. Five of these households had other young children in the house, and their RTHC showed that they were up to date with their immunisations. Figure 4.1 illustrates the households visited.

![Figure 4.1 Immunisation status of the 22 households visited](image)

Potential barriers to immunisation coverage can be split between those related to personal households (socio-economic conditions and religion) and those related to the interaction between the household and the facility (communication, quality of care and availability of data), hence both of these angles should be considered in designing interventions in an integrated fashion – targeting communities and health care providers. Table 4.1 summarises the themes and categories per stakeholder group and Table 4.2 presents these against the six building blocks or pillars defined by the World Health Organization as WHO HSS pillars and the 10-point plan:
Table 4.1 SUMMARY OF THEMES AND CATEGORIES

<table>
<thead>
<tr>
<th>Theme</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal</td>
<td>Religion</td>
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<tr>
<td></td>
<td>Negligence</td>
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<tr>
<td></td>
<td>Patient Empowerment</td>
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<tr>
<td></td>
<td>Financing</td>
</tr>
<tr>
<td></td>
<td>Adverse events following immunisation (AEFI)</td>
</tr>
<tr>
<td></td>
<td>HIV status of the mother</td>
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<tr>
<td></td>
<td>Sex of the child</td>
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<tr>
<td>Facility</td>
<td>Waiting times</td>
</tr>
<tr>
<td></td>
<td>Staff attitude</td>
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<tr>
<td></td>
<td>Accessibility</td>
</tr>
<tr>
<td></td>
<td>Availability of Supplies</td>
</tr>
<tr>
<td>Data</td>
<td>Data management</td>
</tr>
</tbody>
</table>

Table 4.2 KEY FINDINGS OF THE RESEARCH PRESENTED IN THE CONTEXT OF THE WHO HSS PILLARS AND THE COUNTRY’S 10-POINT PLAN

<table>
<thead>
<tr>
<th>WHO HSS pillar</th>
<th>South Africa: 10-Point Plan</th>
<th>Relevance to the study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership and governance</td>
<td>1. Provision of strategic leadership and creation of a social compact for better health outcomes, including the promotion of unified action across the different levels of the health sector. The Ministerial Advisory Committee on Health (MACH) serves to oversee the aforementioned six pillars of the healthcare system.</td>
<td>Leadership needs to include the basic principles of Alma Ata which promote maximum community involvement in the design, prevention, provision and monitoring of health services.</td>
</tr>
<tr>
<td>Health financing</td>
<td>2. Implementation of National Health Insurance (NHI) promoting universal health coverage.</td>
<td>The EPI-SA programme provides free immunisation services for children under the age of six and women at all public health facilities. No respondent mentioned finance as a barrier to immunisation (either in paying for services or accessing services, i.e. transport). A number of respondents highlighted that the waiting times resulted in them having to take days off work, or using their one-off day to wait in the queue rather than do their other personal administration, e.g. cleaning and cooking. Many respondents are living in Zwelihle but originate from the Eastern Cape. Their reasons for moving to the Western Cape is to search for jobs and many of the respondents are accessing, or have historically accessed social grants, which were described by caregivers as being more accessible and efficiently delivered in the Western Cape.</td>
</tr>
<tr>
<td>Service delivery</td>
<td>3. Improving the quality of health services through</td>
<td>National Core Standards (NCS), the country’s quality assurance model, has seven domains and six</td>
</tr>
</tbody>
</table>
measuring standards against actual practice and filling gaps. The implementation of quality improvement plans (QIP) is necessary for all districts.

Priority areas. Waiting times fall under domain one (patient rights) and priority area two (waiting times) [See Figure 4.2]. Waiting times emerged as a sub-theme. Research has shown that accessibility of services, including waiting times, can impact on immunisation coverage. This did not emerge as a major barrier to immunisation coverage in this study, however it was mentioned in a number of interviews as impacting on the quality of service delivery experienced by the patient and could improve uptake of other offerings of the PHC package of services, beyond EPI.

Similarly, values and attitudes (priority area 1) under patient rights (domain one) can be impacted by the provision of training discussed further under #5 as well as appropriate complaints management mechanisms, which are included under patient rights (domain one) and defined in the National Complaints Management Protocol for the Public Health Sector of South Africa (Department of Health 2013:1).

**Health financing**

4. Overhaul the health care system and improve its management by putting in place robust financial management systems and monitoring provincial expenditure patterns. District management teams (DMT) will be created in all of South Africa’s 52 districts in order to develop and monitor District Health Plans. Furthermore, a Hospital Management Training Programme will be provided to hospital CEOs to strengthen the management of hospitals.

See # 2.

**Human resources for health**

5. Improved human resources planning, development and management ensuring all provinces have human resources plans in order to serve the service delivery objectives.

Patient empowerment emerged as a strong theme in the research and this includes the way in which the caregiver perceives her treatment by the healthcare workers – most notably the frontline staff. A number of respondents commented on the lack of discretion of the frontline staff and the manner in which they were treated. No respondent commented on poor service delivery by the nurses. This links to the NCS domain one (patient rights) and priority one (values and attitudes) and the importance of appropriate performance management mechanisms, including supportive supervision [See Figure 4.2].
| Service delivery | 6. Revitalisation of physical infrastructure will be undertaken by assisting provinces in planning preventative maintenance and the establishment of Public-Private-Partnerships to facilitate the construction and refurbishment of health facilities. | This could include the lay-out of the clinic to reduce waiting times as well as improved data management, i.e. respondents described situations whereby their file was lost, resulting in a delayed appointment with the healthcare worker whilst the file was sought, and respondents not being able to be transferred to another facility. |
| Service delivery | 7. Accelerated implementation of the HIV and AIDS and Sexually Transmitted Infections (STI) National Strategic Plan and the increased focus on Tuberculosis (TB) and other communicable diseases to ensure the implementation of existing treatment guidelines and to strengthen prevention interventions. | There is conflicting research on whether the HIV status of the mother influences immunisation coverage. In this study, the HIV status of the mother did not impact on the immunisation status of the child. |
| Service delivery | 8. Mass mobilisation for better health for the population sees provincial health promotion plans focusing on nutrition, physical activity, tobacco control, alcohol and substance abuse control, and safe sexual practices. | Patient empowerment emerged as a critical theme in the research whereby caregivers are not sufficiently informed on the value of vaccines, and do not feel empowered or comfortable to ask the health care providers the questions which they might have. The behaviour of caregivers is largely driven by that of law-abiding citizens, not questioning the reasons why they bring their children to the clinic, and feeling fearful of the healthcare providers. One CHW described a situation of AEFI experienced by one of her clients. Whilst this can be a barrier to immunisation, the situation was not described by any caregiver and did not emerge as a significant barrier to immunisation coverage in the study. |
| Essential medical products & technologies | 9. Review of drug policy in order to improve drug availability. | Whilst no vaccine stock-outs were observed or described; the researcher witnessed a stock-out of one of the de-worming medications. Whilst availability of supplies can be a barrier to immunisation coverage, this was not highlighted as a barrier to immunisation coverage in this study. This links to NCS domain three (clinical support services) and priority six (availability of medicines and supplies) [See Figure 4.2]. |
| Essential medical products & technologies | 10. Strengthening research and development in attempts to generate key reliable information to improve health planning, service delivery and monitoring outcomes. |  |
4.4 DISCUSSION OF THEMES AND LITERATURE CONTROL

The findings below present the reasons why two mothers defaulted, and provide insight into other potential barriers to immunisation coverage, as described by the CHWs and caregivers who do bring their children for immunisation. The key finding is that the data is skewing the coverage rates, i.e. the denominator is greater than the actual number of children that should be accessing services as children are not remaining permanently in the Zwelihle population PHC catchment area.

4.4.1 Theme 1: Personal

Among the caregivers interviewed, there was a fair mix of levels of education, employment and places of origin. Most of the women were in their twenties with between one and three children.

Personal reasons impacting immunisation coverage are discussed under three sub-categories, specifically Religion, Patient Empowerment, and Place of Origin.
4.4.1.1  Religion

One defaulter ascribed the reason for not visiting the clinic, and not immunising her child as a result of her religion:

“in my beliefs if you go to the Clinic… You will be burning yourself that …what we believe in”.

The interviewee has two children, one three-year old who is fully immunised and one of one year who was last brought to the clinic when he was six weeks old, hence defaulting on his 10-week, 14-week and 9-month vaccines. The interviewee found her faith when the child was born and it is believed that the child is not liked within the community and is wanted for witchcraft. Whilst her apostolic faith allows her to go to the clinic, she and the child will have to be baptised [sic] before and after the visit to the clinic. Research in India and in Burkina Faso supports this finding whereby [the Muslim] religion is cited as a reason for unimmunised status; particularly in rural areas in Burkina Faso where Muslim factions had significantly lower rates of coverage (Nath, Singh, Awasthi, Bhushan, Kumar & Singh 2007:602; Sanou et al 2009:6-12).

4.4.1.2  Negligence

One of the two mothers who defaulted described the waiting times as the reason why she did not fully immunise her third child (her first two are fully immunised):

“No it’s not that I don’t want to do it but, it’s a long time there”.

Describing her last time at the clinic (a few months earlier), she explained:

“The thing is I wake up at six in the morning, I go there. I come back four o’clock in the afternoon. Something like that”.

The mother is not working and prior to arriving at home when she was interviewed the researcher had interviewed her aunt who described the mother as understanding the importance of vaccines, but not caring to take the child. The aunt explained that she felt that the mother neglected the children, and that she had complained to child welfare as the mother often spends the night out, leaving the three children alone at
home. This is relevant to acknowledge, although waiting times were highlighted during a number of interviews describing the quality of care at the clinic, it was not recorded as a significant reason not to immunise the children. This mother is not working, reports understanding the importance of vaccines, is able to access the facility, but still chooses not to visit, and, considering the comments on her parenting style, this may be attributed to her unlingness to prioritise and/or care for her children. During the focus group discussion with CHWs, the CHWs described some mothers as lazy and careless. Excluding this one parent, this was not evident from the rest of the visits. Sharma et al (2013:3) similarly describe carelessness, or negligence, as a reason for poor immunisation coverage in India.

4.4.1.3 Patient Empowerment

Participants generally were not aware of why their children were being immunised; they came because the nursing sister told them to come, either after giving birth at the hospital, or because they were given a date after a previous visit. On exploring the reasons for accessing immunisation services, mothers who brought their children to the clinic to be immunised stated:

“I really don’t know because when you come to Clinic they get it [vaccines] the child she they get it [the vaccine]. There are no one to tell who was tell me why you get this [the vaccines]”

“Um it’s because they [the nurses] are, they will uh the sisters they must tell me…the date for coming”.

Both the WHO building blocks and South Africa’s 10-Point Plan fail to include the community and educational aspects of health promotion, a critical element of promoting primary health care. The finding is consistent with global research whereby the level of education of the mother as well as her understanding on the importance of immunisation is recorded as impacting on the immunisation status of the child (Ndirangu et al 2009:1383; Lars et al 2011:8; Sharma et al 2013:3; Rahman & Obaida-Nasrin 2010:139; Sanou et al 2009: 2-12).
Some caregivers ventured that it was for the health of their child but could not articulate why vaccines, for what diseases, or how they worked e.g. “It’s because of the health of my children”, and some caregivers thought it was related to the HIV status or nutritional status of the child:

“This is like um, hey this is like a maybe if I’m HIV positive”.

Furthermore, some caregivers believed all the different vaccines to be the same.

When probing and asking for their opinion on vaccines in exploring reasons why children needed vaccines, the majority of caregivers expressed that they were not comfortable to ask the health worker, or felt too intimidated to ask, despite no one describing a situation when they had been shouted at by a healthcare worker. This is indicative of patients lacking in feeling empowered to ask questions, e.g.

“No, I don’t understand why they give the stof [vaccine] to my child I don’t know…. So I want to know… That’s why took the stof, maybe that’s why the give the stof because I want a safe child…Because of, I don’t like to talk sometimes. Because of uh I am scared. Then I think maybe shouting me so I’m scared”

and/or fearing the potential attitude of the health care worker, e.g.

“Sometimes uh I don’t like to ask….Because they treat us not the same ne. Maybe uh you don’t know the answer. Maybe they the sisters they will, the first thing the sister is she study about this. They learn about this… So me I didn’t learn about this”.

During observation the nurses and the community healthcare workers were patient with patients and took time to explain when questions were asked – although few caregivers asked questions.

When asked to give “the possible reasons why a mother/caregiver cannot bring a child for immunisation to the clinic”, many mothers ascribed it to a lack of understanding of why or when to access the clinic.
4.4.1.4  **Financing**

The cost of services was not mentioned as a barrier to immunisation coverage. Linking to the WHO building block of *health financing* and the second point on the ten-point plan regarding NHI, the EPI-SA programme states that immunisation services for children (under the age of six) and women should be freely available at all public health facilities at all levels of care (National Department of Health 2012: 13). Research has shown that paying for immunisation can serve as a barrier to immunisation (Maekawam, Douangmala, Sakisaka, Takahashi, Phathammavong, Xeuatvongsa & Kuroiwa 2007: 6; Sanou *et al.* 2009:6-12) and socio-economic status of the family does impact immunisation coverage (Sanou *et al.* 2009:2; Rahman *et al.* 2010:139). Maternal education (discussed above under patient empowerment) can be used as a proxy indicator to reflect socio-economic status (Rahman *et al.* 2010:139). Many of the caregivers described how they had moved to the Western Cape from the Eastern Cape because of easier access to social grants in the province i.e. the Disability Grant, which can be made available for people living with HIV and/or TB. This is particularly relevant, considering the aforementioned poverty rate of 29.6% (2010) and unemployment rate of 16.6% (2011) (Western Cape Government Provincial Treasury 2013:2). Further access to the facility (funding for transport) was not cited as a reason, (and is discussed further under 4.4.2.3)

4.4.1.5  **Adverse events following immunisation (AEFI)**

Adverse Events Following Immunisation (AEFI) refers to a medical incident that takes place after immunisation and is believed to be caused by the immunisation. These need to be carefully monitored as such incidents can cause negative advocacy against the programme. They can be caused by the vaccine, or the administrator, or their causes can be coincidental or unknown. The major steps in the surveillance of AEFI are: detecting and reporting; investigating; collation and analysis of data; corrective measures and other actions; and surveillance evaluation and handing of cases (Department of Health 2012:83-90).
One CHW worker described a community member with whom she was working whose child had adverse reactions to the immunisation; this was not mentioned during any other interviews. A study conducted in Nigeria by Itimi, Dienye, and Ordinioha (2009:22) highlights the importance of families assuming responsibility for their own health and welfare, and contributing to the community’s development. The study showed better immunisation coverage rates in a rural area as opposed to an urban area. The factors ascribed to poor immunisation coverage were related to the household in the urban area (e.g. poor motivation; relocation; and adverse rumours regarding immunisation), whilst factors in the rural areas were related to the interaction between the household and the facility (e.g. absence of a vaccinator largely owing to truancy; and non-availability of vaccines). This was particularly surprising, considering that the respondents in the urban areas were better educated; however, the role of the community health committee in the rural area may have been able to promote immunisation services better than that of the urban area, and also because adverse rumours spreading in the urban area did not reach the rural area due to limited exposure to mass media. This highlights the importance of healthcare workers being equipped to respond to such rumours and forewarning the caregiver of any potential side effects (Itimi et al. 2009:22-24).

4.4.1.6 HIV status of the mother

Whilst research has shown that the HIV status of the mother can negatively impact immunisation coverage (Ndirangu, 2009:1383), other research indicates the opposite, i.e. research by Lars et al (2011:6) shows that children of caregivers with an intention to formula feed are more likely to be fully immunised within the recommended time period. One observation is that these caregivers are HIV positive and thus had received increased exposure to healthcare providers and gave increased attention to health. The timelines of vaccine administration needs to be carefully considered for HIV-positive children relative to how immuno-compromised the child is. In a review of two months of immunisation data in January and February 2013, there did not appear to be a relationship between HIV status of the mother and immunisation coverage.
4.4.1.7 **Sex of the child**

A study conducted in Brazil indicated that literacy, marital status of mothers, birth weight, sex of the child, and family income per capita did not influence vaccination uptake (Barreto & Rodrigues. 1992:361). Conversely, a study in Bangladesh found that male children were more likely to receive vaccinations than females (Rahman & Obaida-Nasrin 2010:139-140). A review of two months of immunisation data in January and February 2013, did not reveal a relationship between sex of the child and immunisation coverage.

4.4.2 **Theme 2: Facility**

Theme 2 concerns the factors related to the interaction between the household and the facility (communication, quality of care and availability of data). During the interviews a number of concerns were raised regarding the services provided by the facility. These are explored under the sub-categories: waiting times and staff attitude.

4.4.2.1 **Waiting times**

As mentioned before under 4.4.1.2, one of the two mothers who defaulted described the waiting times as the reason why she did not fully immunise her child. On probing this, it seemed more likely to be related to carelessness. Waiting times did emerge as a key theme in the discussions impacting on the quality of care experienced by patients but not necessarily as impacting on coverage. The majority of the respondents described waiting times as a key challenge impacting the quality of service delivery, with a number of respondents describing how they choose to go to the chemist and pay for the service (not necessarily for vaccines) with their limited income, rather than wait in the queue. Lars *et al* (2011:8) highlight the importance of well organised clinics with short waiting times in order to provide quality EPI services.

One CHW with whom the researcher had been tracing caregivers was pregnant. She took off a full day to visit the clinic for antenatal care because of the waiting times.
Instead of serving her community and improving the quality of services, and accessibility of services, she, too, had to sit in the queue.

The Overberg district Monitoring and Evaluation (M&E) report for 2013/2014 reflects complaints and compliments received during Q4 2013/14, the majority of which are lodged in the Overstrand district. It does not reflect the information provided to the researcher during the interviews, particularly regarding waiting times.

Table 4.3 COMPLAINTS AND COMPLIMENTS LODGED DURING Q4 2013/2014 IN THE OVERBERG DISTRICT

<table>
<thead>
<tr>
<th>Category</th>
<th>Cape Agulhas</th>
<th>Overstrand</th>
<th>Swellendam</th>
<th>Theewaterskloof</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Complaint</td>
<td>Compliment</td>
<td>Complaint</td>
<td>Compliment</td>
</tr>
<tr>
<td>Staff Attitude</td>
<td>-</td>
<td>-</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
<td>-</td>
<td>18</td>
<td>1</td>
</tr>
<tr>
<td>Safety &amp; Security</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Cleanliness</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Access to information</td>
<td>-</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Care &amp; professional treatment</td>
<td>3</td>
<td>20</td>
<td>9</td>
<td>38</td>
</tr>
<tr>
<td>Waiting list</td>
<td>2</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Waiting times</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>Linen</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Food services</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

4.4.2.2 Staff attitude

Staff attitude ranked alongside waiting times, which did not directly impact coverage. No respondents described negative situations with the nurses although a number of respondents described negative situations relating to administrative workers which left them feeling stigmatised for using formula feeding; for presenting late in pregnancy; and for chiding the patient in front of other patients in the waiting room, or speaking about confidential matters outside the clinic.
One focus group discussion with a family of seven revealed that the attitudes of the administrative staff impacted their decision to go to the facility:

“the people that are there, they don’t like their job. What they just like is just the money”.

The family did not comment on the nurses alluding to the fact that they went to the clinic, experienced the receptionists negatively, and then chose to go to the chemist for services, often without seeing the nurse.

### 4.4.2.3 Accessibility

A number of research studies have shown that distance from a health facility impacts coverage rates (Rahman et al 2010:139; Maekawam et al 2007:46; Sanou et al 2009:6-12; Ndirangu et al 2009:1383). The distance to the facility was not mentioned as a potential barrier to immunisation coverage was not mentioned in the current investigation.

This is supported by research in Timor-Leste that suggests that access to health facilities and services is not enough to ensure immunisation coverage, but the healthcare worker’s knowledge and attention to the patient’s needs are critical to ensuring coverage. The research showed that caregivers were motivated to have their children immunised if services were convenient, reliable, friendly and informative; the caregiver’s negative experiences at, or post, immunisation activities were among the most common reasons for discouraging immunisation (Amin, De Oliveira, Da Cunha, Wells Brown, Favin & Cappelier 2013:417).

When asked the question, “Were you ever turned away when you brought your child to be immunised?” no interviewee responded in the affirmative although some interviewees had to come back on a different day to access immunisation services. These services typically are not offered on a Friday as chronic patients (e.g. patients with TB) are at the clinic on Fridays and the staff try to keep these groups separate. The EPI-SA programme states that immunisation services should be accessible at all
times i.e. Every Day should be an Immunisation Day (National Department of Health 2012:13).

Community health workers explained that some foreigners or people without South African identity books are fearful of accessing the clinic. This was not confirmed or refuted during the study.

4.4.2.4 Availability of supplies

Studies in Mozambique, Ghana and Brazil report low coverage due to availability of vaccines, distance to a healthcare facility, and number of days on which immunisation services are provided (Barreto & Rodrigues 1992:357).

When asked the question, “Were you ever turned away when you brought your child to be immunised?”, no interviewee responded in the affirmative. The researcher observed that one de-worming medication was out of stock, which meant that the caregiver would have to return with the child for a next visit.

4.4.3 Theme 3: Data

4.4.3.1 Data management

This is a critical aspect, as the research suggests that poor reported immunisation coverage does not reflect the reality, i.e. the data presents a greater denominator than that which is true within the catchment area because children remain on the facility’s database despite moving to other facilities. In a review of two months of immunisation data in January and February 2013, a majority of children were lost between the fourteen-week and nine-month vaccines, i.e. the first dose of measles vaccine and the third dose of pneumococcal vaccine,. The Operational Manager, who is also involved in the provision of EPI services, ascribes this to women giving birth in Zwelihle, but then leaving the sub-district to take the children to their home towns, most often in the Eastern Cape before they have to return to work. This is supported by the researcher’s findings after visiting 22 homes (20 of which were suspected defaulters) and only
finding two defaulters. Others who were on the list of defaulters either were no longer living at the home; had never lived at the home (e.g. had given wrong addresses), or were now accessing services through other facilities (e.g. closer to where they worked).

The Road to Health Card (RTHC) is a card that records the immunisations and growth care of infants from when they are born to the age of five. It is issued to mothers when a baby is born in both government and private hospitals. The mother is required to present this card every time the child visits a doctor or a nurse who will then use the card to check whether the child has received all the necessary immunisations and vitamin supplementations, and record the growth of the child and the development according to milestones (Western Cape Government, 2014:1). All caregivers who were interviewed were able to present their RTHC, both within the clinic and within the households, including the two defaulters. One woman, the aunt of an expected defaulter (who in reality was taking the child to a facility closer to her work) runs an early childhood development (ECD) facility – she describes how all children entering the facility are required to show her their RTHCs. She works with the clinics to arrange campaigns during which children are immunised and receive supplementations, and have to bring their RTHC to the ECD facility on the day of the campaign in order to document services that are rendered.

Secondary to this, respondents described situations of their patient files being lost and this either delayed their visit to the healthcare worker, or resulted in them being unable to transfer to another facility. As mentioned before, some community members chose to access services at the pharmacy to avoid the queues, but such data are not reconciled with the facility data.

4.5 SUMMARY

Chapter 4 presents the barriers to immunisation coverage as reported by 31 caregivers and nine CHWs under three themes:

- Personal, including religion, negligence, patient empowerment, financing, adverse events following immunisation, HIV status of the mother, and sex of the child
- Facility, including waiting times, staff attitude, accessibility and availability of supplies
- Data management, which is the most pressing concern considering that the data is skewing the reported coverage rates and the clinic is not being kept up to date with transfers.
CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

Chapter 4 presented the findings and literature control and Chapter 5 presents recommendations based on these findings and key themes in order to meet the research objectives:

1. To explore factors that impact on access to immunisation services, from the perspectives of community healthcare workers and community members.
2. To provide recommendations for the development of district EPI programmes and strategies.

5.2 MAIN FINDINGS

The research showed that, whilst defaulters are present, the coverage rate is likely to be greater than the 75.8% recorded for the district (Western Cape Government Provincial Treasury 2013:2).

5.2.1 Modifiable factors impacting on immunisation coverage

As per the research objective, the purpose of the research was to explore and describe a range of modifiable factors that impact on access to PHC services, most notably immunisation. Chapter 4 presented these under the three themes of personal, facility and data management.

5.2.1.1 Personal

Whilst a number of personal considerations were mentioned during the interviews — including those related to adverse events following immunisation and patient empowerment — only religion and negligence were experienced to impact on immunisation coverage.

Other factors, i.e. HIV status of the mother, sex of the child and financing, which previous research has reported as impacting on immunisation coverage were not
supported in this study. All of these considerations impact on the quality of service delivery, but, in terms of impacting coverage rates, only religion and negligence were supported by the interviews with two mothers who made decisions based on these factors.

5.2.1.2 Facility

Waiting times and the attitude of administrative staff were reported as impacting on the quality of service delivery in this study. These, however, did not directly impact immunisation coverage. Other facility-based considerations cited in previous research as impacting coverage, including accessibility and availability of supplies, did not directly impact on immunisation coverage in this study.

5.2.1.3 Data

As mentioned before, this is the most critical finding as the research suggests that the immunisation coverage is greater than the 75.8% recorded for the district (Western Cape Government Provincial Treasury 2013:2). Poor data quality for the Expanded Programme on Immunisation also reflects poor data quality for other programmes and data of this quality are being used to direct resources (including the work of CHWs), design interventions, plan campaigns, order stock and estimate outbreaks of disease.

It further reflects a barrier between the relationship of the facility and the community whereby accurate addresses are not provided, and community members are not keeping the facility up-to-date with their biographical information. The RTHC is a key mechanism to promote patient empowerment and this record retained by the patient provides caregivers with the opportunity to go to any facility, or access a campaign, ensuring continuity of care.
5.3 LIMITATIONS OF THE STUDY

The scope of the research was limited to the services provided through the Zwelihle Clinic in the Overstrand sub-district of the Overberg district. The researcher had no difficulty entering the field; the-facility based staff and community health workers were welcoming. The community health workers reported mixed responses in the community regarding the day-to-day delivery of their services. The stigma of HIV is still rife and the perception of community health workers visiting one’s household is often related to HIV, despite the fact that they offer a variety of services including home-based care, follow-up on newborn babies, support for breastfeeding, and adherence clubs for HIV and TB. Interviews with caregivers were strained, possibly owing to language difficulties despite the support of a translator when requested, as well as the underlying power dynamic between the caregiver and the health care workers, including the researcher.

The education level of caregivers was limited, and those at the clinic displayed characteristics akin to those of ‘law-abiding citizens’, i.e. they did what they were told to do when instructed by healthcare workers, without querying why or seeking improved service delivery, e.g. reduced waiting times or improved treatment by facility staff. This may have resulted in the caregivers responding to the questions in order to satisfy the researcher, rather than to comfortably express their own opinions. Similarly, the translator was either from the facility or a CHW, which may also have impacted on the honesty of the response, considering the reported challenges experienced with administrative staff.

Owing to the qualitative, non-random, sampling technique of the study, and the geographical scope, the findings may not be generalisable globally. It may provide a useful tool for removing barriers to immunisation coverage in the facility and provide impetus for further research.

5.4 RECOMMENDATIONS

Wiysonge et al (2012:4) conducted a similar study on the challenges and effectiveness of proposed solutions, with the finding, as presented in Table 5.1, that education
meetings have a greater impact on immunisation coverage where inadequate knowledge exists, than financial arrangements for those experiencing financial constraints that inhibit access to immunisation.

Table 5.1 A RANGE OF CHALLENGES AND PROPOSED SOLUTIONS TO IMPROVE

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Potential solution</th>
<th>Effective solutions evidenced by research (High/Med/Low evidence)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inadequate knowledge of vaccines and immunisation</td>
<td>Training, supportive supervision, and audit &amp; feedback</td>
<td>Educational meetings (High)</td>
</tr>
<tr>
<td>Financial constraints</td>
<td>Government-provided financial arrangements for EPI</td>
<td>Social health insurance schemes (Low)</td>
</tr>
<tr>
<td>Staff shortages and high staff turn-over</td>
<td>Government-led strategies for recruitment and retention of staff</td>
<td>Feedback on performance (High); supportive supervision (High)</td>
</tr>
<tr>
<td>Poor communication among stakeholders</td>
<td>Utilisation of best available evidence for vaccine advocacy and social mobilisation</td>
<td>Educational outreach; printed educational materials (Low)</td>
</tr>
<tr>
<td>Resistance from parents and anti-immunisation rumours</td>
<td>Strengthened social mobilisation and timely evidence-based response to speculations</td>
<td>Parent reminder and recall systems (Med); use of community health workers (Med); interactive communication tools (Med); mass media interventions (Med); conditional cash transfers (Med); (Wiysonge, Nthombenhle, Prakash, Madhi, Shoub, Hawkridge, Shey &amp; Hussey. 2012:4)</td>
</tr>
</tbody>
</table>

This information is useful in reviewing the challenges presented in the current study, and in the provision of recommendations for improving coverage. Most notably, the opportunities for the Zwelihle clinic lie in patient empowerment, towards which educational meetings have a high impact, as well as the challenge of staff attitude (which could be linked to staff shortages), which may be resolved by providing feedback on performance (including complaints management), as well as supportive supervision.

5.4.1 Recommendations for the development of district EPI programmes and strategies

5.4.1.1 Patient empowerment

There is opportunity to develop IEC materials to educate the mothers on how vaccines work; the importance of vaccines; the different types of vaccines; and so forth. IEC materials could be available at the facility as well as in public waiting spaces, in
multiple languages and multiple mediums including radio, by SMS, on Television and in graphics.

The clinic could also engage with religious movements that do not support immunisation and other services provided by the facility to explore ways to support one another and provide services that meet the needs and beliefs of these groups.

Further life skills training could also be provided to community members for them to be empowered to take responsibility for their own health and that of their family members – this includes asking questions, knowing who to ask, and how to demand quality service.

5.4.1.2 Staff attitude

As mentioned before, Values and Attitudes fall under domain one, priority area one, of the country’s National Core Standards (NCS) quality assurance programme. A Complaints Management Protocol included under patient rights in domain one, is a critical opportunity for patients to provide feedback on the services provided in the clinic. Effective performance management systems and supportive supervision, directed to the administrative staff in the front line is recommended in order to improve the quality of service delivery provided to the community.

5.4.1.3 Waiting times

The clinic processes could be reviewed to reduce waiting times; this might include a more accurate appointment system. All the provinces, besides the Western Cape province, are currently implementing the National Department of Health Integrated Chronic Disease Management (ICDM) model which includes recommendations on appointment systems, patient flows, and waiting times. The researcher furthermore recommends that CHWs requiring PHC services should be fast-tracked in the queue in order to best provide services to the community.
5.4.1.4 Data management

An electronic patient tracking system, both within the facility (to prevent losing and misplacing files) as well as between facilities (in order to better track patients) is recommended. Similarly transfer letters should be requested when a patient moves from one facility to another and improved relations with the community should be sought to ensure that accurate addresses are provided and documented (supported by the electronic patient tracking system). A DHS could also be conducted to improve the accuracy of the denominator.

5.4.2 Recommendations for further research

Further research is recommended to improve the accuracy of data across the country, including improving information systems and patient tracking between public and private facilities, including pharmacies. The researcher focused on access to immunisation services, however further research is recommended with other population groups and with different packages of services to improve PHC within the country. Research into the role of the CHW in creating demand and providing services could be conducted similarly. This research was focused on a particular community with a high level of migration. Further research could be conducted to explore the role of politics and efficient service delivery on migratory patterns, including the role of social grants. Research into the role of religion and traditional beliefs and the impact it has on the country’s health system would also contribute to building a client-centred health system and would assist in designing communication and community strategies that meet the reality of the community setting.

5.5 SUMMARY

The study aimed to explore the range of modifiable factors impacting on immunisation coverage and resulting in the poor immunisation coverage rates of the Zwelihle clinic in the Overberg district of the Western Cape Province in order to inform a strategy to improve access to immunisation services within the district.
An exploratory qualitative study was conducted using non-probability, purposive sampling. The researcher conducted face-to-face semi-structured interviews allowing interviewees to describe their reasons for accessing, and not accessing, immunisation services. A total of nine mothers who brought their children for immunisation were interviewed at the facility; 22 households were visited; and nine CHWs were interviewed. Only two defaulters were identified, with core reasons for defaulting being religion and negligence.

The study discussed three themes: personal, facility and data, which impacted on immunisation coverage and these findings were described against the WHO HSS building blocks and South Africa’s ten-point plan. The findings from the study allowed the researcher to provide recommendations to inform a strategy for improving access to immunisation services within the district.
REFERENCES


Richards, HM & Schwartz, LJ. 2002. Ethics of qualitative research: are there special issues for health services research? *Family Practice* 19: 135-139.


WHO see World Health Organization.


UNIVERSITY OF SOUTH AFRICA
Health Studies Higher Degrees Committee
College of Human Sciences
ETHICAL CLEARANCE CERTIFICATE

HSHDC/275/2013

Date: 10 December 2013
Student No: 4854-767-0

Project Title: Barriers to routine immunization at Zwelihle Clinic, Overberg District in Western Cape.

Researcher: Mrs Claire Patricia Hugo

Degree: Masters in Public Health
Code: MPCHS94

Supervisor: Mrs MR Makua
Qualification: M Tech
Joint Supervisor: -

DECISION OF COMMITTEE

Approved √ Conditionally Approved

Prof L Roets
CHAIRPERSON: HEALTH STUDIES HIGHER DEGREES COMMITTEE

Prof MM Moleki
ACADEMIC CHAIRPERSON: DEPARTMENT OF HEALTH STUDIES

PLEASE QUOTE THE PROJECT NUMBER IN ALL ENQUIRIES

89
REFERENCE: RP 010/2014
ENQUIRIES: Ms Charlene Roderick

P O Box 501
Hermanus
7200

For attention: Claire Hugo and Dr Mogalagadi Makua

Re: Barriers to routine immunisation at Zwelihle clinic, Overberg district in Western Cape.

Thank you for submitting your proposal to undertake the above-mentioned study. We are pleased to inform you that the department has granted you approval for your research.

Please contact the following people to assist you with any further enquiries in accessing the following sites:

Overberg District

R Zondo
Contact No. 028 212 1512

Kindly ensure that the following are adhered to:

1. Arrangements can be made with managers, providing that normal activities at requested facilities are not interrupted.
2. Researchers, in accessing provincial health facilities, are expressing consent to provide the department with an electronic copy of the final report within six months of completion of research. This can be submitted to the provincial Research Co-ordinator ((Health.Research@westerncape.gov.za).
3. The reference number above should be quoted in all future correspondence.

Yours sincerely

DR J EVANS
ACTING DIRECTOR: HEALTH IMPACT ASSESSMENT
DATE: 05/05/14
CC W KAMFER
DIRECTOR: OVERBERG
ANNEXURE C: CONSENT FORM FOR CAREGIVERS

Claire Hugo [MPH, UNISA]

*Barriers to routine immunisation at Zwelihle clinic, Overberg district in Western Cape.*

This informed consent form is for community members eligible to access immunisation services through Zwelihle clinic. You are invited to participate in research conducted by a UNISA student, Claire Hugo, currently completing her master's degree in public health (MPH). The title of the research is: *Barriers to routine immunisation at Zwelihle clinic, Overberg district in Western Cape.*

This Informed Consent Form has two parts:

- Information Sheet (to share information about the study with you)
- Certificate of Consent (for signatures if you choose to participate)

**Part I: Information Sheet**

*Purpose of the research*

Immunisation is one of the most important healthcare interventions, saving millions of lives around the world every year. Strong routine immunisation (RI) programmes are necessary to build effective national immunisation programmes. These programmes, if robust, can boost the success of immunisation campaigns, assist in the introduction of new vaccines, and serve as a gateway for a number of other public health and community development interventions. The purpose of this research is to explore barriers to routine immunisation and identify opportunities to reduce these barriers to strengthen the delivery of primary health care services.

*Participant Selection*

You are being invited to take part in this research because we feel that your experience as a parent/caregiver can contribute much to my understanding and knowledge of routine immunisation and other primary healthcare activities.

*Procedures*

I am asking you to help me learn more about the barriers to immunisation and to help identify opportunities to remove these barriers. If you accept the invitation to form part of this research, you will be asked to participate in an interview of one hour or less, to talk me through your thoughts on immunisation. I am interested to know the reasons why you choose to access/not access immunisation services through the clinics, and to help identify ways in which we can improve access to services through the clinic.

The discussions will take place in English, at a place convenient to you and I will be the interviewer. The entire discussion will be recorded, and no-one will be identified by name on the recording. The recording will be password protected in electronic format. The information recorded is confidential, and no one else except Ms Makua, the student’s supervisor, will have access to the recordings. The recordings will be destroyed 12 months after collecting the information. The supervision is done under the auspices of UNISA. This proposal has been reviewed and approved by the UNISA Ethics Committee, which is a committee whose task it is to make sure that research participants are protected from harm. If you wish to find out more about the UNISA Ethics Committee please contact Ms...
Makua.

Nothing that you tell me, the interviewer, will be shared with anybody besides Ms Makua and nothing will be attributed to you by name. The knowledge that we get from this research will be shared with you and your community before it is made widely available to the public.

**Duration**
The interviews will take place over 3 months. During that time, I will interview you once. The interview will take about one hour. I will communicate with you well ahead of time if additional time is required.

**Risks**
Whilst the research is not of a personal nature, there is a risk that you may share some personal or confidential information by chance, or that you may feel uncomfortable talking about some of the topics. You do not have to answer any question or take part in the discussion/interview if you feel the question(s) are too personal or if talking about them makes you uncomfortable.

**Benefits**
There will be no direct benefit to you, but your participation is likely to help us find out more about how to reduce barriers to immunisation. Each participant will receive a summary of the results. At the end of the study, the results may be published so that other interested people may learn from the research. The research will not result in any personal financial gain for participants, the researcher or the university.

**Confidentiality**
The research being done in the community may draw attention and if you participate you may be asked questions by other people in the community. The information that we collect from this research project will be kept private. Any information about you will have a number on it instead of your name. Only the researchers will know what your number is and we will lock that information up with a password. It will not be shared with or given to anyone except Ms Makua, the student’s supervisor.

**Right to Refuse or Withdraw**
You do not have to take part in this research if you do not wish to do so; you may stop participating in the discussions at any time. I will give you an opportunity at the end of the interview/discussion to review your remarks, and you can ask to modify or remove portions of those, if you do not agree with my notes or if I did not understand you correctly.

**Who to Contact**
If you have any questions, you can ask them now or later. If you wish to ask questions later, you may contact any of the following: Claire Hugo, 072 669 9229 or Ms Makua 072 343 7651.
Part II: Certificate of Consent

I have read the earlier information and I have had the opportunity to ask questions about it and any questions I have been asked have been answered to my satisfaction. I consent voluntarily to be a participant in this study.

_______________________  _____________________
Name                                      Date (dd/mm/yy)

_______________________  _____________________
Signature                                Place

For researcher use:

Code: _____________________
ANNEXURE D: CONSENT FORM FOR HEALTHCARE WORKERS

Claire Hugo [MPH, UNISA]

Barriers to routine immunisation at Zwelihle clinic, Overberg district in Western Cape.

This informed consent form is for health care workers providing immunisation services through Zwelihle clinic. You are invited to participate in research conducted by a UNISA student, Claire Hugo, currently completing her master’s in public health (MPH). The title of the research is: Barriers to routine immunisation at Zwelihle clinic, Overberg district in Western Cape.

This Informed Consent Form has two parts:

• Information Sheet (to share information about the study with you)
• Certificate of Consent (for signatures if you choose to participate)

Part I: Information Sheet

Purpose of the research
Immunisation is one of the most important healthcare interventions, saving millions of lives around the world every year. Strong routine immunisation (RI) programmes are necessary to build effective national immunisation programmes. These programmes, if robust, can boost the success of immunisation campaigns, assist in the introduction of new vaccines, and serve as a gateway for a number of other public health and community development interventions. The purpose of this research is to explore barriers to routine immunisation and identify opportunities to reduce these barriers to strengthen the delivery of primary health care services.

Participant Selection
You are being invited to take part in this research because we feel that your experience providing immunisation services through Zwelihle clinic can contribute much to my understanding and knowledge of routine immunisation and other primary healthcare activities.

Procedures
I am asking you to help me learn more about the barriers to immunisation and to help identify opportunities to remove these barriers. If you accept the invitation to form part of this research, you will be asked to participate in an interview of one hour or less, to talk me through your role as a healthcare worker in the EPI programme. I am interested to know your thoughts on barriers to immunisation, opportunities to remove these barriers, and if this will have an impact on other primary health care services.

The discussions will take place in English, at your place of employment and I will be the interviewer. The entire discussion will be recorded, and no one will be identified by name on the recording. The recording will be password protected in electronic format. The information recorded is confidential, and no one else except Ms Makua, the student’s supervisor, will have access to the recordings. The recordings will be destroyed 12 months after collecting the information. The supervision is done under the auspices of UNISA. This proposal has been reviewed and approved by the UNISA Ethics Committee, which is a committee whose task it is to make sure that research participants are protected from
harm. If you wish to find out more about the UNISA Ethics Committee, please contact Ms Makua.

Nothing that you tell me, the interviewer, will be shared with anybody besides Ms Makua and nothing will be attributed to you by name. The knowledge that we get from this research will be shared with you and your community before it is made widely available to the public.

Duration
The interviews will take place over 3 months. During that time, I will interview you once. The interview will take about one hour. I will communicate with you well ahead of time if additional time is required.

Risks
Whilst the research is not of a personal nature, there is a risk that you may share some personal or confidential information by chance, or that you may feel uncomfortable talking about some of the topics. You do not have to answer any question or take part in the discussion/interview if you feel the question(s) are too personal or if talking about them makes you uncomfortable.

Benefits
There will be no direct benefit to you, but your participation is likely to help us find out more about how to reduce barriers to immunisation. Each participant will receive a summary of the results. At the end of the study, the results may be published so that other interested people may learn from the research. The research will not result in any personal financial gain for participants, the researcher or the university.

Confidentiality
The research being done in the community may draw attention and if you participate you may be asked questions by other people in the community. The information that we collect from this research project will be kept private. Any information about you will have a number on it instead of your name. Only the researchers will know what your number is and we will lock that information up with a password. It will not be shared with or given to anyone except Ms Makua, the student’s supervisor.

Right to Refuse or Withdraw
You do not have to take part in this research if you do not wish to do so, and choosing to participate will not affect your job or job-related evaluations in any way. You may stop participating in the discussions at any time that you wish without your job being affected. I will give you an opportunity at the end of the interview/discussion to review your remarks, and you can ask to modify or remove portions of those, if you do not agree with my notes or if I did not understand you correctly.

Who to Contact
If you have any questions, you can ask them now or later. If you wish to ask questions later, you may contact any of the following: Claire Hugo, 072 669 9229 or Ms Makua 072 343 7651.
Part II: Certificate of Consent

I have read the earlier information and I have had the opportunity to ask questions about it and any questions I have been asked have been answered to my satisfaction. I consent voluntarily to be a participant in this study.

_______________________  ______________________
Name                               Date (dd/mm/yy)

_______________________  ______________________
Signature                        Place

For researcher use:

Code: ______________________
ANNEXURE E: INTERVIEW GUIDE

Topic guide for community health workers:

1. How would you describe the population your health facility serves?
2. Tell me about your role in providing/accessing immunisation services.
   1. Routine
   2. Campaign
3. Would you say these services are effective? In what way?
4. Tell me about things to prevent these services from being effective?
5. Do you think we could remove any of these obstacles?
6. Do you think these obstacles related to PHC services besides immunisation?
7. Are you involved in the provision of other PHC services?
8. Do the same challenges/opportunities exist?

Topic guide for community members:

1. Tell me about yourself.
2. Tell me about the last time you went to Zwelihle clinic.
3. Tell me about your experience at the clinic the last time you brought your child to the clinic/to be immunised.
4. What is your opinion of immunisation/vaccines?
5. What do you think the clinic could do to improve its service delivery?


ABSTRACT

**Background:** Although immunisation services are provided free at all public health facilities in South Africa, immunisation coverage remains variable and disease outbreaks still occur. The coverage rate in the Overberg district is recorded as 75.8%, below the national target of 90% (Western Cape Government Provincial Treasury 2013:2). The researcher wanted to understand what the barriers to accessing immunisation services were and how this might relate to other primary health care services.

**Methods:** The researcher visited 22 households and interviewed nine mothers who had brought their children to Zwelihle Clinic to be immunised and nine community health workers servicing the Zwelihle community in the Overberg district, Western Cape Province.

**Findings:** A key finding is that the data does not reflect the actual situation – children in the community either are immunised at other facilities or have left the catchment area, hence strong relationships between the facility and the community and an electronic patient tracking system become important. Findings impacting access to services include the attitude of administrative staff, waiting times and the impact of migratory communities.

**Recommendations** are made to improve the quality of data, provide training to administrative staff, improve patient education, reduce waiting times and improve the relationship between the clinic and the community in order to better track patient migration.

**KEY CONCEPTS**
Health systems strengthening; routine immunisation; primary health care