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AN EVALUATION OF THE NATIONAL CERTIFICATE (VOCATIONAL) PRIMARY HEALTH QUALIFICATION FOR COMMUNITY HEALTH WORKERS IN SOUTH AFRICA

by

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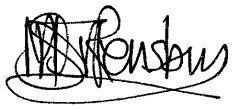
DEDICATION

To the wonderful, wonderful people – the Community Health Workers – who I have the privilege of engaging with... may your important work be recognised and your strong voices be heard.

DECLARATION OF ORIGINALITY

I, Michelle NS Janse van Rensburg, hereby declare that '**An evaluation of the National Certificate (Vocational) Primary Health qualification for community health workers in South Africa'**, submitted for the degree Doctor of Philosophy (Family Medicine) at the Department of Family Medicine, School of Medicine, Faculty of Health Sciences at the University of Pretoria, is my own work and has not been submitted by me for any other degree or examination at this or any other tertiary institution.



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ABSTRACT

Background: In South Africa, the re-engineering of primary health care (PHC) includes establishing PHC teams, also called ward-based outreach teams (WBOTs), which consist of community health workers (CHWs) who perform health promotion, disease prevention and disease management in households in defined areas. The need to train CHWs properly has been recognised and various training programmes currently exist. A qualification developed by the Department of Higher Education and Training (DHET) to educate potential CHWs is the National Certificate (Vocational) Primary Health programme. Registered on NQF Levels 2, 3 and 4, subjects include Community Oriented Primary Care, Public Health, Human Body and Mind, South African Health Systems, English, Mathematics, and Life Orientation. It has been offered since 2013 on a full-time basis over three years at various Technical and Vocational Education and Training (TVET) Colleges across South Africa. In 2014 the Department of Family Medicine at the University of Pretoria entered into a partnership with the City of Tshwane and Gert Sibande TVET College to present the NC(V) Primary Health curriculum to a cohort of existing CHWs on a part-time basis over four years.

Aim and objectives: This research aimed to evaluate the NC(V) Primary Health qualification to determine whether it is adequate, appropriate, effective, and relevant training for CHWs in PHC teams in South Africa. The objectives of the research were 1) to evaluate the NC(V) Primary Health programme; 2) to determine how the NC(V) Primary Health programme contributed regarding PHC provided to individuals and families in defined geographical areas, curriculated qualifications and human resource development, and individual learning, employment and personal aspirations; 3) to document lessons learnt from the implementation of the NC(V) Primary Health qualification nationwide; and 4) to make recommendations regarding CHW training for South African ward-based outreach teams.

Methodology: The pragmatic evaluation used qualitative methods to gain information from participants in three provinces, from both the full-time and part-time offerings. There were 65 participants in the research, including TVET college managers, NC(V) Primary Health lecturers, curriculum experts, a government consultant, a PHC team leader, NC(V) Primary Health students, and existing CHWs doing the programme part-time. Thirteen in-depth interviews, seven focus groups, five written lecturer reflections, nine written student reflections, and various fieldwork notes were used as sources of data. Thematic analysis of data was performed, and relevant theoretical frameworks were used to make sense of the data. Various policy and curriculum documents were also analysed.

Results:

The NC(V) Primary Health programme was well-structured to produce workers with the required competencies in primary health. Students' understanding and application of theory and practice contributed to growth in critical thinking and development of agency. Participants expressed deep commitment to and belief in the programme. Although the full-time programme did not have sufficient fieldwork learning opportunities, a unique strength was the interprofessional nature of teaching and students benefitted from exposure to various health professionals. Improving English, mathematics and computer skills were also advantageous. Hope at the possibility of second chances and a better future was evident, and some students were able to access further educational opportunities. The programme was regarded by participants as transformative, empowering and, thus, of value to communities. However, frustration and disappointment were apparent from those who had experienced criticism of their participation in the programme or when their learning and contribution was not valued in PHC teams. Disappointment and despondency were palpable among participants regarding the unfolding uncertainty about the future of the programme, and also their own futures.

Conclusion: This study contributes to the ongoing discourse around the education and training of CHWs in South Africa. Careful, respectful and thoughtful regard must be given to the training as people's lives – individuals, families, and communities – are deeply and directly affected by the training and associated vocational prospects (or lack thereof). CHW education and training programmes should be based on the community oriented primary care (COPC) approach and consider the capabilities of CHWs in context. Novel partnerships and interprofessional contributions will optimise education and training and produce well-rounded and competent CHWs. Structuring of programmes should be in line with the NQF to facilitate career progression and pathways. These findings are in line with policy recommendations from the recently published WHO 'Guideline on health policy and system support to optimize community health worker programmes'. CHWs should not be underestimated and their voices need to be heard, especially in terms of their contributions and valuable work, their learning needs, and as advocates for the communities they serve.

Keywords: NC(V) Primary Health, Community Health Worker, Education and Training, Primary health care re-engineering, Ward-based primary health care outreach teams

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CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS/ACRONYMS

Abbreviation / acronym	Meaning
ADL	Activities of daily living
ANC	African National Congress
ASHAs	Accredited social health activists
CCW	Community health care worker
CHAs	Community health agents
CHERI	Community Health Worker Education Research Initiative
CHW	Community health worker
CIPP	Context, Input, Process, Product Model
CoT	City of Tshwane
CBO	Community-based organisation
CSO	Civil society organisation
COPC	Community Oriented Primary Care
DCST	District Clinical Specialist Teams
DFM	Department of Family Medicine
DHET	Department of Higher Education and Training
DHS	District Health System
DoH	Department of Health
ESASS	External summative assessment
FBO	Faith-based organisations
FCHV	Female Community Health Volunteer
FET	Further education and training
FPD	Foundation for Professional Development
GSC	Gert Sibande College
HBC	Home-based care
HDAVs	Health Development Army Volunteers
HEWs	Health Extension Workers
HH	Household
HIV/AIDS	Human immunodeficiency virus/Acquired immune deficiency syndrome
HPCSA	Health professions council of South Africa
HRH	Human resources for health
HWSETA	Health and Welfare Sector Education and Training Authority
ICASS	Internal continuous assessment

iCCM	Integrated community case management
IFCH	Institute of Family and Community Health
ILO	International Labour Organization
IMR	Infant mortality rate
IT	Information technology
ISAT	Integrated Summative Assessment Task
ISHP	Integrated School Health Programme
L2 L3 L4	Level 2 Level 3 Level 4
LMIC	Low- and middle-income countries
MCH	Maternal and child health
MDGs	Millennium Development Goals
MEC	Member of the Executive Council (provincial government)
NCHWPF	National Community Health Worker Policy Framework
NC(V)	National Certificate (Vocational)
NDoH	National Department of Health
NDP	National Development Plan
NEET	Not in employment, education, or training
NGO	Non-government organisation
NHI	National Health Insurance
NHS	National health system
NPO	Non-profit organisation
NPPHCN	The National Progressive Primary Health Care Network
NQF	National Qualifications Framework
NRF	National Research Foundation
NSDSIII	National Skills Development Strategy III
NSFAS	National Student Financial Aid Scheme
OT	Occupational therapist
OTL	Outreach team leader
PAT	Practical assessment task
PHC	Primary health care
PSET	Post-school education and training
QCTO	Quality Council for Trades and Occupations
rPHC	Reengineering of primary health care
RTC	Regional training centre

SAMWU	South African Municipal Workers Union
SANC	South African Nursing Council
SAQA	South African Qualifications Authority
SDGs	Sustainable Development Goals
TB	Tuberculosis
TVET	Technical Vocational Education and Training
UHC	Universal health coverage
UNESCO	United Nations Educational, Scientific, and Cultural Organization
UNESCO-UNEVOC	International Centre for Technical and Vocational Education and Training
UNICEF	United Nations International Children's Emergency Fund
UP	University of Pretoria
WBOTs	Ward-based outreach teams
WBPHCOTs	Ward-based primary health care outreach teams
WHO	World Health Organization

CHAPTER 1: INTRODUCTION

"Education is the great engine of personal development. It is through education that the daughter of a peasant can become a doctor, that the son of a mineworker can become the head of the mine, that a child of farm workers can become the president of a great nation. It is what we make out of what we have, not what we are given, that separates one person from another."

Nelson Mandela

1.1. INTRODUCTION

Education brings hope. And hope brings light and life to possibilities – possibilities that things can be better. The reality of poverty is devastating, and the evidence of this is seen in pervasive ill-health and elusive well-being in poor communities. As we strive to sustainably achieve specific developmental and health goals, community health workers (CHWs) are being recognised as vital role players, most especially because of their embeddedness within poor communities. While the contributions of CHWs depend on many factors, their potential impact is directly related to education and training. And so, we must engage in questions and discussions around CHW education and training, so that hope that can direct us towards what is possible, even when it seems impossible.

As a contribution to this discourse, a pragmatic evaluation was done to determine how adequate, appropriate, effective, and relevant a specific, curriculated programme – the National Certificate (Vocational) Primary Health qualification (also known as the NC(V) Primary Health) – is as training for current and potential community health workers in primary health care teams in South Africa.

This chapter presents background information necessary to situate the research within the context of the history of community health worker programmes globally and in South Africa, as well as within health system reform in South Africa. Furthermore, the chapter expands on the rationale of the study to establish significance, the research question is presented, the research aim and objectives are explained, and relevant definitions are clarified. The chapter ends with an outline of the chapters to follow.

1.2. BACKGROUND

This section presents a historical summary of community health worker (CHW) programmes globally and within South Africa.

1.2.1. A brief history of community health workers globally

Community health programmes have a long history. In the late 1800s the 'Feldsher' programme in Russia used 'middle medical workers' to provide basic health interventions in rural areas.[1,2] This system of rural primary care influenced the work in China[2] in the 1920s and 1930s, where village health workers helped record births and deaths, and provided health counselling.[1] They later became known as 'barefoot doctors' in the 1950s, as they were mostly farmers (who worked barefoot in rice paddies) who had received basic medical training.[3] They provided health promotion, disease prevention and treatment of common conditions, often combining western and Chinese traditional medicines, in the rural villages in China.[3,4]

From the late 1920s in South Africa malaria assistants worked in the-then Natal and Zululand.[5] They visited kraals, took blood samples from sick people, and searched for vector mosquitoes that were sent away for identification.[6] The origins of the community oriented primary care (COPC) framework came from work done in rural Pholela in South Africa during the 1940s[7], which will be expanded on in section 1.2.2.1. In Pholela, local people were hired, initially as 'health assistants' and then called 'community health workers', to do health work in the community.[8] CHWs were essential team members as they visited homesteads, carried out demographic surveys, did basic epidemiology and educated families about health.[8] Through this work a comprehensive approach to health care was developed, which considered the socioeconomic and cultural determinants of health, identified health needs, and provided integrated (preventive and curative) health care to the whole community with significant community involvement.[9] This concept spread globally during the 1950s and '60s[7,8] and was later[a] named COPC[9,10].

The 1960s saw early CHW programmes being established in Guatemala[11] Honduras, India, Indonesia, Tanzania and Venezuela,[1] as it was becoming increasingly apparent that the modern Western medical model was unable to meet the needs of rural and poor populations throughout the developing world.[11] These innovative community health programmes were

a. The term Community Oriented Primary Care (COPC) was coined in 1981 – a culmination of the work done since the 1940s.[10]

based on principles of "*social justice, equity, community participation, disease prevention, multisectoral collaboration, decentralisation of services to the periphery in close proximity to the people, use of appropriate technology, and provision of services by a team of workers, including community-based workers*".[11] These programmes increasingly gained the world's attention – a case in point being that in 1972 it was reported that around one million barefoot doctors were reaching about 800 million people in the rural areas of the People's Republic of China.[11]

As these programmes became recognised, the World Health Organization published a book in 1975 entitled 'Health by the People'[12], which was a series of case studies[b] from countries where CHWs had been foundational to community health programmes.[11] This work along with the international recognition of the strengths of the developing COPC approach[9,13] were instrumental in formalising the Alma-Ata Declaration on Primary Health Care (PHC) in 1978, especially in terms of the comprehensive nature of PHC (promotive, preventive, curative and rehabilitative services)[14]. The Alma-Ata Declaration acknowledged how political, social and economic factors influence health, and its specific focus on "*food supply and proper nutrition, adequate supply of safe drinking water and basic sanitation, maternal and child health care…, prevention and control of endemic diseases, [and] appropriate treatment of common diseases and injuries*"[14] is precisely what the COPC approach pioneered. As Gofin and Gofin state, COPC is considered "*an expression of the Alma-Ata spirit*".[9]

The Declaration of Alma-Ata was also the first official endorsement of community workers as legitimate members of health teams and as outreach workers.[15] CHWs were seen as key to the World Health Organization's goal of 'Health for All by the year 2000' and, as a result, many CHW programmes were started in the 1970s and 1980s in low- and middle-income countries (LMICs)[5], such as Ethiopia[15], Nepal, Zimbabwe, Malawi, and Mozambique,[1] as well as Nicaragua and Peru[11]. However, many large-scale programmes in developing countries were faced with challenges such as inadequate training, insufficient remuneration or incentives for CHWs, poor integration with the health system, and resistance by higher-level health providers.[11] In addition, because of factors such as the global recession of the early- to mid-1980s[5,11], the change in donor policies, the debt crisis faced by many low-income countries, and decreasing momentum for comprehensive PHC, CHW programmes ended up being insufficiently financed, and lacked adequate planning, supervision, logistical support, and political backing.[15] Without evidence of the effectiveness of these programmes at the time[15],

b. Case studies presented in 'Health by the People' were from the People's Republic of China, Cuba, India, Indonesia, Iran, Niger, Tanzania, and Venezuela.[12]

commitment had waned by the late 1980s and into the 1990s[5] resulting in the deterioration and collapse of many national CHW programmes.[11,15]

Even so, from the 1990s onward, CHW programmes continued to develop across Africa, Asia and Latin America.[1] For example, in Ethiopia an early CHW programme trained around 3000 CHWs during the civil war there in the 1970s and 1980s. These workers were selected by their communities and received training in maternal-, child-, and environmental health, as well as in malaria diagnosis and treatment. This particular programme was stopped at the end of the war in 1991.[15] But, in recognition of the unmet health needs of the majority rural population, the Ethiopian Government launched two programmes in 2003, where two cadres[c] of local human resources were developed: Health Extension Workers (HEWs), who are paid as full-time government employees after completing one year of training; and volunteers, initially called Community Health Promoters (CHPs) but now called Health Development Army Volunteers (HDAVs).[15] The HEWs provide curative care in health posts (including basic first aid, and the diagnosis and treatment of malaria, diarrhoea and intestinal parasites), and are supervised by a team leader from a PHC centre.[11,15] They also do health promotion in the community with the HDAVs, for whom they provide training and support.[15,d]

In Nepal, the Female Community Health Volunteer (FCHV) programme was established in 1988 to increase the coverage of basic health services in rural areas. Unfortunately, by the early 1990s the programme had largely become obsolete, mostly because of lack of political support and funding. However, with the increasing recognition of vitamin A deficiency in Nepal, the government established the 'National Vitamin A Program' (NVAP) using FCHVs to distribute vitamin A capsules. Soon the programme was recognised for its impact, bringing national and international attention to the key role of the FCHVs, and by 1993 the vitamin A supplementation programme had grown to cover all 75 districts in Nepal.[15] There are now over 55 000 FCHVs in Nepal, and their responsibilities have expanded to include integrated community case management[1] (iCCM – i.e. the detection and treatment of common childhood diseases), as well as home-based neonatal care, distribution of oral contraceptives, and promotion of available health services such as antenatal care[11].

Bangladesh implemented a large-scale community-based family-planning programme in the mid-1970s with Family Welfare Assistants. The programme expanded into the 1980s, being

c. 'Cadre' refers to a group of people who have been specially trained for a particular purpose.
d. There are currently more than 128 000 CHWs in Ethiopia i.e. HEWs (>34 000) and HDAVs (>94 000).[11]

complemented by NGOs using CHWs to provide family planning services. By 1997, 30 000 female CHWs were providing home-based family-planning services to women in Bangladesh. The work grew further to include women who were members of microcredit savings groups, who obtained special training in health. The national NGO cadre is currently made up of over 100 000 CHWs who reach more than 100 million people.[11]

Another successful example is Brazil, where CHWs, known as '*agentes comunitário de saúde'* or community health agents (CHAs), were introduced in Brazilian municipalities in the 1990s after the success of a pilot CHW project in one of the poorest areas of Brazil in the 1980s. Today, CHAs are an integral part of the 'Family Health Strategy' – a national public health programme, composed of over 240 000 CHAs[11] who provide home visits and connect communities across Brazil to primary health care services.[15] The programme has achieved universal coverage of primary health care services (and thus marked improvements in population health) by reaching all households and providing services to over 110 million people.[11] In fact, this programme is considered one of the largest and most successful community health programmes to integrate CHWs into national health services, mainly because community health committees have become an intrinsic part of municipal health services, thus sustaining social participation in the state's delivery of health care.[16]

There are many other examples of CHW programmes worldwide[11] that have grown into the 2000s in response to increasing service needs, especially in remote and under-resourced communities, and also because of the impact of the HIV/AIDS pandemic, and the mounting shortage of professional health workers.[16] India started the Rural Health Mission in 2005, which involves 800 000 CHWs known as ASHAs (Accredited Social Health Activists), making it one of the world's largest CHW programmes.[11] The Lady Health Worker Programme in Pakistan, launched in 1992, currently serves about 70% of the rural population with more than 90 000 workers.[11] Various African countries, such as Uganda, Ghana, Liberia, Rwanda, Nigeria, Kenya, Mozambique and Malawi have recognised the value of strong community health programmes and have increased their investment in community health[1], many with large-scale CHW programmes[11]. South Africa has an interesting history in this regard, which is necessary to expand on in order to understand the current remodelling of the primary health care system, based on Brazil's health system in which CHWs are foundational.[11] The following section provides more detail about the history of CHWs in South Africa, leading to the current health system reform.

1.2.2. The history of community health workers in South Africa

As mentioned in section 1.2.1, CHWs were essential team members in the COPC approach that began its development in rural South Africa during the 1940s, which is considered by many as seminal in the evolution of community health programmes. Thus, we cannot talk about the history of CHWs in South Africa without considering COPC. The following sub-sections expand on the development of COPC in South Africa, as well as the history of CHWs during the Apartheid era, post-1994 and into the present time.

1.2.2.1. The origins of COPC and CHWs in South Africa

i) Pioneering COPC

The COPC approach was pioneered in rural Pholela in the 1940s by two South African doctors, Sydney and Emily Kark, and Edward and Amelia Jali, a medical assistant and nurse respectively. Together they developed a unique health system that integrated people's social relationships and context with health services.[8] While for many this approach to health care is probably a given in today's time, this was not the case back then. The 1930s and 1940s were turbulent times in South Africa – people were still reeling from the Great Depression and World War II, and many suffered deep poverty. Also, post-colonial South Africa was characterised by racial segregation, and African people were poor and getting poorer. They had suffered land dispossession and increasing unemployment, poverty, hunger and ill-health. In response, and despite the social, economic and political obstacles, the Karks and Jalis, with the support of a small section of the Union of South Africa government[e] of that time, established a health centre at Pholela (a rural area in KwaZulu Natal) to address the dire circumstances that prevailed.[8] This profoundly innovative[7] work was the beginning of the creation of a "*socially inclusive, locally relevant, comprehensive system of collaborative health care*"[8].

As the work developed, it became known as the 'health centre movement'.[8] Key to this work was the collecting of social and epidemiological data from individuals and families in defined geographic areas[8] to make a 'community diagnosis'[17] (see Table 1.1 for Abrahamson and Kark's representation of the complementary functions of clinical and community interventions). This information was then used to develop relevant health services[8] that were specific to the needs of the population[7]. In this way, the Pholela Health Centre sought to address the social conditions that influence health, especially targeting nutrition, water, hygiene and sanitation,

e. Eustace Cluver (Secretary for Health, 1938–1946), and Harry S Gear (Assistant Chief Health Officer), were government officials in that time, and they were genuinely concerned about the ill-health in the African population.[7,8]

housing conditions, and work-related issues. In addition, they focused on the health needs of women and children by establishing household- and community food gardens, school feeding schemes, child growth monitoring, and communal child care.[7,8]

Table 1.1. Summary of the complementary functions of clinical and epidemiologic skills in development of community oriented primary health care[13,17]

CLINICAL (Individual)	***EPIDEMIOLOGIC (Population Group)***
Examination of a patient	***Survey***
Interview and examination of individuals by history taking, physical and psychological examinations, laboratory, radiography, and other special techniques.	*State of health of community and families, using questionnaires, psychological testing, and special facilities for such investigations.*
Diagnosis	***Community diagnosis***
1. Usually of a patient. Differential diagnosis to determine main causes of patient's complaint. *2. Appraisal of health status of 'well' persons, such as pregnant women, well children; periodic health examinations of adults.*	*1. Usually problem-oriented. Differential distribution of a particular condition in the community and the causes of this distribution.* *2. Health status of the community as a whole or of defined segments of it, e.g., health of expectant mothers, growth and development of children, birth and death rates.*
Treatment	***Treatment***
1. According to diagnosis and depending on resources of patient and medical institutions. *2. Intervention usually follows on the patient seeking care for illness or advice about health.*	*1. According to the community diagnosis and depending on resources of the health service system.* *2. Intervention on basis of survey findings, often before any illness notified or recognised.*
Continuing observation	***Continuing surveillance***
Evaluation of patient's progress and sometimes for further diagnostic workup.	*Surveillance of health state of community and ensuring continuing action. Evaluation of intervention programmes.*

Sidney Kark apparently coined the term 'community health workers' in Pholela and these CHWs were vital team members in the emerging COPC approach, visiting homesteads, doing demographic surveys and basic epidemiology, and educating families about health.[7,8] Characteristic of this interdisciplinary and collaborative work was that it was family- and community-centred and was it was performed in partnerships with effective teamwork. Especially important to note was the unique emphasis on community empowerment and participation in health care delivery, and community members and local leaders were directly involved in health service planning and delivery.[7] Over time, major health improvements were documented in Pholela, especially in terms of decreased infant mortality rate (IMR), improved nutritional status, and decease in the incidence rate of infectious diseases.[13] The explanation

for this was attributed to the relationships that emerged between the health centre team and the community, demonstrated in the "*intensive and informal health education programme"* that took CHWs into homes and neighbourhoods.[13] The emphasis of the service thus shifted from what is usually done for patients, to "*what the family or community does for itself, encouraged and enabled by the health centre team*."[13] This was foundational to the development of COPC, and Sidney Kark published about his approach of *"community medicine and primary health care as a unified practice"* in 1974 (before the Alma Ata).[9]

ii) Training in COPC

This unprecedented work in Pholela, which combined primary medical care with community outreach based on community epidemiology (i.e. the community diagnosis) for a designated area, was recognised and valued by some government administrators[f] of the Union of South Africa. Thus, because of the 1942 National Health Services Commission[5,7] and the resulting Gluckman (1944) report[7,8], it was decided to build the national health system on a network of around 400 PHC centres, based on the Pholela model[7]. In 1945, the Institute of Family and Community Health (IFCH) was started in Durban to further train health workers to staff the proposed future health centres.[13] Nurses, doctors, dentists, psychologists, social workers, CHWs, health recorders and laboratory technicians were trained.[8,13] Students were taught about community-, family- and home health; environmental hygiene; control of infectious diseases; nutrition; dental hygiene; health education; health administration; as well as physiology, clinical pathology, and biometrics and epidemiology.[8,13] The training was comprehensive to equip health workers for implementing the comprehensive approach. It is interesting to note that CHWs were initially trained for six months, which later became a three-year programme.[8]

In addition to training, the IFCH[g] combined learning with service and research. Eight health centres were attached to the Institute (seven centres were around Durban), with Pholela as the rural practice site[13] where students could apply what they learnt.[8] Health conditions in a range of geographic and ethnic communities were researched, as well as what health delivery systems were appropriate to the circumstances of different communities.[13] This synthesis of learning, service and research would be foundational to the practice, growth and spread of COPC.

f. George Gale (who became Secretary for Health, 1946–1952) and Henry Gluckman (a member of Parliament and the first national Minister of Health, 1946–1948)[8]
g. The IFCH was later attached to the Natal University Medical School.[7]

iii) Dispersion of COPC worldwide

By the late 1940s there were over 40 community health centres in different regions across the country that were based on the Pholela model.[8,9] But, as the Apartheid regime (the National Party) came to power by 1948, they deliberately, aggressively and systematically dismantled[8] the work that had been done in South Africa based on the COPC approach, rejecting Gluckman's recommendations[18]. Despite struggling for almost a decade against the reactionary government to keep the COPC concept alive[7], by 1960 most of the key figures who had been instrumental in building the approach had left the country, including the Karks.[8] As a result, the COPC approach spread to other countries across the globe and was further developed in countries such as Israel (where the Karks established a COPC training centre), the USA, Canada, Cuba, Brazil, Uganda, India, and Catelonia.[8,13] South Africa's loss was the world's gain, as those pioneers who had worked to develop COPC in South Africa became world leaders[h] in COPC and primary health care.[8]

Sadly, the progress made in the development of a community-oriented health system in South Africa in the 1940s and 1950s was lost. The innovative, community-based research and training, and health systems development through the COPC approach was discarded by the National Party in favour of their focus on tertiary or hospital-based care and the private health sector.[7] The disastrous consequences of this are still tangible to this day in South Africa.

1.2.2.2. CHWs during Apartheid South Africa

The 1950s to the 1980s are considered the height of apartheid, and during this time urban health development in South Africa was focused on building public hospitals and expanding the private sector, both of which were designed to benefit the privileged white minority.[18] Health services were strictly segregated according to race and rural health care was mostly provided by mission hospitals and clinics.[18] The 1960s saw the establishment of the ethnic homelands[7] or 'bantustans'[19] where black South Africans had been forced to live due to apartheid policies. By the 1970s these homelands had received so-called 'independence'[18] and the responsibility for health was given to the homeland authorities[5,18], each with their own health department[19], many of which struggled to provide proper public health care, mostly due to poor organisation and management[7], as well as being under-resourced and even corrupt[5].

h. For example[7,8]: Dr John Cassel (became a leading social epidemiologist), Dr Guy Steuart (became an expert in health promotion), Dr Joe Abrahamson (was a leading epidemiologist and author), Dr George Gale (became a leading professor in Uganda and worked for the WHO), Drs John and Grace Bennett (worked for UNICEF), and several others.

Despite this, many practitioners worked hard to improve the health and living conditions of homeland and underserved communities in South Africa.[7] Paradoxically, the very constraints of the apartheid era created the opportunity for civil society organisations (CSOs) to be innovative and determined in their purpose[5] and the 1970s and 1980s saw many small-scale health development projects with high levels of community participation being established, mostly by faith-based organisations (FBOs) and NGOs.[18] These were initiated during a time of repression and struggle in response to the neglected health of black populations, often underscored by strong socio-political motivations[5] Despite state control over all aspects of South African society, there was a rekindling of COPC principles through these grassroots initiatives[7] and the growing awareness of PHC[18] as a means to achieve 'Health for all' guided these projects in implementing key elements of PHC[7].

Examples of community-based health initiatives utilising CHWs during this time include the Elim Care Groups that operated from the Elim mission hospital in Gazankulu. These groups initially responded to trachoma, but later also other infectious diseases and nutrition, and they involved hundreds and later thousands of volunteer village women.[7] The Newlands and Chalumna projects, established in the Ciskei (Eastern Cape), were nutrition schemes to respond to kwashiorkor, but they also grew to address wider health issues.[5] Other examples of community-based PHC projects are the SACLA[i] Health Project (a comprehensive health service, including rehabilitation), the Alexandra Health Centre near Johannesburg[18], the Khayelitsha clinics[7] in the Western Cape, the Gelukspan community hospital in Transvaal, the Manguzi and Bethesda hospitals in Natal, and Tintswalo in Limpopo, among others.[7]

Van Ginneken et al's retrospective analysis of CHW projects during the late apartheid era shows that the projects that were influenced by the COPC approach were more comprehensive and tended to be better at recording their impact due to the epidemiological focus of the approach.[5] In fact, the Karks visited Johannesburg and Durban in the 1980s and 1990s, which contributed to the revival of surveillance- or research-based projects based on the COPC approach. Examples of this are Mamre Community Health project[7] (in the Western Cape) and the Agincourt site in Gazankulu (now Limpopo Province), where the University of Witwatersrand's Health Systems Development Unit has developed an important body of evidence on community health needs through participatory research.[5]

Another seeming contradiction in that time was that, while the apartheid state's involvement in community health was negligible[18], the homeland authorities seemed to be influenced by

i. SACLA is the South African Christian Leadership Assembly Health Project.

the Alma Ata and aimed to make healthcare more accessible to rural populations[20]. Homeland health services were struggling with the realities of fragmentation, poverty, migrant labour, drought and malnutrition[21], yet they tried to develop integrated district healthcare for their African populations, which prioritised preventive and promotive rather than curative medicine.[20] For example, Bophuthatswana adopted a comprehensive approach to health and welfare emphasising educational services and Gazankulu prioritised health centres and clinics as the 'backbone' of their community services.[20] Transkei, KwaZulu, and Bophuthatswana implemented CHWs working on a modest scale, while Gazankulu and the Ciskei gave CHWs central roles in their healthcare strategy.[20]

Gazankulu began training CHWs in 1980.[20] Ijsselmuiden tells how CHWs in Gazankulu were women of nursing assistant level, chosen by their village (usually by the headman), paid by the homeland government, who had six months of extra training in various health matters, especially nutrition.[22] It was not initially evident whether those CHWs had a positive influence or not, especially on malnutrition, and there were some doubts. Challenges included problems with training and supervision, but it seems that the CHWs contributed to raising standards of healthcare.[20]

Between 1980 and 1986, CHWs (also called village health workers) in the Ciskei were trained for six months at district hospitals. They were considered to be frontline auxiliary health workers who could detect health problems and promote preventive medicine, mostly in communities without a clinic.[20] While there were challenges, such as irregularities in the quality of care given and inadequate supervision, the Ciskei health department considered their impact to be significant due to their contribution to a decline in the incidence of malnutrition, gastroenteritis and measles.[20]

Other examples of community health programmes in the homelands include community health facilitators in KwaZulu and Venda, where community interventions seemed to lower infant mortality and reduce preventable infections in children. In Bophuthatswana, traditional midwives ("*Mmaya-Botsetse*") were trained to assist with deliveries at home. Yet, there remains controversy about homeland health authorities' veracity in reporting results, and it is recognised that community healthcare interventions were inconsistent.[20] Even so, it is worthwhile to study these projects within their historical context.

In the 1980s The National Progressive Primary Health Care Network (NPPHCN) was founded by a range of organisations, activist and health professionals in opposition to apartheid and the homeland health services.[7] The organisation challenged government policies and called

for the implementation of 'progressive PHC' in South Africa[7] and debated the shape of a future national health system.[18] Progressive PHC was based on four principles – commitment to socio-economic development; community accountability; concerned health worker practice; and comprehensive care – and was a uniquely South African form of PHC "*born out of the struggle against apartheid*".[7]

In the transition time of the early 1990s, these progressive community health leaders and activists were active in informing the African National Congress' (ANC) National Health Plan[5] and it was fundamentally framed by the Alma-Ata Declaration and inspired by South Africa's early COPC history[7]. Interestingly, Sydney Kark held meetings with health officials and academics in this time to promote the COPC approach[5]. In 1994 the new democratically elected government adopted the district health system (DHS) as the core of the National Health Plan. Comprehensive, community-based health care was to be made accessible to all South Africans by establishing PHC centres as the foundation of the national health system.[7] Unfortunately, CHWs were not included in this plan, despite CHWs being part of the 1992 health plan draft.[5] This was a lost opportunity to harness the strengths of the NGO CHW sector to partner with the ANC government in reconstructing and developing the health system.[7] And so, many CHWs projects collapsed, mostly due to the redirection or cancellation of funding and changed priorities of the new Department of Health that wanted a professional-driven DHS.[5]

1.2.2.3. CHWs post-1994

There were many challenges to CHW organisations both pre- and post-democracy, and some survived into the democratic era, while others did not. The Valley Trust in Natal is an example of an NGO that has survived since 1953.[5] The growing pandemic of HIV/AIDS in South Africa in the 1990s and 2000s, along with the ANC's initial lack of prioritisation and subsequent AIDS denialism[7], resulted in community organisations shifting focus to provide care and medication to people living with AIDS[5]. CHWs became single-purpose workers, and while this was a necessary response in that time, the foundational focus of community-oriented and comprehensive primary health care was essentially lost.[5] Yet, the CSO-based CHWs and particularly home-based carers (HBCs) were essential in mitigating the effects of the wrecking ball of AIDS and TB in communities throughout South Africa in the early 2000s.

Aspects of the COPC approach were recognised by government by the late 1990s, and by 2004 a National Community Health Worker Policy Framework (NCHWPF) was developed to guide the implementation of a national CHW programme. This 2004 framework aimed to bring

together the old and new CHW community-based organisations and address the crisis of health workers shortages, particularly by government providing grants to NGOs who would employ generalist CHWs.[5] However, the CHW framework was criticised for being too rigid as it hadn't considered the experiences of pre-democracy comprehensive community health initiatives, that it was vague and non-committal about remuneration, and that there was insufficient consideration of supervision of CHWs.[5]

Between 2004 and 2010 much work was done to refine the strategy around CHWs and to work towards formally integrating them into the health system. This was driven by CSOs like Section 27, who advocated for the inclusion of CHWs (also called community care workers or CCWs at that time) into the formal health workforce. The CCWs themselves were increasingly and understandably dissatisfied with how they were being treated, and would typically spend months without pay and were subject to labour exploitation. Despite providing an essential service, especially in terms of national HIV and TB responses, CCWs had to operate without comprehensive training, supervision, norms and standards, or pay.[23]

In 2010, the Minister of Health, Dr Aaron Motsoaledi, and the provincial MECs visited Brazil to learn how that country had improved population health outcomes through "*expanding the role of community agents working in teams with health professionals in designated catchment areas*"[24] Due to this influence, the Minster set up a team to design a South African model, which led to the reengineering of PHC (rPHC) that has been implemented since 2011. PHC reengineering continued to strengthen the district health system through establishing ward-based PHC teams (which finally saw the integration of CHWs into the national health system), along with the Integrated School Health Programme (ISHP), and District Clinical Specialist Teams (DCSTs).[24]

1.2.3.4. Current Health system reform in South Africa

The National Development Plan (NDP) 2030 Vision[25] presents health goals for South Africa to strive towards in order to achieve health and well-being for the population through a strengthened health system. As part of complete health system reform, the NDP guides the rPHC by establishing PHC teams[25] and these teams have been rolled out nationally as ward-based outreach teams (WBOTs) at various sites since 2013. Gauteng province has adopted COPC as the approach to achieving universal health coverage through WBOTs.

WBOTs deliver integrated primary care in defined geographic areas. They usually comprise of approximately 10 CHWs who work under the leadership of an outreach team leader (OTL),

who is a health care professional (most often a professional nurse). The CHWs are essential for executing proactive health promotion and disease prevention and management strategies[26], particularly by performing home visits to all households in their designated areas. To realise this model of delivery, the National Department of Health (NDoH) faces the challenge of educating and training around 50 000 CHWs and OTLs to work in ward-based outreach teams.[26]

An estimated 70 000 CHWs have worked on the periphery of the public health care system[24,26] for many years as care workers in non-government organisations (NGOs), non-profit organisations (NPOs), faith-based organisations (FBOs), as mentioned in Sections 1.2.2.2. and 1.2.2.3. These CHWs have faced challenges such as poor and irregular payment, uncertain working conditions, absent or unaccredited training and inadequate skills development.[26] Many of these CHWs have been absorbed into WBOTs across the country, but many still remain unemployed.

Over the years short-course programmes have been developed and implemented to try to address the learning needs of community health workers and home-based carers (HBCs). In 1997, for example, the NDoH contracted the Hospice Association of South Africa to develop a short-course training programme for volunteers working in community health care. This resulted in a standardised 59-day care worker training course (on NQF[j] level 4) that was used to effectively train HIV/AIDS community workers. This programme was highly regarded by stakeholders.

In 2010 the NDoH entered into discussions with the Department of Higher Education and Training (DHET) and the HWSETA (Health and Welfare Sector Education and Training Authority) to develop a learning programme in health. In 2011 the National Certificate (Vocational) or NC(V) programme in Primary Health was developed as an Umalusi[k]-approved full-time three-year certified qualification at NQF levels 2, 3 and 4. The first enrolment of full-time students began in 2013 at 12 Further Education and Training (FET)[l] colleges across the country (with 14 colleges eventually presenting the programme).

In 2012, the HWSETA, along with the Quality Council for Trades and Occupations (QCTO), developed an occupation-specific one-year programme for CHWs. The Occupational

j. NQF is the National Qualifications Framework.
k. The Umalusi Council sets and monitors standards for general and further education and training in South Africa.
l. FET colleges were renamed Technical Vocational Education and Training (TVET) Colleges in 2014.

Qualification: Health Promotion Officer (Community Health Worker) SAQA[m] ID 94597[27] was approved in November 2014 at NQF level 3, replacing pre-existing training, including the 59-day course. The first students were selected and enrolled in the course at NDoH Regional Training Centres (RTCs) in 2015 (see Appendix 1 for the curriculum structure).

At the same time, short-course training was developed by the NDoH. During 2013 and 2014 a 10-day training course for all CHWs working in WBOTs was presented country-wide by contracted-in private training providers, such as the Foundation for Professional Development (FPD). Since 2015, it and the second phase of training have been delivered to CHWs through NDoH RTCs (see Appendix 2 for the content of the training).

1.3. PROBLEM STATEMENT, RATIONALE AND SIGNIFICANCE

At present, there are considerable differences in the range of CHW knowledge, skills and competencies[26]. Generally, CHWs are insufficiently and variously trained to meet the requirements of a geographically-defined integrated primary health care delivery system. Without improvements in their training there is real risk that the envisaged primary care reform could fail.

Furthermore, the lack of proper training impacts on the roles, responsibilities and functions fulfilled by the CHWs across provinces and organisations. Clarity on their qualification requirements, especially in relation to health and social development professionals[26], will also help to settle variations in their scope of work, job descriptions, employment mechanisms and practice oversight.

In addition, the existing short courses and certificate programmes articulate poorly with post-school education and training opportunities. As a consequence, community health workers have little opportunity to advance academically and to use their qualifications to improve employment and career opportunities.

There is an unequivocal need to meet the national personnel requirements in the NDoH's reengineered primary health care system, the DHET's requirements to create progressive and cumulative learning pathways for human capital development, and individual community health workers' learning and employment aspirations. The University of Pretoria's Family

m. SAQA is the South African Qualifications Authority

Medicine Department established the Community Health Education Research Initiative (CHERI) in 2016 as part of the University of Pretoria's Community Oriented Primary Care (COPC) Research Unit in order to facilitate deeper research into the training of CHWs.

This study focussed on the NC(V) Primary Health programme and formed part of a larger research project that aimed to evaluate current formal and informal CHW training in South Africa. This is necessary to contribute to understanding how best to equip CHWs in order to strengthen their contribution within COPC. Results obtained will help to standardise CHW training in South Africa, thus enabling CHWs to optimally fill relevant gaps in the South African health system, while they develop capacity and meet their personal employment and learning aspirations.

1.4. RESEARCH QUESTION

Is the National Certificate (Vocational) Primary Health qualification adequate, appropriate, effective, and relevant training for community health workers in primary health care teams in South Africa?

1.5. AIM AND OBJECTIVES

This study aimed to evaluate the NC(V) Primary Health qualification to determine its adequacy, appropriateness, effectiveness, and relevance as training for CHWs in South Africa.

The objectives of the research were:

1. To evaluate the NC(V) Primary Health programme as a whole,
2. To determine how adequate, appropriate, effective and relevant the NC(V) Primary Health qualification is in terms of:
    - PHC provided to individuals and families in households in defined geographical areas (NDoH),
    - Curriculated qualifications and human resource development (DHET),
    - Individual learning, employment and personal aspirations (CHWs).
3. To document lessons learnt from the implementation of the NC(V) Primary Health qualification nationwide.
4. To make recommendations regarding CHW training for South African ward-based outreach teams.

1.6. CONCEPT CLARIFICATION

The following concepts are defined in order to better understand the study.

a)The definitions of the adjectives used in the research question:

-Adequate: "*sufficient for a specific need or requirement*"[28] or "*satisfactory or acceptable in quality or quantity*"[29]. Thus, is the NC(V) Primary Health qualification good enough as training for CHWs?

-Appropriate: "*especially suitable or compatible*"[30], i.e. is the NC(V) Primary Health qualification a good fit for CHW training?

-Effective: "*successful in producing a desired or intended result*"[31] or "*producing a decided, decisive, or desired effect; ready for service or action*"[32]. In other words, does the NC(V) Primary Health qualification produce properly trained CHWs?

-Relevant: "*closely connected… to what is being done or considered*"[33] or "*having significant and demonstrable bearing on the matter at hand*; *having social relevance*"[34]. Will CHWs with the NC(V) Primary Health qualification align with/fit into health system reform and PHC re-engineering?

b) **Community Health Worker** (CHW): Many varying definitions of what a CHW is exist. The International Labour Organisation (ILO) developed the following definition in 2008: "*Community health workers provide health education and referrals for a wide range of services, and provide support and assistance to communities, families and individuals with preventive health measures and gaining access to appropriate curative health and social services. They create a bridge between providers of health, social and community services and communities that may have difficulty in accessing these services*."[35]

Since certificated tertiary education for CHWs has been introduced in South Africa, this study aims to evaluate one of these programmes – the NC(V) Primary Health qualification. The occupational purpose of the CHW, as stated in the QCTO Health Promotion Officer (Community Health Worker) curriculum document[27] is helpful in clarifying how CHWs are currently seen in the context of WBOTs: "*Community health workers: Creates[sic] a bridge between the providers of professional health services, community services, social agencies and vulnerable populations within the community through:*

- *Carrying out basic assessments of communities, households, groups and individuals;*
- *Providing basic health education and referrals for a wide range of services; and*
- *Supporting and assisting in navigating the health and social services system*."

c) **Community Oriented Primary Care (COPC)** "*is primary care where professionals from different disciplines and approaches work together with organisations and people in defined communities to identify and respond systematically to health and health-related needs in order to improve health*".[36] There are five principles that guide the implementation of COPC in South Africa, which are 1) local health and institutional analysis, 2) comprehensive care, 3) equity, 4) practice with science, and 5) service integration around users.[36]

d) The **National Certificate (Vocational)** or NC(V) is a SAQA registered qualification on NQF levels 2, 3 and 4. It is funded by the DHET and 18 NC(V) programmes are currently presented at Technical Vocational Education and Training (TVET) Colleges across South Africa, providing opportunity for learners to specialise in a vocational area. The qualification is offered on a full-time basis over three years - one academic year per level. There are three compulsory subjects and four vocation-specific subjects for all NC(V) programmes. The compulsory subjects are: i) First Additional Language, ii) Mathematics or Mathematical Literacy, and iii) Life Orientation. The four vocational subjects that are specific to the NC(V) Primary Health qualification are iv) The South African Health Care System, v) Public Health, vi) Human Body and Mind, and vii) Community Oriented Primary Care (COPC).

e) The **National Qualifications Framework** (NQF) is a comprehensive system approved by the Minister of Higher Education and Training for the classification, registration, publication and articulation of quality-assured national qualifications.[37]

f) The **South African Qualifications Authority** (SAQA) must advise the Minister of Higher Education and Training on matters pertaining to the NQF (in terms of the NQF Act) and oversee the implementation of the NQF as well as ensure its objectives are achieved.[37]

1.7. TYPE OF STUDY AND METHODS

The study was a pragmatic evaluation that endeavoured to understand, interpret and describe[38] the extent to which the NC(V) Primary Health qualification is suitable training for CHWs within the context of health system reform[39]. Evaluation research makes judgements

about a programme's merit, worth, or significance.[40] Information about the programme's activities, characteristics, and outcome is collected to improve the programme or make decisions about future programmes.[40] Put simply, evaluation research is answering three pertinent questions: What? So what? Now what?[40]

Qualitative methods were used to evaluate the NC(V) Primary Health programme, including document reviews (e.g. policies, reports, curriculum-related documents, student assessments), interviews with key stakeholders and experts, focus group discussions with NC(V) Primary Health college lecturers, focus groups with existing CHWs who were also NC(V) Primary Health students, and fieldwork notes that were compiled during the research process.

The research aimed to obtain information about the adequacy, appropriateness, effectiveness, and relevance of the NC(V) Primary Health qualification in CHW training. In order to gain this information, an inductive approach[41] was applied by analysing the transcriptions of interviews and focus groups, field notes, and reflective student assessments to discover emergent themes. Furthermore, to enhance trustworthiness, data obtained from transcripts, observation notes, student assessments, and curriculum-related documents were analysed deductively by applying appropriate models and/or theoretical frameworks to further interpret the data.[42] Results of analysis and the discussion thereof will be presented in the Chapters that follow.

1.8. OUTLINE OF THE THESIS

Chapter 2 focusses on the literature that exists around the work and training of CHWs globally and in South Africa. Further literature relevant to each objective will be presented in the chapters dealing with the particular objective. Chapter 3 elaborates on the methods used to do the research, along with the limitations and ethical considerations. Chapter 4 presents the findings and discussion related to Objective 1, which deals with the NC(V) Primary Health programme as a whole. Chapter 5 considers the findings and discussion pertaining to Objective 2, which considers PHC delivery, human resource development, and personal development. Chapter 6 discusses the lessons learnt from the implementation of the programme (Objective 3) and Chapter 7 makes recommendations for future CHW education (Objective 4) and concludes the manuscript.

1.9. SUMMARY

This chapter provided background information to provide context to the research. The early beginnings of CHW programmes were sketched culminating in some discussion about current-day CHW programmes globally. The South African history of CHWs was also discussed. This set the stage for presenting the rationale of the study, along with the research question, aim, objectives and delineation of the study. Clarification of definitions and assumptions were described, the type of study was mentioned, and a brief outline of the chapters to follow was given.

The following chapter will consider literature pertaining to the work and training of community health workers globally and within South Africa.

CHAPTER 2: LITERATURE REVIEW

2.1. INTRODUCTION

There are two main aspects to this study as it strives to present an argument around the legitimacy of community health workers (CHWs) in health system reform in South Africa. These are the development of CHWs as human resources, and the education needed for them to indeed be valuable human resources within our health system.

This chapter presents relevant literature on which to base the argument. A general understanding of the CHW is presented, along with perspectives from different countries, especially low- and middle income (LMIC) countries. Literature relevant to the training and education of CHWs will also be explored. Furthermore, health system reform in South Africa is considered, specifically focussing on primary health care (PHC) re-engineering, and the community oriented primary care (COPC) framework that guides much of the implementation.

2.2. GLOBAL CONTEXT

The World Health Organization (WHO) has highlighted a crisis of too few health workers worldwide.[43] In fact, their forecast is a global shortage of 18 million health workers by 2030[44], with the greatest critical shortages in Sub-Saharan Africa[43]. This crisis in the global health workforce is further characterised by inadequate and inappropriate skill mixes and service coverage gaps.[43] So, crucial to achieving the health-related Sustainable Development Goals (SDGs) and universal health coverage (UHC) are enough competent health workers who provide services in enabling environments.[43] It is increasingly recognised that a viable solution is the deployment of CHWs, especially in LMICs.[16,44] Evidence shows that CHWs are key to increasing the availability of and access to health services, particularly in under-resourced areas, thus bridging the health equity gap.[43] Over the past few years there has been increasing interest in and discourse about CHWs worldwide.[45] Several countries have adopted various models and approaches to implementing CHW programmes as part of a global commitment to strengthening and integrating CHW programmes within national health systems.[46] It has been most helpful to see recently published systematic and scoping reviews about the work of CHWs.[43,47,48] The reviewed papers are from all regions and multiple countries, with a large body of work coming from sub-Saharan Africa.[43,47] Thus, there is a growing consensus on how to define the different types of community- or frontline health workers that exist worldwide.

2.3. COMMUNITY HEALTH WORKERS

2.3.1. What is a community health worker?

Initial definitions and understandings of CHWs were based on the idea that a CHW is a lay worker or volunteer health worker. Lewin et al's definition, as quoted by Lehmann and Sanders, has been mostly accepted: "*any health worker carrying out functions related to health care delivery; trained in some way in the context of the intervention; and having no formal professional or paraprofessional certificated or degreed tertiary education*"[16]. However, since then, various forms of CHW programmes have been implemented worldwide, ranging from largescale, national programmes to small-scale, community-based initiatives.[16] And so, different countries have very different approaches and are at various stages regarding community health. Table 2.1. depicts some variations of CHW programmes that exist worldwide.[1]

Table 2.1. Different approaches to community health programmes[1]

Wide variety of roles	*Unpaid Village Health Workers in Nigeria only do health promotion work*
	Health Extension Workers (HEWs) in Ethiopia treat life threatening diseases
Mix of public vs. private provision	*Lady Health Workers in Pakistan are paid government employees*
	Health Workers in Tanzania are volunteers
Varying integration with formal health system	*Community Health Assistants in Brazil are managed by local nurses*
	HEWs in Ethiopia are part of the formal healthcare system

The term 'community health worker' (CHW) embraces a variety of community health aides selected, trained, and working in the communities from which they come. It is difficult to generalise the profile of CHWs[16] and different attempts to define and categorise CHWs based on roles, educational levels and remuneration have been presented over the past few years. In building on this, Olaniran, Smith, Unkels et al recently conducted a systematic review of definitions of CHWs to provide more clarity.[43] In their consolidation of the definitions, they concluded that a single definition would not necessarily encompass specific contexts, norms, and cultures. A distinct CHW definition will, however, be key when assigning roles and positions within multi-disciplinary health teams. Thus, it is helpful to note that definitions of CHWs should emphasise the following: a) "*they are individuals with an in-depth understanding*

of the community, culture and language"; b) "*they have received standardised job-related training which is of shorter duration than health professionals"*; and c) "*their primary goal is to provide culturally appropriate health services to the community"* that they serve.[43]

2.3.2. What do community health workers do?

The roles and activities of CHWs have been diverse throughout their history, within and across countries and across programmes.[16] In terms of tasks, CHWs generally do health promotion and disease prevention in households, as well as provide basic treatment and collect household and community health information.[43] The multi-faceted nature of CHWs means that their work ranges from implementing biomedical interventions to being agents of social change in their communities.[5] More specifically, the literature comprehensively reviewed by Olaranian et al[43] in 2017 showed that CHWs work within communities and are often linked to health facilities, and they provide services to promote a healthy lifestyle and prevent disease. This is done by communicating health messages to community members. They mobilise, encourage and refer community members to make use of available health services and to access health facilities, and they may provide logistical support to people accessing health care within a complex system. CHWs often act as 'patient navigators'[43] and will interpret health information, helping patients cope better with their health conditions by providing psychosocial support to those who need it. In addition, they are seen as the link between the community and the health system, and they serve as community representatives, conveying policy-related health information to the community and then, in turn, reporting community needs back to the facilities or health information systems.[43] Much of the literature also presents the CHW within disease- or programme-specific contexts[47], such as HIV/AIDS programmes and maternal and child health (MCH). In some instances, CHWs have additional roles of providing treatment for basic conditions such as malaria and diarrhoea, while there are some in LMICs who have training to provide basic obstetric case management.[43]

Research over the past two decades shows compelling evidence that CHWs are critical for helping health systems achieve their potential, regardless of a country's level of development.[11] In LMICs, CHW can contribute meaningfully to improving priorities such as childhood malnutrition, maternal- and child health, access to family-planning services, and the control of HIV, malaria, and tuberculosis infections.[11] Brazil is a good example where CHWs are essential members of the health team, providing primary health care and health promotion.[11] In the United States, research shows how CHWs contribute to reducing the disease burden by managing hypertension, reducing cardiovascular risk factors, diabetes

control, cancer screening, and managing HIV infection, particularly among hard-to-reach sub-populations.[11]

However, many challenges exist in CHW programmes universally, and weaknesses in training, task allocation and supervision are prevalent.[16] Some of these challenges could include the following[1]:

- *Challenges related to the health workforce*
  - *Shortage of skilled health providers who are willing to work in certain communities*
  - *Lack of adequate supervision, monitoring and training for current health workers*
- *Challenges related to health-related infrastructure*
  - *Poor referral systems from community-based health care into formal health systems*
  - *Frequent stock-outs of essential supplies*
- *Challenges related to health behaviors and healthcare utilisation*
  - *Low education and literacy levels of health workers and community members*
  - *Lack of women's empowerment causes challenges in seeking care, leading to poor health outcomes*
  - *Friction between socio-cultural practices and good health practices leading to opposition from cultural leaders or religious leaders*
- *Lack of trust between communities and healthcare providers*

It is imperative that challenges are addressed and solutions shared as CHWs represent an important health resource. Their essential role in providing and extending a reasonable level of health care to underserved populations must be optimally utilised.

2.3.3. How are community health workers trained and remunerated?

As mentioned, most definitions in literature are based on roles and tasks of CHWs. However, there are suggestions that definitions of CHWs be based on competency or educational qualification rather than on tasks or roles, as the level of competency usually informs the tasks. Also, competency-based categorisation may be useful in developing a common understanding of the CHW cadre.[43] Table 2.2. summarises the correlation between training and remuneration, which Olaniran et al used to categorise CHWs into three levels.

Table 2.2. Different levels of CHWs based on pre-service training and remuneration[43]

Level	Educational Qualification and pre-service training	Remuneration
Lay health worker	*-Minimal to no previous education,* *-A few days to a few weeks of job-related informal pre-service training outside a recognised training institution*	*Usually unpaid or receive an allowance or incentive*
Level 1 Para-professional	*-Some secondary education,* *-Informal pre-service training outside a recognised training institution lasting a few months to more than a year.*	*Usually receive an allowance or incentive or stipend*
Level 2 Para-professional	*-Some secondary education,* *-Formal pre-service training in a recognised training institution lasting a few months to more than a year.*	*Usually receive a salary*

This level distinction is important, as it shows that there are different types of CHWs in different settings and not everyone has the same point of reference regarding CHWs. When making decisions about CHW programmes within health systems, it is helpful to be clear about the type or level of worker that is envisaged, so that good and reasonable decisions can be made regarding selection, training, remuneration and role expectations, especially in multi-disciplinary teams.[43] For example, the disjuncture exists where CHWs are expected to do the work of Level 2 paraprofessionals, but are only paid a stipend. Or, where CHWs are not expected to be more than lay workers, but the CHWs themselves aspire to be recognised, properly trained and decently paid.

When provided with suitable training, resources, and support, CHWs help improve health outcomes.[44] Many authors agree that CHWs can play a key role in strengthening health systems by providing comprehensive care that is people-centred, equitable, culturally appropriate, and economically feasible.[48] The WHO has thus suggested that for CHWs to be successful in carrying out their roles, they require regular training and supervision.[44] CHWs cannot fulfil their roles within PHC if they have not received appropriate education and training, and if they are not able to function at the required level of competence.[49] Proper training increases CHW knowledge and skills and can positively influence CHW motivation, job satisfaction, and performance, as well as increase community members' confidence in CHWs' capacity to perform their duties. Given that, short- and/or insufficient training typically erodes CHW confidence and reduces community trust and uptake of CHW services.[48]

Scott, Beckham, Gross et al found in their extensive review of literature about CHW programmes that the amount and type of training of CHWs should be understood within the

context of the health system, the pre-existing capacities of CHWs, and the roles that they are expected to fulfil.[48] Literature suggests that CHW training needs to impart technical and social competencies e.g. record-keeping skills, communication skills, psycho-social support competencies, problem solving abilities, and ethical understanding (such as the importance of confidentiality). Also, understanding the political and social determinants of health is important for CHWs. The development of these capacities should be facilitated both theoretically in the classroom and practically in the field.[48]

As it stands, there are CHW programmes providing initial or pre-service training, programmes providing on-going training, or programmes using a mixture of both. There is thus much variability between training programmes, particularly in LMICs[44], and especially in the content and duration of CHW training (some CHWs receive informal training taking place outside recognised training institutions, while other CHWs undergo formal, structured education in nationally recognised training institutions)[43]. And so, there is still a lot that needs to be understood regarding how best to deliver training[44], in all its forms – pre-service/initial training and on-going training. A realist approach has been suggested in evaluating training programmes for CHWs, especially since training is a complex intervention.[44]

Walker states patently that the CHWs of the SDG era (and thus the training that equips them) will need to move away from "*simplistic health information interactions*" towards a social model of health, thus being able to face the complex needs of a shifting demographic, food insecurity, gender violence and social inequalities, so that the needs of all family members are considered within an "*overarching concept of social and medical vulnerability*".[50]

In fact, the WHO 'Guideline on health policy and system support to optimize community health worker programmes''[51] that has been put together by experts to assist countries in their implementation of CHW programmes was recently published (at the end of October 2018), which will, needless to say, be most valuable worldwide to support CHW programmes.

The guideline[51] uses a health system approach to group issues and make recommendations in terms of three broad categories of policy interventions regarding CHWs, which are:

- *selection, education and certification*;
- *management and supervision; and*
- *integration into and support by health systems and communities*.

The following table (Table 2.3.) summarises the 15 recommendations made in the WHO 'Guideline on health policy and system support to optimize community health worker programmes'.

Table 2.3. Policy recommendations from the WHO 'Guideline on health policy and system support to optimize community health worker programmes'[52]

Selecting, training and certifying CHWs	
1. Selection	*• Specify minimum educational levels;* *• Require community membership and acceptance;* *• Consider personal capacities and skills; and* *• Apply appropriate gender equity to context.*
2. Pre-service training duration	*• Base on CHW roles and responsibilities;* *• Consider pre-existing knowledge; and* *• Factor in institutional and operational requirements.*
3. Curriculum to develop competencies	*• Train on expected preventive, promotive, diagnostic, treatment and care services;* *• Emphasize role and link with health system; and* *• Include cross-cutting and interpersonal skills.*
4. Training modalities	*• Balance theory and practice;* *• Use face-to-face and e-learning; and* *• Conduct training in or near the community.*
5. Offer competency-based formal certification upon successful completion of training	
Managing and supervising CHWs	
6. Supportive supervision	*• Establish appropriate supervisor-CHW ratios;* *• Train and resource supervisors to provide meaningful, regular performance evaluation and feedback; and* *• Use supervision tools, data and feedback to improve quality.*
7. Remuneration	*• Include resources for incentives in health system resource planning; and* *• Provide a financial package commensurate with the job demands, complexity, number of hours, training and roles that CHWs undertake.*
8. Contracting agreements	*• For paid CHWs, establish agreements specifying roles, responsibilities, working conditions, remuneration and workers' rights.*
9. Career ladder	*• Create pathways to other health qualifications or CHW role progression;* *• Retain and motivate CHWs by linking performance with opportunities; and* *• Address regulatory & legal barriers.*
Integrating into health systems and gaining community support	
10. Target population size	*• Consider population size, epidemiology, and geographical and access barriers; and*

	• Anticipate expected CHW workloads, including nature and time requirements of the services provided.
11. Collection and use of data	*• Enable CHWs to collect, collate and use health data on routine activities;* *• Train CHWs and provide performance feedback based on data; and* *• Minimize reporting burden, harmonize requirements and ensure data confidentiality and security.*
12. Types of CHWs	*• Adopt service delivery models comprising CHWs with general tasks as part of integrated primary health care teams; and* *• CHWs with more selective tasks to play a complementary role based on population health needs, cultural context and workforce configuration.*
13. Community engagement	*• Involve communities in selecting CHWs and promoting programme use; and* *• Engage relevant community representatives in planning, priority setting, monitoring, evaluation and problem-solving.*
14. Mobilization of community resources	*• CHWs to identify community needs and develop required responses;* *• CHWs to engage and mobilise local resources; and* *• CHWs to support community participation and links to health system.*
15. Supply chain	*• Ensure CHWs have adequate and quality-assured commodities and consumables through the overall health supply chain; and* *• Develop health system staff capacities to manage the supply chain, including reporting, supervision, team management and mHealth.*

These 15 pragmatic recommendations can be adapted contextually to support CHW programmes, particularly in the selection, education, deployment, management, supervision, career advancement, community embeddedness and system support of CHWs.[51]

2.4. HEALTH SYSTEM REFORM IN SOUTH AFRICA

South Africa's transition to a constitutional democracy over the past two decades has seen considerable progress in the reversal of discriminatory practices that existed pre-1994.[53] However, the health and well-being of the majority of South Africans remain beset with the burdens of poverty and its pervasive and persisting social disparities, infectious- and non-communicable diseases, a scourge of violence and injury, and inadequate human resources to provide health care to a growing population.[53] This reality requires that, to adequately

address South African health care challenges, social determinants of health should be prioritised nationally, the health care system needs to be strengthened, and universal coverage for health care must be facilitated[53], which the National Development Plan (NDP) 2030 Vision seems to have indeed made its priorities regarding promoting the nation's health[54].

The NDP 2030 Vision, drafted in 2012, is a long-term plan that aims to eliminate poverty and reduce inequality by 2030.[55] Regarding health in particular, there are nine NDP goals that aim to improve population health (goals 1 – 5) and the health system (goals 6 – 9), which are[55]:

GOAL 1: Average male and female life expectancy at birth increases to 70 years
GOAL 2: Progressively improve TB prevention and cure
GOAL 3: Reduce maternal, infant and child mortality
GOAL 4: Significantly reduce prevalence of non-communicable chronic diseases
GOAL 5: Reduce injury, accidents and violence by 50 percent from 2010 levels
GOAL 6: Complete health system reform
GOAL 7: Primary health care teams provide care to families and communities
GOAL 8: Universal health care coverage
GOAL 9: Fill posts with skilled, committed and competent individuals

Goal 7 further stipulates that *"Each household must have access to a well-trained community health worker"*.[55] This is based on the primary health care reengineering (rPHC)[56] strategy, introduced in 2010[57], that aims to strengthen health promotion, disease prevention and early disease detection.[56] Key to this strategy is the revitalisation of the health system through the introduction of ward-based PHC outreach teams[46], school health teams, and district specialist teams[58]. The rPHC strategy falls under national health care system reform to be integrated through the National Health Insurance (NHI) financing system, which was initiated in 2011.[57]

In terms of the ward-based outreach teams (WBOTs) in particular, the rPHC strategy envisages teams of generalist CHWs (around 6 to 10 CHWs per team), led by a trained nurse, who are responsible for a defined number of households (250 to 270 families[58]), while having close links to the local health facility.[56] Each team is thus responsible for about 1500 – 2500 households or a population of around 6000 – 10 000 people.[56] The teams typically address HIV and TB, maternal- and child health, and chronic non-communicable diseases with promotive and preventative approaches. The approach includes intersectoral action on the social determinants of health.[46]

Initiating the reform has certainly been a complex process.[58] WBOTs were rolled out in nine NHI pilot sites in seven provinces in 2012.[57]. The approach that guides much of the implementation of ward-based outreach teams in South Africa is Community Oriented Primary Care, or COPC. But provinces have implemented PHC teams in different ways[57], for example, Gauteng province applied the COPC approach in their implementation of municipal ward-based outreach teams (WBOTs)[59,60], while the Western Cape did not. Assessing the implementation of PHC teams in the provinces so far has, nonetheless, shown similar successes and challenges nationally.

Reported successes include that healthcare has been extended beyond the individual patient, and services are being provided to people in their homes; healthcare has been extended to remote, rural and marginal populations (such as people who are homeless, those who abuse substances, and sex workers); there has been increased cooperation with and acceptance of CHWs by communities and clinic employees; CHWs have assisted with the formation of support groups in communities; and CHWs have been successful in finding people who were not sticking to their treatment (otherwise known 'defaulter tracing'), thus contributing positively to an increase in successful treatment completion.[62]

Challenges include lack of clarity regarding CHW roles and scope[56,61], difficulties in redefining relationships and partnerships with NGOs and PHC facilites[59,61], poor communication within PHC services system and with communities[58,59], limited integration within other streams of rPHC[58], insufficient political support[59], problems with supervision and management of CHWs[57,58,61], under-provision of supplies[57,61], poorly constituted teams[57] and high CHW turnover[61], frustrations with remuneration[59], and inadequate training of CHWs[58,61].

Even so, current commitment by the South Africa government to CHWs in WBOTs is described in a recent policy framework and strategy for 2018/19 to 2023/24[62] that aims to overcome these challenges. Apart from naming the PHC teams 'Ward-based Primary Health Care Outreach Teams', resulting in the (unfortunately long and rather clumsy) acronym WBPHCOTs[n], the policy framework and strategy seeks to give guidance to the "*equitable distribution of a comprehensive community-based PHC service that will contribute to the improvement of health and well-being of individuals, households and communities*" through community participation and empowerment, inter-sectoral collaboration, and context-specific

n. It is easier to stick to WBOT, rather than WBPHCOT. However, these terms are used interchangeably in this thesis.

implementation.[62] The document outlines four goals to support the delivery of PHC (see Appendix 3), which are[62]:

> *Goal 1: Improve the working conditions of WBPHCOTs*
> *Goal 2: Improve human resource recruitment, selection, placement, development and management pertaining to the WBPHCOT programme*
> *Goal 3: Standardise the WBPHCOT scope of work and ensure standardised application in all nine provinces in South Africa*
> *Goal 4: Improve and maintain the monitoring and evaluation system for the WBPHCOT programme*

These goals are expanded on by presenting concrete ways to try to overcome the above-mentioned challenges, including improving employment conditions uniformly across provinces; using specially-trained enrolled nurses as OTLs, because professional nurses are a scarce resource; being flexible about the number of households covered by teams, as distances and travel times may vary considerably; and requiring CHWs to have matric.[62]

While there are no explicit training goals in the policy framework and strategy, the goals do align with the NDP 2030 and demonstrate the recognition of the important role that CHWs play in addressing the social determinants of health in our communities. The policy framework and strategy document gives direction to fully integrating CHWs into the health service so that access to a well-trained CHW becomes a reality for households. According to the document, South Africa ideally needs around 9000 WBOTs and 55 000 CHWs.[62]

The COPC approach is key to achieving this. COPC has evolved and adapted over the years, yet it remains a viable, relevant, and realistic solution[13] to a country that remains gripped in social crisis, with widespread poverty, high rates of unemployment, epidemics of communicable- and chronic diseases, high levels of violence, and rampant corruption. COPC has been tried and tested around the world, over generations, and it is a strong beacon of hope to a failing health and social system.

2.5. COMMUNITY ORIENTED PRIMARY CARE

An earlier definition of COPC by Abrahamson (in 1988) quoted by Mash, Howe, Olayemi et al is *"a continuous process by which PHC is provided to a defined community on the basis of its assessed health needs, by the planned integration of primary care practice and public health".*[63] More comprehensively, COPC is "*primary care where professionals from different*

disciplines and approaches work together with organisations and people in defined communities to identify and respond systematically to health and health-related needs in order to improve health".[36] Put simply, COPC mobilises clinical and public health resources in the places where people live and work.[64]

There are five principles that provide a framework for doing COPC.[36] These principles can guide the structure and implementation of health services[36] i.e. they "*steer practice so that services work with people to respond to basic health needs and the social, economic and political causes of poor health*".[64] It is most helpful to understand these principles, especially to identify and solve problems relating to community health needs and the health system, and to ultimately review and improve practice so that it is effective and sustainable.[36] Within the complexity of rPHC, understanding the COPC principles provides a most helpful perspective for what, why and how things are being done. Also, the NC(V) Primary Health programme has COPC as its cornerstone, and thus it is necessary to expand on these principles in order to evaluate the programme. Table 2.4 on the next page provides an overview of the five principles and their components.

Table 2.4. An overview of the COPC Principles[36,64]

Principle 1: ***Local Health and institutional analysis*** • *Who is there?* • *What is there?* • *What needs to be done?* • *How can it be done?* • *Who can do it?*	*Health care services need to be built from* ***scientific information***	
	Scientific information must ***come from*** *and* ***be specific to*** *people and organisations in defined* ***local places*** *and* ***contexts***	
Principle 2: ***Comprehensive Care*** • *Addressing health and disease management along the health-disease continuum*	***Promotion*** *(health promotion)*	*Behavioural approach*
		Social approach
	Prevention *(disease prevention)*	*Primary prevention*
		Secondary prevention
		Tertiary prevention
	Treatment *(curative services)*	*Assessing, identifying, diagnosing the health problem*
		Developing a medical care response
		Managing the condition
	Rehabilitation	*To retain function*
		To restore function
		To create function
	Palliation	*To relieve suffering*
Principle 3: ***Equity*** • *Values* • *Justice* • *Human rights*	***Accessible***	
	Appropriate	
	Affordable	
	Relevant	
Principle 4: ***Practice with Science***	***Scientifically*** *informed*	
	Interdisciplinary *and* ***multi-professional***	
Principle 5: ***Service integration around users***	***Person-centred*** *health care*	
	People and practitioners in ***partnership***	
	Continuity *of care*	*Relationship continuity*
		Management continuity
		Informational continuity

These principles show how community-oriented PHC can be evidence-based, contextual, comprehensive, integrated, continuous, person-centred, based on human-rights, and

sustainable. The work of CHWs is unambiguous when applying the COPC principles, as CHWs visit households in a specific geographic area to determine health status (principles 1, 4 and 5), they do education about health and disease (principles 2, 4 and 5) and refer to the local clinic and/or NGOs where necessary (principles 2, 3 and 4), and they are understanding of- and responsive to the context of the household and the community (principles 1,3 and 5).

The early development of COPC from the 1940s onwards is still relevant as a blueprint regarding the training of CHWs. What stands out is 1) the deep understanding of the connection between socio-economic circumstances and ill-health, 2) the commitment to the idea that local people could be well-trained to work in their communities to address local health needs, 3) that the contributions of these local workers were highly regarded, especially because their unique mix of understanding the local culture and health knowledge was fundamental to community-oriented primary health work, 4) that proper training was valued, so a training institute was established, which was dedicated to the interdisciplinary training of all health workers in COPC, and 5) that there was a strong research- and surveillance-basis in COPC work. While trying to find and fill the space for CHWs within the current health system in South Africa, it is necessary to better understand the roots and history of COPC and CHWs. The past and all the experience gained worldwide are certainly guides for the present implementation of actions as we attempt to build a better future for all.

2.6. CONCLUSION

As the world celebrated the 40-year anniversary of the Alma-Ata Declaration in 2018, there is a renewed commitment to PHC. The Astana Declaration of 25 October 2018 commits to four key areas: *"1) make bold political choices for health across all sectors; 2) build sustainable primary health care; 3) empower individuals and communities; and 4) align stakeholder support to national policies, strategies and plans*."[65] CHWs most definitely play an essential part in achieving this. International commitment to successful CHW programmes has been further entrenched by the WHO 'Guideline on health policy and system support to optimize community health worker programmes' that was released in October 2018.[51] Interestingly, five of these recommendations deal with pre-service training of CHWs, emphasising the importance of proper CHW education and training.[52] Huge strides have been taken to recognise, integrate, and fully harness the potential of CHWs, and because of this we can make progress towards universal health coverage and achieving the health targets of the Sustainable Development Goals.[52]

2.7. SUMMARY

This chapter brought together relevant literature to provide context to the current global CHW movement, explain what CHWs are and how they are trained. Also, the current stance on CHWs in South Africa has been highlighted in relation to health system reform in order to build an argument around the education and training of CHWs going forward, particularly based on the COPC approach.

Chapter 3 explains the methodology used in this research that aimed to evaluate the NC(V) Primary Health qualification.

CHAPTER 3: METHODOLOGY

3.1. INTRODUCTION

Chapter 3 describes what was done to achieve the aim and objectives of the research. Qualitative methods were used to better understand this particular training qualification. In this chapter, the research design is discussed and the methodology is expounded by presenting the theories applied to inform data collection and analyses. Explanations of the study area, population, and sample are given. Trustworthiness is expanded on, along with the limitations of the study, and ethical considerations are included.

3.2. RESEARCH DESIGN

The interpretive framework that guided this qualitative research was a constructivist paradigm.[66] The constructivist paradigm assumes a relativist ontology, i.e. that one's understanding of reality is an inter-subjective construct existing through meanings and understandings that have developed socially and experientially[67] and that there are thus multiple constructed realities[66], which are local and specific[68]. In other words, what we know is always negotiated within cultures, social settings and relationship with other people[67].

Knowledge about people's experiences of their social reality was thus viewed as subjective or transactional[67], i.e. that the knower and respondent co-create understandings[66] and that the knower and known interact and shape one another[69]. Subjectivist or transactional epistemology assumes that we cannot separate ourselves from what we know[67] and that this belief is central to how we understand ourselves, others and the world. My values and positionality as a lecturer and researcher were thus intrinsic in all phases of the research process[67], which is inherent to qualitative research. For example, I have built good relationships with community workers over several years while working in community settings. I have worked with amazing people and I have seen the value of their work. I have grown in my humanity because I have learnt so much from them, and I have seen the benefits of good training. I would like to see that community health worker (CHW) education programmes are successful, as I believe they can be (and many already are). In making my position explicit, I believe I was better able to seek the strengths and the weaknesses, the opportunities, and the barriers in the CHW education programme being evaluated, as all information (positive, negative, and neutral) is helpful for learning and can contribute to strengthening programmes.

A naturalistic set of methodological procedures[66] were followed in using the constructivist paradigm. These included interviewing, observation, and analysis of existing texts[67]. More specifically, document reviews were done of policies, reports, curriculum-related documents, and student assessments; interviews were conducted with key informants; and focus group discussions were held with participants. Also, thorough notes were kept of observations and experiences during the research fieldwork. Thus, a range of in-depth accounts were gathered to build detailed pictures of personal experiences.[70] These methods ensured an adequate dialogue between myself and those who were being interacted with, and naturalistic evaluation[71] allowed for the qualitative analysis of interactions[38] so that a meaningful reality could be constructed collaboratively.[66] It follows that interpretations of reality are diverse rather than seeking an overarching 'truth'[70] and truth was negotiated through dialogue[67] as the investigation continued. This dialogue between researcher and respondents is critical, as it is through a dialectical process[67] that we can progress in our understanding of the world. Interpretations were situated in a particular context and time, and, since they are subjective, they can be re-interpreted and re-negotiated through conversation[67]. Findings were also related to an existing body of theory and research and so the literature review was performed before-, during- and after[38] the research findings were being formulated.

This led to further consideration of the philosophical underpinnings of the research. The very existence of the NC(V) Primary Health qualification was challenged during the research period, which made the steps of the study very uncertain and unpredictable. In short, when the programme was implemented in 2013 an expectation was apparently created by the National Department of Health (NDoH) that graduates of the NC(V) Primary Health programme would be employed as CHWs. However, after completing the course at the end of 2015, many graduates were unable to find work or access higher education with their NC(V) Primary Health qualification. As a result, violent protests occurred at several TVET college campuses, coinciding with protests about other issues, like corruption. In response, the Department of Higher Education and Training (DHET) put the NC(V) Primary Health programme 'on hold'. As a result, 2016 and 2017 was a very sensitive and unsettled time for staff and students of the NC(V) Primary Health programme at TVET colleges. In trying to decide how to proceed further with the research, a deeper philosophical fit began to emerge – pragmatism. So, while the work made sense for the most part in terms of the constructivist paradigm, it made even more sense when considering the pragmatic paradigm, as evaluating the NC(V) Primary Health programme would still provide valuable information about CHW education in general, even if the programme's future was in the balance at that point.

According to pragmatism, the truth or meaning of an idea lies in observable and practical consequences rather than in any metaphysical attributes.[72] Pragmatists believe that philosophical concepts should be judged according to their practical uses and successes, not on the basis of abstractions. In other words, to a pragmatist, the mandate of science is not to find truth or reality (which are perpetually in dispute), but to facilitate human problem-solving.[73] Pragmatism seeks solutions to problems. In so doing, there is an inherent attention to issues of social justice in social research[74], because research always occurs in social, historical, political and other contexts[75]. Emphasis is placed on *why* research is done, and why it is done in a particular way. This stems from the work of John Dewey in the late 1800s and early 1900s. Dewey sought to promote pragmatism by reorienting philosophy away from abstract concerns and emphasising human experience.[74] Dewey described *inquiry* as a process of self-conscious decision making. Many problematic situations require thoughtful reflection, and this is why inquiry is important.[74] In research, therefore, we see the importance of careful, reflective decision making. And so, pragmatism as a philosophical assumption recognises the importance of joining beliefs and actions in a process of inquiry that underlies any search for knowledge.[74] Thus, data is collected in various ways from multiple sources to best answer the research question, and the focus is on the importance of the research and its practical implications.[75]

All throughout this research, the problem of how CHWs should be trained lingered. Thus, the pragmatic lens is a suitable one when considering what adequate, appropriate, effective, and relevant training should look like for community health workers in primary health care teams in South Africa. Even though the NC(V) Primary Health programme was ultimately cancelled or 'phased out' at the TVET colleges by the DHET, the research interactions with those at the coalface of the implementation of the programme were important in order to facilitate their voices being heard. Evaluating a programme that didn't work out and exploring the reasons why could produce meaningful insights into the political and practical dynamics of this type of education.

3.3 STUDY AREA, POPULATION AND SAMPLE

During the study period, the NC(V) Primary Health programme was being presented in two ways – on a full-time basis (over three years) at fourteen TVET colleges across the country, and on a part-time basis (over four years) through a unique collaboration between a university department, a TVET college and a municipal DoH. Both the full-time and the part-time

offerings were included in the research, along with other participants who were relevant experts and key informants. These are explained further in the sub-sections that follow.

3.3.1. Full-time offering of the NC(V) Primary Health programme

The NC(V) Primary Health programme was presented at fourteen TVET colleges across the country (not all TVET colleges in South Africa present the programme). All the TVET colleges in South Africa that presented the NC(V) Primary Health programme on a full-time basis at the time of the study were approached to be included in the research. These were:

1. Gauteng: Ekurhuleni East (Springs)
2. Gauteng: South West (Soweto)
3. Free State: Maluti (Phuthaditjhaba, Bethlehem)
4. North West: Taletso (Mmabatho)
5. Limpopo: Waterberg (Mokopane)
6. Limpopo: Capricorn (Polokwane)
7. Mpumalanga: Gert Sibande (Ermelo)
8. KwaZulu-Natal: Umfolozi (various campuses)
9. Western Cape: West Coast (Vredendal)
10. Western Cape: Boland (Caledon)
11. Western Cape: College of Cape Town (Crawford)
12. Western Cape: Northlink (Parow)
13. Eastern Cape: Eastern Cape Midlands College (Uitenhage)
14. Northern Cape: Northern Cape Urban (Kimberley)

Unfortunately, when the colleges were approached about participating in the study, doubt about the future of the programme had begun to set in, and the colleges either refused to allow any research to be done or simply didn't respond, despite several attempts to make contact. The only colleges willing to participate were Northlink in the Western Cape and Gert Sibande College (GSC) in Mpumalanga.

The first group of full-time NC(V) Primary Health students had enrolled in 2013 and graduated from the various colleges at the end of 2015. It was hoped that students enrolled at the various colleges at levels 2, 3 and 4 would be included in the study, but this was not possible as student protests were occurring on most campuses during the research period, and both Northlink and Gert Sibande Colleges were reticent to allow any contact with their students. However, managers and lecturers teaching NC(V) Primary Health subjects at all three levels at both the TVET colleges were willing to participate in interviews and focus groups. At

Northlink College permission was given to access some written reflections of nine level 4 students. Table 3.1. shows the research participants from the full-time offering.

Table 3.1. NC(V) Primary Health full-time offering research participants

TVET College	Participants	How was data collected?	How was data analysed?
Northlink TVET College, Western Cape	-One **programme manager**	-In-depth interview with the programme manager	-Thematic analysis of interview transcription
	-Two **lecturers**	-In-depth interviews with the lecturers	-Thematic analysis of interview transcriptions
	-Nine **students** (but only their written reflections)	-Nine written student reflections	-Thematic analysis of written reflections
		-Notes of on-site observations	-Analysis of observation notes
	=12 Participants	**=3 in-depth interviews =9 written reflections =Fieldwork notes**	
Gert Sibande TVET College, Mpumalanga	-One **college manager**	-In-depth interview	-Thematic analysis of interview transcription
	-One **course leader**	-In-depth interview	-Thematic analysis of interview transcription
	-Six **lecturers**	-One focus group	-Thematic analysis of focus group transcription
		-Notes of on-site observations	-Analysis of observation notes
	=8 Participants	**=2 in-depth interviews =1 focus group =Fieldwork notes**	

3.3.2. Part-time offering of the NC(V) Primary Health programme

In 2014, with the agreement of the DHET, the Family Medicine Department of the University of Pretoria (UP) partnered with Gert Sibande TVET College to pilot the NC(V) Primary Health qualification as a part-time offering over four years, available to CHWs employed in WBOTs in Mamelodi by the City of Tshwane (CoT). The aim was to raise the qualification levels of CHW employees, based on a work-integrated learning model. Mamelodi is a large peri-urban area, northeast of Pretoria and part of the City of Tshwane Metropolitan municipality. It is an important site as it was one of the pilot sites for WBOT roll-out.

CHWs working for WBOTs in Mamelodi could volunteer for this programme offering, and only 35 spaces were available. Initially all 35 spaces were filled, but 12 students dropped out very soon after commencing, leaving 23 students. By the end of 2014 only 18 students were still in the programme (see Table 3.2.). Students dropped out along the way for various reasons, such as uncertainty about the benefits of the programme or not coping with the demands of part-time studying.[o] A major challenge that arose during 2016 and 2017 was with the contracts of the CHWs employed by CoT. Many CHWs working for the CoT were unhappy about the terms of the new contract and did not want to sign it until their concerns were heard. The CoT adopted a “take-it-or-leave-it” approach, and there was a long period of limbo, where CHWs weren’t being paid and weren’t working either. This situation affected most of the CHW-students enrolled in the part-time NC(V) Primary Health offering, with many not being able to afford to get to classes at the UP Mamelodi campus. Despite these challenges, by the end of 2017, 16 CHW-students from the first cohort wrote the final exams. Ten students passed, with six students needing to re-register for some of the subjects in 2018. There are still four students from this group who have not passed mathematics, and have registered again for 2019.

A second, smaller group of 29 CHWs from Mamelodi were enrolled at the beginning of 2016. Nine dropped out during the first year, and four during the second year. There are currently 14 CHW-students from the second cohort registered for 2019, with 12 CHW-students on track to complete the course by the end of 2019 (see Table 3.2.). Both these part-time groups were

o. Initially, during 2014, the CHW-students worked as CHWs in the mornings and attended NC(V) Primary Health classes in the afternoons every weekday at the UP Mamelodi campus. In 2015 this was changed, in agreement with the CoT, so that the CHW-students could work as CHWs on three days (Monday to Wednesday), and attend NC(V) Primary Health classes on Thursdays and Fridays. This made the attendance of classes easier for the CHW-students as they only had to get to campus twice a week instead of daily.

included in the study between 2016 and 2018, thus around 32 CHW-students were available for several focus groups that took place during the data collection period.

Table 3.2. Student numbers for the first and second cohorts of the part-time offering

	Beginning	End	Beginning	End
	COHORT 1		COHORT 2	
2014	35	18		
2015	18	17		
2016	16	16	29	20
2017	16	16	20	16
2018	6	4	14	14
2019	4		14	

A team of lecturers, appointed by the UP Department of Family Medicine, who taught the various subjects to the two groups, were also included as research participants. These lecturers have varied over the years and have included existing staff from the Department of Family Medicine, including various clinical associates and family medicine registrars. Lecturers were also appointed on a part-time basis by the Department, especially the mathematics and English teachers. However, a core group of five lecturers has consistently taught the NC(V) Primary Health curriculum since 2015, which includes myself (an occupational therapist with a master's degree in public health), two colleagues trained as mathematics teachers, and two clinical associate lecturers. Table 3.3. shows the part-time offering participants.

Table 3.3. NC(V) Primary Health part-time offering research participants

(Part-time offering)	Participants	How was data collected?	How was data analysed?
UP/GSC/CoT collaboration, Mamelodi, City of Tshwane, Gauteng	-32 **CHW-students**	-Six focus groups with various groupings of the CHW-students	-Thematic analysis of focus group transcriptions
	-Five UP **lecturers**	-Five written lecturer reflections	-Thematic analysis of written reflections
		-Notes of fieldwork observations	-Analysis of observation notes
	=37 Participants	**=6 focus groups =5 written reflections =Fieldwork notes**	

3.3.3. Other participants

Key informants who were asked to participate included relevant role-players from the health and education sectors, as well as academics involved in mid-level worker education and curriculum experts. Table 3.4. gives more information about the key informants.

Table 3.4. Other research participants

Other participants	Participants	How was data collected?	How was data analysed?
Various stakeholders, key informants and experts, nationally	-A **consultant to the NDoH**, who has been involved in an advisory capacity to the NDoH regarding CHW programmes and policies. -A **HWSETA official**, who had been involved in the development of CHW training programmes. -A **TVET college executive**, who had in-depth knowledge of the TVET system and an understanding of the NC(V) Primary Health programme. -Three **academics**, including two involved in mid-level worker education at university level who have had students in their programmes that have completed the NC(V) Primary Health programme. The third academic was an expert in	-Eight in-depth interviews	-Thematic analysis of interview transcriptions

	curriculum design and evaluation -A **nurse** working as a **team leader** with CHWs in a WBOT pilot site -a **previous CHW** who at the time of the study managed an aspect of WBOT functioning in the CoT		
	=8 Participants	**=8 In-depth interviews**	

3.3.4. Summary of study sample

Full-time offering: While purposive sampling[76] was initially used to select participants, most of the participation in the full-time offering came down to whoever was willing and able to participate due to the uncertainly of the NC(V) Primary Health programme nationally. This may have contributed to some bias, as the TVET college course managers who did give permission to participate in the research were disappointed that the programme had been stopped, and were willing to share information so that lessons can be learned to prevent this situation from happening again. Those who were resistant to participate would have had valuable information to share, but they were not willing or able to share it. It would have also been very worthwhile to obtain information from the full-time NC(V) Primary Health students, but I was not given permission to contact them. These restrictions were beyond my control as the researcher.

Part-time offering: In the part-time offering, convenience[76] sampling was used, and all 32 CHW-students (i.e. cohorts 1 and 2) enrolled in the NC(V) Primary Health part-time offering were given the opportunity to participate in the focus groups, which were held at the end of some of my classes and at a designated time during a social gathering. CHW-students were thus free to choose whether to participate in the focus groups or not. It also depended on who was present on that particular day. The CHW-students inevitably had a particular bias as well, which emerged during the research, as they too were uncertain about their futures due to the phasing out of the NC(V) Primary Health programme and the predicament regarding their contracts with the CoT.

Other participants: Key informants were identified before and during the research process and were asked to be interviewed. I was also referred to other key informants by specific respondents, and so snowball sampling[76] was employed, which contributed to a broader perspective.

Thus, a total of 65 people participated in the research. Thirteen in-depth interviews and seven focus groups were conducted with the various participants. Five written lecturer reflections and nine written student reflections were also included. The following section explains in more detail what the sources of data were and how data was collected.

3.4. DATA COLLECTION

3.4.1. Sources of data

Data[p] was collected from the following sources:

a) The overarching policies that guide the training of CHWs in South Africa were used to assess the baseline requirements in training CHWs, in particular the National Skills Development Strategy III (NSDSIII), the Policy Framework and Strategy for Ward Based Primary Healthcare Outreach Teams, 2018/19 – 2023/24[62], and the White Paper for Post-school Education and Training. The NC(V) Primary Health programme was described and compared to that baseline. It was also benchmarked against international literature about training programmes for CHWs.

b) Relevant documents pertaining to the NC(V) Primary Health course were reviewed, including the NC(V) Primary Health subject guides, textbooks, and manuals.

c) Thirteen individual in-depth interviews were done with selected key informants and experts. Although a general line of questioning was prepared beforehand, these one-on-one interviews were unstructured[76], as it allowed different questions to be asked of the different interviewees, allowing respondents to answer as they saw fit[77]. The personal perspectives of the participants were shared[78], and this provided an opportunity to understand the history, successes and challenges of the programme from a design and

p. Data can be seen as 'information' in qualitative research and thus the singular is used i.e. Data was collected. In quantitative research data is seen as sets of data, thus the plural 'Data were collected' is used.

implementation perspective. The interviews were transcribed verbatim and analysed thematically.

d) Six focus groups were conducted with CHW-students of the part-time NC(V) Primary Health programme and one focus group was carried out with lecturers from the full-time programme (thus, seven focus groups were held). This was done to obtain information about the perceptions, opinions and experiences of each of these groups in terms of the programme. Focus groups (also called group interviews) can consist of two to 12 participants, guided by a facilitator who manages the shifting conversation among group participants, so that multiple voices and perspectives can be discussed and shared[76]. All the focus groups were recorded, transcribed verbatim and analysed thematically.

e) Written reflections were obtained from the part-time offering lecturers and analysed. These reflections gave insight into lecturer perspectives about teaching the programme on a part-time basis.

f) Student assessments were analysed where available and relevant. For example, nine of the level 4 ISAT (Integrated Summative Assessment Task) completed during 2015 were accessed at Northlink College and provided interesting information based on the students' reflections, which were included in the study as units of analysis.

g) Fieldwork notes were made during the research. I made notes about my thoughts, ideas and observations throughout the research process. These were analysed and used to guide the interpretation of data.

h) National results of NC(V) Programmes were obtained for the years 2014, 2015, 2016 and 2017. The NC(V) Primary Health results were compared to the other NC(V) programmes. (The 2018 results were not available at the time of writing the thesis.)

3.4.2. Data collection processes

All engagements with participants were polite, considerate, and professional.[77] Arrangements to meet with participants were made timeously and according to when it suited them. Focus groups and interviews were conducted where it was convenient to the participants. Northlink (in the Western Cape province) and Gert Sibande (in Mpumalanga province) colleges were visited for a day each so that interviews, focus groups and document analysis could be done.

Interviews were conducted in English, as all interview respondents were conversant in English. Focus groups were also facilitated in English, except in one particular focus group with part-time students where a colleague helped to translate when CHW-students used their vernacular language. Interviews and focus groups took the form conversations between myself (the researcher) and the respondents that were guided by a general plan of inquiry (Appendix 4) rather than a specific set of questions, so that specific topics raised by respondents could be pursued.[38]

While most engagements took place in a relaxed atmosphere, the interviews and focus groups at both the TVET colleges with lecturers and programme managers were strained. It was clear that there was stress among the staff about the future of the NC(V) Primary Health programme at that point. The focus group with lecturers was particularly difficult, as the lecturers were suspicious of the research being conducted and were hesitant to engage. Also, some of the lecturers had recently heard that they could no longer be employed due to the phasing out of the NC(V) Primary Health programme, which had, understandably, caused disappointment and anxiety. I had to gain the trust of the participants during the focus group by assuring participants that I was there with no agenda other than to obtain information. I was sincere, showed empathy, and listened attentively as they began to open up and share despite their initial reluctance.

3.5. DATA MANAGEMENT

All interactions with participants were either recorded or detailed notes were taken. When recordings were made, two different password-protected iPhones were used simultaneously and the recordings were downloaded onto my Google Drive account on a password-protected computer. Interviews and focus groups were transcribed verbatim as soon as possible after the recordings. Hard copies of data were photographed or scanned and all electronic documents generated were saved in Dropbox and Google Drive. Data was colour coded, put into tables, and represented diagrammatically by using mind maps or pictures, depending on how the data was best explored.

3.6. DATA ANALYSIS

The research aimed to obtain information about the adequacy, appropriateness, effectiveness, and relevance of the NC(V) Primary Health qualification in CHW training. In order to gain this information, an inductive approach[41] was applied by analysing the transcriptions of interviews and focus groups, field notes, and reflective student assessments to discover emergent themes. Furthermore, data obtained from transcripts, observation notes, student assessments and curriculum-related documents were analysed deductively by applying appropriate models and/or theoretical frameworks to further interpret the data.[42] Thus, all data was analysed accordingly and put together to meet the research objectives through a process of abduction (i.e. examining the range of possibilities for interpretation and selecting the most likely).[79]

The following theories were used to guide the analysis of data:

a) Stufflebeam's Context, Input, Process, Product (CIPP) Evaluation Model[80] was used in the interpretation of Objective 1 – to evaluate the NC(V) Primary Health programme as a whole. This is an appropriate model to evaluate higher education programmes, and includes:

Context evaluation: The big picture.
Input evaluation: The mission, goals, and plan of the programme.
Process evaluation: The programme's implementation.
Product evaluation: The outcomes of the programme.

b) The Capability Approach was used to structure understanding of Objective 2, which was to determine how adequate, appropriate, effective and relevant the NC(V) Primary Health qualification was in terms of PHC delivered to individuals and families; curriculated qualifications and human resource development; and individual learning, employment and personal aspirations. This approach allows for the exploration of the opportunities that exist to be a CHW and to do the work of a CHW, particularly in relation to the NC(V) Primary Health programme.

c) For Objective 3, which considered the lessons learnt, a partnership analysis tool[81] was used to evaluate the unique partnerships that existed in the implementation of the NC(V) Primary Health programme. This was done to contribute to the thinking around the need for novel partnerships in CHW training and education. The various interconnections were complex, however, and Morieux's Smart Rules[82] were also applied to facilitate clarity for future partnerships pertaining to CHW education.

d) The WHO 'Guideline on health policy and systems support to optimize community health worker progammes'[51] was used as the foundation for recommendations made regarding CHW education and training for South African ward-based outreach teams (Objective 4).

In a nutshell, the data was analysed to find patterns in data and discover their interrelationships.[79] This was done by applying Creswell and Poth's data analysis spiral, where i) the data is managed and organised, ii) reading and memoing takes place through reflexive thinking to develop emergent ideas, iii) these ideas are then classified into themes, iv) interpretations are developed and assessed, which are v) represented in the account of the findings.[83]

3.7. TRUSTWORTHINESS

The concept of trustworthiness in qualitative research has been well-established by Lincoln and Guba in 1985. The trustworthiness criteria they put forward are widely recognised and accepted, and are pragmatic choices for demonstrating acceptability of research. These criteria are credibility, transferability, dependability and confirmability, and they were applied in this research to enhance trustworthiness.[84]

3.7.1. Credibility

Through prolonged engagement with the NC(V) Primary Health programme (since April 2014), I have been immersed in the content. I have taught three of the vocational subjects (COPC, Public Health, and SA Health Systems) on all three levels, and I also reviewed three of the L4 textbooks (Public Health, SA Health Systems, and Human Body and Mind) before starting this research. There has thus been persistent observation of the content, which I have verified through researcher triangulation and peer debriefing (i.e. with the other NC(V) Primary Health lecturers) and through data collection triangulation (by collecting data from various sources, such as policies, learning guides, textbooks, focus groups, interviews, reflections, student assessments, and national results).[84]

3.7.2. Transferability

By trying to give thick descriptions[84] of the data analysis results, I have endeavoured to provide the opportunity for transferability within the domain of CHW education, particularly as far as formal pre-service training is concerned.

3.7.3. Dependability

A logical and well-documented research process helps to achieve dependability. In addition, the reflexive notes documenting critical thoughts and personal reflections that I kept were most useful in enhancing dependability.[84] I have also had the opportunity to engage with leaders in health science education and primary health care through attending academic conferences, being part of a health science education fellowship, and by being involved in two working groups dealing with frontline and mid-level worker training. Because of this, there have been many opportunities to discuss ideas around this research and CHW training in general, which have certainly contributed to the dependability of the ideas put forward in this work.

3.7.4. Confirmability

Confirmability is established when credibility, transferability and dependability are achieved.[84] Also, in keeping with the pragmatic philosophical basis of this research, I have tried to provide reasons for theoretical, methodological, and analytical choices, so that the reader can follow how and why decisions were made.[84]

3.8. ETHICAL CONSIDERATIONS

The research proposal was submitted to the University of Pretoria's PhD Committee in January 2016 and to the University's Health Sciences' Ethics Committee in February 2016. After institutional and ethical approval (protocol 46/2015 – see Appendix 5) was obtained, permission to conduct the research was requested from the DHET. While the Director-general of the DHET gave permission for the research to be done at all the relevant TVET Colleges (see Appendix 6), permission still had to be obtained from each TVET College. This proved to be very difficult, as the research was being conducted during a time of student protests and most of the colleges were reluctant to allow outsiders onto their campuses.

Permission to do the research with the CHW-students employed by the CoT and doing the NC(V) Primary Health programme part-time was requested from and granted by the municipal manager of the City of Tshwane's Department of Health (see Appendix 7).

Data collection commenced in June 2016 and continued through 2017. Informed consent was obtained from every individual participant (CHW-students, lecturers, managers, key informants, etc.) and no-one was included in the study if they had not given their informed consent. Written permission to record focus groups and interviews was also obtained from all

participants. Confidentiality and privacy were strictly adhered to and no names of individuals were recorded or made known in the collection or reporting of information. (See Appendix 8 for the informed consent document.) Data analysis was performed on an on-going basis as data was being collected. Thesis writing began at the end of 2017 and continued into 2018.

Research expenses such as university registration, travel costs, conference costs, a computer, internet data, airtime, stationery costs, and textbooks were covered by an NRF grant (that had already been allocated as part of a larger existing community engagement award made to the Department of Family Medicine in 2016), as well as by a University of Pretoria PhD bursary.

Questions regarding any conflict of interest because of my position as a lecturer in the part-time NC(V) Primary Health offering, as well as being the researcher evaluating the whole programme, were addressed by being upfront about my roles. I work for the University of Pretoria as a part-time lecturer teaching this particular curriculum and researching the NC(V) Primary Health programme as a full-time PhD candidate. I was not involved in the design of the curriculum, and have no vested interest in whether or not this particular programme continues. As a lecturer, my commitment is to be the best facilitator-of-learning that I could be to the CHW-students I work(ed) with, irrespective of the curriculum. And my interest as a researcher is to contribute to the conversation about how to train CHWs in South Africa. I do admit that my working relationship that grew with CHW-students as I got to know them over the years has probably influenced my opinion to a large degree. I have seen how competent CHWs can be through my interaction with the CHW-students. I have seen how they have tackled and overcome challenges, how they have persevered despite difficult circumstances, how they have kept hope even though they felt disregarded. This has given me great respect for the people who do this work, and who do it well. Because of my relationship with them, I have a perspective that is richer than one that would have been only informed by data.

The results of this study will be disseminated through publication of academic articles in suitable national and international accredited journals. Various aspects of the results have been presented at relevant academic conferences, contributing to the current local and international discourse on community health workers in primary health. I hope to present more aspects of the research at conferences during 2019. Feedback will be provided to the various stakeholders, which include the NDoH, DHET, HWSETA, CoT and the various participating educational entities. I will also ask the CHW-students to give feedback to the households where they work in Mamelodi, but this might prove difficult, as many of them are currently unemployed due to problems with their contracts that occurred during 2017 and 2018.

I feel strongly that CHWs themselves should be involved in feedback about CHW education and training, especially through co-writing articles and oral presentations. I am going to try my very best to include CHW-students from the NC(V) Primary Health part-time offering in the presentation of perspectives to stakeholders, and, where possible, at academic conferences (this would mostly depend on financing possibilities, though). As a researcher, I am a conduit for the participants' voices, but their actual voices need to be heard. So, I believe researchers need to take a step back and facilitate opportunities for empowerment (needless to say within the ethical parameters of social justice, beneficence, autonomy, anonymity, and respect for dignity).

3.9. LIMITATIONS

Various limitations existed during the research process and are described in the sub-sections that follow.

3.9.1. Temporal and physical limitations

The research was limited to the time frame from 2016 to 2018, and during this time the NC(V) Primary Health programme was suspended by the DHET. This inevitably limited the breadth of the research, as most TVET colleges did not want to allow research to be done on the programme during such a sensitive time. Nonetheless, it was decided to continue with the evaluation of the NC(V) Primary Health programme as an analysis of this particular programme and the lessons learnt from its implementation (the positive and negative aspects) would still be a valuable contribution to the research being done about CHW education in South Africa.

3.9.2. Participant limitations

It was initially hoped to secure participation from across the country. This was not possible, despite my best attempts, as the political sensitivity and precarious situation of the NC(V) Primary Health course during the time of the research prevented more participation. This reality, in and of itself, is necessary to consider further, as the political nature of CHW training and work within health system reform is important to acknowledge.

3.9.3. Scope limitations

The research scope was limited to a focus on the NC(V) Primary Health programme only, although there are other training programmes in existence currently in South Africa (see Appendices 1 and 2). It would be worthwhile to compare these programmes in depth, but that is outside the scope of this study. Even so, the recommendations emanating from this study can contribute significantly to the current discourse regarding the education of frontline workers (i.e. CHWs) and even mid-level workers (such as disability workers).

3.10. SUMMARY

Chapter 3 presented the methodology of the research. Philosophical assumptions were discussed, methods were described along with the theories applied in the selection and use of these methods. The study population, area, and sample were delineated, and ethical considerations were outlined, along with the limitations of the study.

The following chapter will put forward the results and discussion of the first objective of the research, which sought to evaluate the NC(V) Primary Health programme as a whole.

CHAPTER 4: EVALUATION OF THE NC(V) PRIMARY HEALTH PROGRAMME (OBJECTIVE 1)

4.1. INTRODUCTION

The focus of this chapter is Objective 1 – the evaluation of the NC(V) Primary Health qualification as a whole. Stufflebeam's context, input, process, product (CIPP)[80] was used as a framework to guide the evaluation. The chapter is structured according to the components of the model and discusses the results obtained from analyses of pertinent documents, including subject guides, textbooks, manuals, and policies, as well as theoretical frameworks. The national results of the NC(V) programmes for the research period were also analysed and compared. Themes that emerged from the analyses of student assessments, focus groups, and in-depth interviews with key informants are also presented and discussed.

4.2. THE CIPP MODEL

Stufflebeam's CIPP evaluation model is a comprehensive and integrated framework for guiding formative and summative evaluations of programmes, projects, and systems.[85], and is well-suited to evaluate higher education programmes. The model was selected as it considers the bigger picture and context, as well as the details of the specific programme being evaluated. This makes it appropriate for analysing an educational programme positioned within health system reform. i.e. the NC(V) Primary Health qualification. It can also be used before, during and after the implementation of a programme.[85,86] In this study, the CIPP model was used retrospectively[85] to evaluate the NC(V) Primary Health programme and thus inform decisions about future programmes for CHW education in South Africa. The main components of the model are represented by the acronym CIPP, which stands for evaluations of context, inputs, processes, and products.[85] Figure 4.1. below gives a diagrammatic representation of the model.

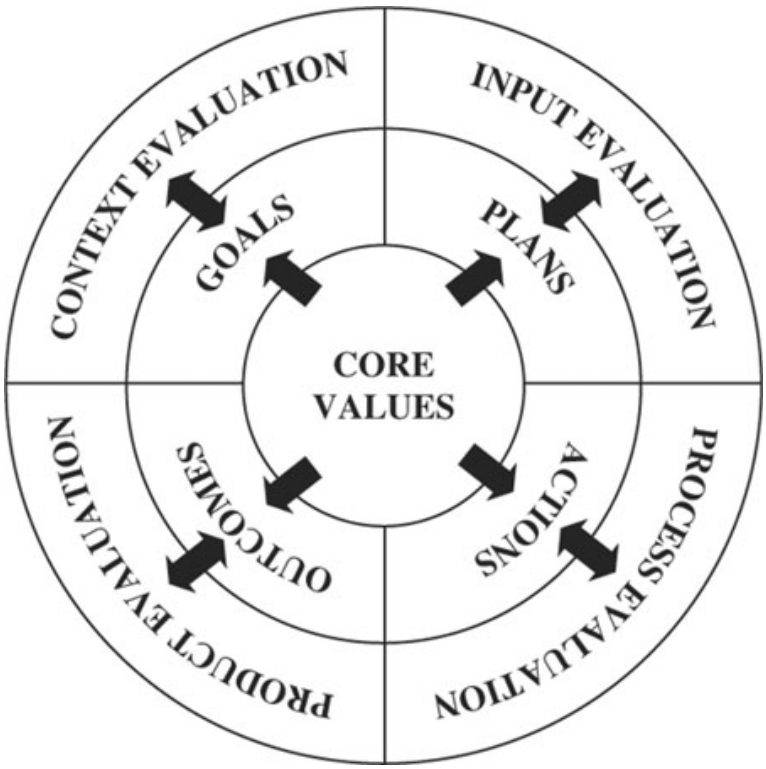


Figure 4.1. Components of Stufflebeam's CIPP Model[85]

The basic elements of the CIPP model are depicted in three concentric circles. The inner circle shows the core values that should be defined and used to 'ground' the evaluation (which include ideals held by individuals, groups, or society at large). The wheel surrounding the values is divided into the four evaluation foci of a programme evaluation, which are goals, plans, actions, and outcomes. The outer wheel indicates the components of evaluation (or types of evaluation) used for each of the four evaluative foci (i.e., context, input, process, and product evaluation). The two-directional arrows show the reciprocal relationships between an evaluative focus and the type of evaluation.[85]

Context evaluations consider the history and background of the programme, the defined goals, as well as needs, problems, assets, and opportunities.[85,86] Input evaluations assess the financial-, material-, time-, physical- and human resources needed for the effective working of the programme[86] in order to achieve its goals.[85] Process evaluations assess the implementation of the programme. Product evaluations identify and assess the outcomes of the programme – the intended and unintended, the short-term and long-term[85] – and the potential usefulness or benefit of the programme to individuals and society[86]. Table 4.1 shows how each component (type of evaluation) was performed.

Table 4.1. How data was obtained for each component of evaluation

Component/Type of evaluation[80,85]	How data was obtained
Context evaluation: *The big picture. Where does the programme fit? Where does the evaluation fit? What are the goals of the programme? What are the goals of the evaluation?*	• In-depth interviews with key informants to obtain background information • Analysis of policy documents
Input evaluation: *Information is collected regarding the mission, goals, and plan of the programme. What is the programme's strategy? Is the programme responsive to community or health system needs?*	• In-depth interviews with key informants to obtain information regarding goals and plans. • Analysis of programme documents
Process evaluation: *Investigates the quality of the programme's implementation.*	• In-depth interviews with key informants to obtain perspectives of programme implementation • Focus group with full-time lecturers • Focus groups with CHW-students • Analysis of full-time student reflections • Analysis of part-time lecturer reflections
Product evaluation: *What are the positive and negative aspects of the programme? What are the intended and unintended outcomes, both short-term and long-term? Judgments of stakeholders and relevant experts are analysed.*	• In-depth interviews with key informants to obtain perspectives of outcomes • Focus group with full-time lecturers • Focus groups with CHW-students • Analysis of full-time student reflections • Analysis of part-time lecturer reflections

The results of the evaluation and the discussion thereof will be presented in terms of the context, input, process, and product components.

4.3 CONTEXT (GOALS)

Unemployment, and especially rising youth unemployment, are undeniably of the most pressing problems facing economies and societies globally.[87] In South Africa, we faced the very real crisis of a 27.5% unemployment rate for the third quarter of 2018.[88] That means there are some 6.2 million South Africans who are currently unemployed. Shockingly, the youth unemployment rate (for those aged 25-34) is 52,8%.[88] The basis of this problem is systemic

and complex, but we also know that proper education and training are central to equipping people with the skills needed for "*employment, decent work, entrepreneurship, and lifelong learning*".[87] And when this is founded on eradicating poverty, combatting inequality, preserving the planet, creating inclusive and sustainable economic growth, achieving productive employment and decent work for all, while fostering gender equality and social inclusion,[87] then there is hope that people could sustain their livelihoods because of the education or training they receive.

4.3.1. Post-school education and training

South Africa continues to face substantial education and training challenges. As Nzimande puts it, "*for our country to achieve high levels of economic growth and address our social challenges of poverty and inequality, we must work together to invest in education and training and skills development to achieve our vision of a skilled and capable workforce to support an inclusive growth path.*"[89] The National Skills Development Strategy (in all its versions) is meant to drive a process that seeks to improve the skills development system in South Africa by explicitly linking skills development to career pathways and progression.[89] The White Paper for post-school education and training in South Africa expands on the framework envisioned by government to improve post-school education and training, as access to quality post-school education is key to overcoming poverty and inequality.[90]

4.3.2. Levels of education and training

The National Qualifications Framework (NQF) provides the framework to guide consistent learning achievement across qualifications. It ensures comparability and benchmarking of qualifications nationally and internationally[89] by providing clearly described levels of qualification in which school and post-school learning can be situated so that applied competence is achieved[91] (see Figure 4.2. NQF Level descriptors[92]). The South African Qualifications Authority (SAQA) is responsible for the development of the content of the level descriptors for each level of the NQF in agreement with the three Quality Councils: The Council on Higher Education, Umalusi, and the Council for Trades and Occupations (QCTO).[89,91]

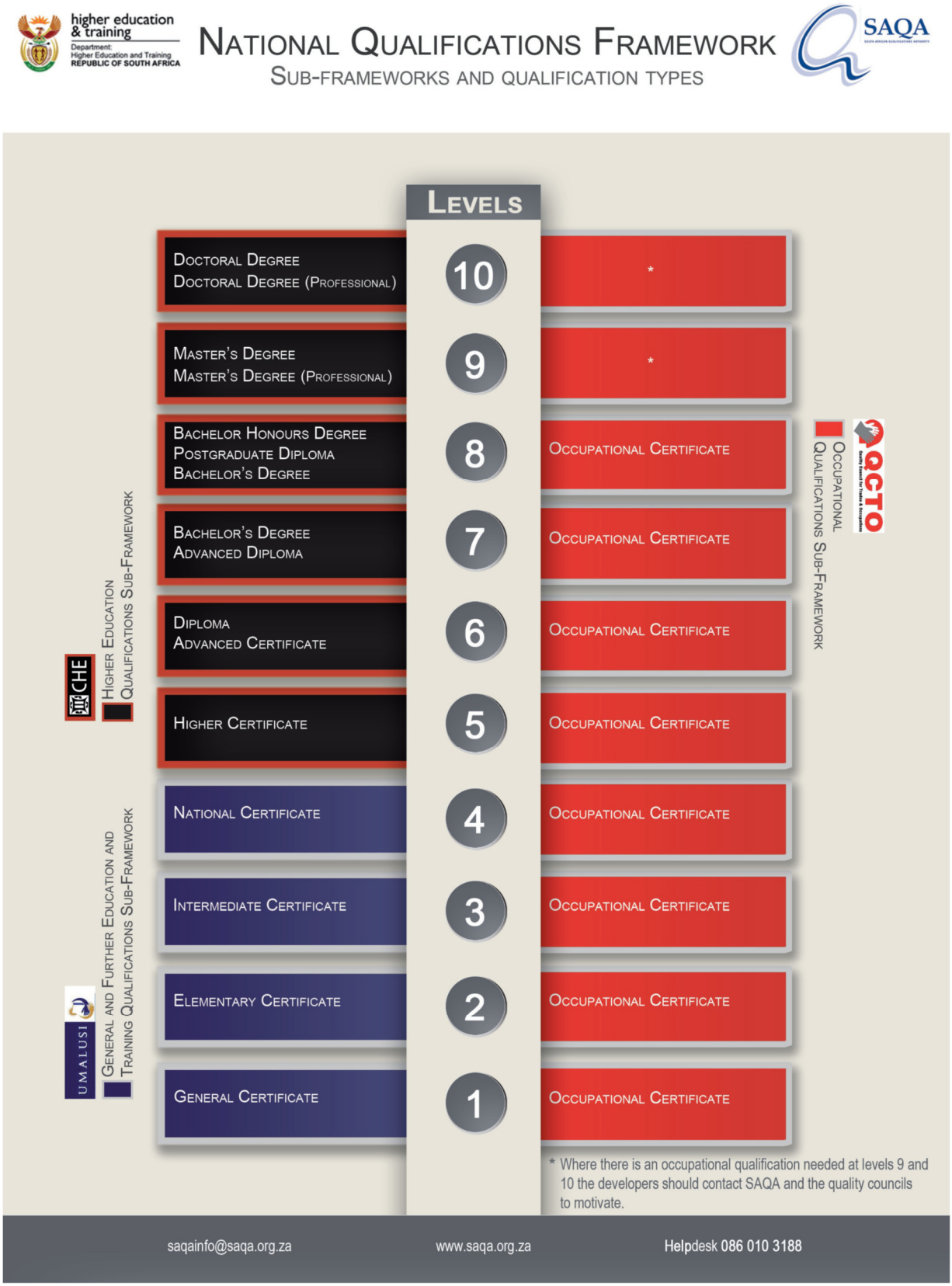


Figure 4.2: NQF Level descriptors[67]

The NQF also sets out the categories (Box 1) that need to be included in the development of any post-school training competencies.[91]

Box 1: Categories of post-school training competencies[91]

- *Scope of knowledge*
- *Knowledge literacy*
- *Method and procedure*
- *Problem solving*
- *Ethics and professional practice*
- *Accessing, processing and managing information*
- *Producing and communicating of information*
- *Context and systems*
- *Management of learning*
- *Accountability*

These competencies are matched to the level descriptors, so that students are able to grow step-by-step in their development of competencies. Table 4.2. shows how the categories of competencies are applied across NQF levels[91], particularly levels 2, 3, and 4.

Table 4.2. Description of applied competencies across each NQF level[66] (*bold sections have been added for emphasis*)

Categories	NQF Level 2	NQF Level 3	NQF Level 4
Scope of knowledge	*Scope of knowledge, in respect of which a learner is able to* ***demonstrate a basic operational knowledge*** *of one or more areas or fields of study, in addition to the fundamental areas of study.*	*Scope of knowledge, in respect of which a learner is able to* ***demonstrate a basic understanding of the key concepts and knowledge*** *of one or more fields or disciplines, in addition to the fundamental areas of study.*	*Scope of knowledge, in respect of which a learner is able to* ***demonstrate a fundamental knowledge base of the most important areas*** *of one or more fields or disciplines, in addition to the fundamental areas of study, and a* ***fundamental understanding of the key terms, rules, concepts, established principles and theories*** *in one or more fields or disciplines.*
Knowledge literacy	*Knowledge literacy, in respect of which a learner is able to* ***demonstrate an understanding that one's own knowledge of a particular field or system*** *develops(sic) through active participation in relevant activities.*	*Knowledge literacy, in respect of which a learner is able to* ***demonstrate an understanding that knowledge in a field can only be applied if the knowledge, as well as its relationship to other relevant information*** *in related fields,* ***is understood.***	*Knowledge literacy, in respect of which a learner is able to* ***demonstrate an understanding that knowledge in one field can be applied to related fields****.*
Method and procedure	*Method and procedure, in respect of which a learner is able to* ***demonstrate the ability to use a variety of common tools and instruments****, and* ***a capacity to work in a disciplined manner in a well-structured and supervised environment****.*	*Method and procedure, in respect of which a learner is able to* ***demonstrate operational literacy****, the* ***capacity to operate within clearly defined contexts****, and the* ***ability to work within a managed environment****.*	*Method and procedure, in respect of which a learner is able to* ***demonstrate the ability to apply essential methods, procedures and techniques*** *of the field or discipline* ***to a given familiar context****, and the ability to* ***motivate a change using relevant evidence****.*

Problem solving	*Problem solving, in respect of which a learner is able to* ***demonstrate the ability to use own knowledge to select and apply known solutions to well-defined routine problems****.*	*Problem solving, in respect of which a learner is able to* ***demonstrate the ability to use own knowledge to select appropriate procedures to solve problems within given parameters****.*	*Problem solving, in respect of which a learner is able to* ***demonstrate the ability to use own knowledge to solve common problems within a familiar context****, and the ability* ***to adjust an application of a common solution within relevant parameters to meet the needs of small changes in the problem or operating context*** *with an* ***understanding of the consequences*** *of related actions.*
Ethics and professional practice	*Ethics and professional practice, in respect of which a learner is able to* ***demonstrate the ability to apply personal values and ethics in a specific environment****.*	*Ethics and professional practice, in respect of which a learner is able to* ***demonstrate the ability to comply with organisational ethics****.*	*Ethics and professional practice, in respect of which a learner is able to* ***demonstrate the ability to adhere to organisational ethics and a code of conduct****, and the ability* ***to understand societal values and ethics****.*
Accessing, processing and managing information	*Accessing, processing and managing information, in respect of which a learner is able to* ***demonstrate the ability to apply literacy and numeracy skills to a range of different but familiar contexts****.*	*Accessing, processing and managing information, in respect of which a learner is able to* ***demonstrate the basic ability to summarise and interpret information relevant to the context from a range of sources****, and the ability* ***to take a position on available information, discuss the issues and reach a resolution****.*	*Accessing, processing and managing information, in respect of which a learner is able to* ***demonstrate a basic ability in gathering relevant information, analysis and evaluation skills****, and the ability* ***to apply and carry out actions by interpreting information from text and operational symbols or representations****.*

Producing and communicating of information	*Producing and communicating information, in respect of which a learner is able to* ***demonstrate the basic ability to collect, organise and report information clearly and accurately****, and the ability to* ***express an opinion on given information clearly in spoken/signed and written form****.*	*Producing and communicating information, in respect of which a learner is able to* ***produce a coherent presentation and report, providing explanations for positions taken****.*	*Producing and communicating information, in respect of which a learner is able to demonstrate the ability* ***to communicate and present information reliably and accurately in written and in oral or signed form****.*
Context and systems	*Context and systems, in respect of which a learner is able to* ***demonstrate an understanding of the environment within which he/she operates in a wider context****.*	*Context and systems, in respect of which a learner is able to* ***demonstrate an understanding of the organisation or operating environment as a system****, and* ***application of skills in measuring the environment using key instruments and equipment****.*	*Context and systems, in respect of which a learner is able to* ***demonstrate an understanding of the organisation or operating environment as a system within a wider context****.*
Management of learning	*Management of learning, in respect of which a learner is able to* ***demonstrate the capacity to learn in a disciplined manner in a well-structured and supervised environment****.*	*Management of learning, in respect of which a learner is able to* ***demonstrate the ability to learn within a managed environment****.*	*Management of learning, in respect of which a learner is able to* ***demonstrate the capacity to take responsibility for own learning within a supervised environment****, and* ***the capacity to evaluate own performance against given criteria****.*
Accountability	*Accountability, in respect of which a learner is able to* ***demonstrate the ability to***	*Accountability, in respect of which a learner is able to* ***demonstrate the capacity to***	*Accountability, in respect of which a learner is able to* ***demonstrate the capacity to***

	***manage own time effectively**, the ability **to develop sound working relationships**, and the ability **to work effectively as part of a group**.*	***actively contribute to team effectiveness**.*	***take decisions about and responsibility for actions**, and the capacity **to take the initiative to address any shortcomings found**.*

As one reads through these categories on each level, it is clear that they provide a comprehensive structure for a curriculum to be built upon, and that well-educated, competent individuals should be the result of a programme that adheres to these categories.

4.3.3. Technical Vocational Education and Training (TVET)

A 'natural fit' to facilitate the realisation of government's strategy to develop skills is technical and vocational education and training or TVET. This is an international education term applied to post-school scenarios and designed to improve vocational training programmes around the world. It is defined by UNESCO-UNEVOC as follows: *"Technical and vocational education is used as a comprehensive term referring to those aspects of the educational process involving, in addition to general education, the study of technologies and related sciences, and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life."*[93] In 2014 the Department of Higher Education and Training (DHET) changed the existing Further Education and Training (FET) colleges in name to TVET colleges in order to fit in with international trends, as governments across the globe are moving towards making TVET more responsive to the labour market and produce much-needed skills.[94]

Despite their critical role in providing technical and vocational training, which is crucial for our country, TVET colleges are often viewed as 'poor people's universities'. Even so, TVET colleges make it possible for many people to further their education and change their economic status.[94] But South African TVET colleges have been beset by problems. These include many thousands of graduates waiting for years for their certificates, unqualified and incompetent lecturers, claims of corruption and lack of accountability as well as poor leadership, inadequate funding for students from the National Student Financial Aid Scheme (NSFAS) along with delays in the payment of accommodation and transport allowances, and inadequate learning facilities.[95] Government has committed to taking responsibility for resolving these issues, and has significantly increased the higher education and training budget, particularly its support for TVET colleges through the National Skills Fund.[95] Yet, TVET colleges remain overstretched. The government's aim to expand enrolments is noble, but the lack of resources needs attention, human capital (educational and administrative) must be improved, and better alignment between education- and training needs within the workplace should be prioritised.[94]

While acknowledging the challenges, TVET colleges can and should play a vital role in addressing chronic deficiencies in technical and vocational skills, as well as closing the gap of access to post-school education. They are important in the context of lingering youth unemployment and the huge number of young people not in education, employment or training (NEET).[94]

4.3.4. The National Certificate (Vocational) Primary Health

The National Certificate (Vocational), or NC(V), is a qualification registered by SAQA and funded by the DHET. The qualification was developed by the DHET to replace the 'nated'[q] programmes and rolled out in colleges in 2007 in response to the reality of South African youth not staying in the education system. The aim was to provide young people with relevant knowledge and skills for employment and further learning.[96] Learners who have completed grade nine can enrol in the programme as the NC(V) level 2 is equivalent to Grade 10, level 3 to Grade 11, and level 4 to the National Senior Certificate, also known as 'matric'.[94,97] Around 18 NC(V) programmes are presented at various TVET colleges across South Africa. These provide students with an opportunity to specialise in specific vocational areas, such as office administration, management, engineering studies, building construction, electrical infrastructure construction, tourism, hospitality, marketing, information technology, transport and logistics, primary agriculture, education and development, safety in society, finances/accounting and economics, mechatronics, process plant operations, and primary health. The NC(V) courses are typically full-time qualifications presented over three years on NQF levels 2, 3, and 4. All NC(V) programmes have three compulsory subjects: first additional language (usually English), mathematics or mathematical literacy, and life orientation. The remaining four subjects are vocation-specific (see Table 4.3. for the vocation-specific subjects for primary health).

Regarding the NC(V) Primary Health programme in particular, in 2010 the National Department of Health (NDoH) entered into discussions with the DHET and the HWSETA (Health and Welfare Sector Education and Training Authority) to develop a curriculated learning programme in health. The aim of this qualification was to provide a platform of training within the higher education sector under the DHET to produce relevantly qualified people who could work in- or study further in health care (DoH). It was agreed to place this vocational health qualification on the level of a National Certificate (Vocational). Thus, in 2011 the NC(V) Primary Health programme was developed as an Umalusi-approved full-time three-year certified qualification. The vocation-specific subjects are Community Oriented Primary Care (COPC), South African Health Systems, Public Health, and Human Body and Mind, all presented at levels 2, 3 and 4 (see Table 4.3.). The first enrolment of full-time NC(V) Primary Health students began in 2013 at 12 selected TVET Colleges across the country (with 14

q. 'Nated' refers to National Accredited Technical Education Diploma. The decision to replace the nated programmes was controversial.

colleges eventually presenting the programme). The first full-time cohort to graduate from the programme at level 4 completed the course at the end of 2015.

Table 4.3. NC(V) Primary Health Subjects L2 to L4 (see Appendix 9)

NC(V) Compulsory Subjects	NC(V) Primary Health Vocation-specific subjects
English	Community Oriented Primary Care (COPC)
Mathematics/Maths Literacy[r]	South African Health Care System
Life Orientation	Public Health
	Human Body and Mind

4.3.5. Other CHW training programmes in South Africa

As mentioned in the introduction chapter, there are currently two other CHW training programmes being presented in South Africa – the short-course training that was developed by the NDoH during 2013 and 2014, called the '10-day training' or orientation for CHWs working in WBOTs, and the QCTO occupational qualification 'Health Promotion Officer' that was introduced in 2015 on level 3 (see Appendices 1 and 2).

When referring back to Olaranian et al[43] and Table 2.1. we can place the 10-day training at the lay health worker level (a few days of job-related informal pre-service training), although the involvement in the training of the Foundation for Professional Development (FPD) as a recognised training institution makes it difficult to fit it precisely into this category, as it is not informal training, but actually a very well-structured curriculum that is presented over the ten days. Yet, it is not clear if or where it fits on the NQF. All CHWs working in WBOTs have to do the training, and as such, it is the official orientation for government-employed CHWs in South Africa. Basic skills such as community entry, how to conduct a household assessment and home visit, referral of community members to services in the community, child and maternal health, and HIV and TB, are taught over the 10 days, and CHWs are given a comprehensive manual to assist their learning.[98]

The QCTO Health Promotion Officer qualification[27] is an occupational certificate on NQF level 3 and is a year-long course, presented at QCTO-accredited health training institutions, such as private training centres or non-profit organisations (NPOs) that are registered with the Health and Welfare SETA (HWSETA). It probably fits between the level 1 and level 2 para-

r. In order to support the possibility of articulation into health sciences at university, some TVET colleges offered mathematics to students in the NC(V) Primary Health programme, while others only offered mathematical literacy.

professional category as formal pre-service training in a recognised training institution (but not a higher education institution). Not all CHWs employed in WBOTs have to do this training and it is made available to those who would like to do it. There is, however, no benefit it terms of remuneration or promotion if a government-employed CHW obtains the qualification, so the motivation for doing the qualification is mostly self-improvement. Since it is on level 3 (see Figure 4.2.), graduates cannot articulate into higher education and would need to do a level 4 qualification to be able to access higher education.

The NC(V) Primary Health is a national certificate on NQF level 4 (see Figure 4.2. and Table 4.2.), and is also formal pre-service training, but in a recognised higher education training institution (TVET colleges), falling under the DHET, fitting the level 2 para-professional category. It takes significantly longer than a year i.e. three years. It is a full-time programme, and, because it is a level 4 national certificate, graduates can move on within higher education to university qualifications.

So, even though there are these general categories of CHW training based on relevant literature, the current CHW education and training programmes in South Africa don't quite fit neatly into them. There is thus an opportunity to go deeper into these categories and the variations of them. The focus of this research was on the NC(V) Primary health programme, which makes it uniquely positioned to comment on formal, certified, curriculated and lengthy pre-service education that can feed into higher education.

4.4. INPUT (PLANS)

4.4.1. General structure of the NC(V) qualification

The DHET has put together a very sound general structure for the NC(V) programmes. This is evident in the thoroughness of the documentation that has been developed to facilitate a common approach to the presentation of all NC(V) programmes. Guidelines and templates are very well-structured and clearly set-out, giving explicit information for course implementation and assessment, and are required to be read in conjunction with the National Policy on the Conduct, Administration and Management of the Assessment of the National Certificate (Vocational), 2007.

Curriculums of the NC(V) programmes are underpinned by the objectives of the National Qualifications Framework (NQF), which are to[96]:

- *Create an integrated national framework for learning achievements.*
- *Facilitate access to and progression within education, training and career paths.*
- *Enhance the quality of education and training.*
- *Redress unfair discrimination and past imbalances and thereby accelerate employment opportunities.*
- *Contribute to the holistic development of the student by addressing:*
    - *social adjustment and responsibility;*
    - *moral accountability and ethical work orientation;*
    - *economic participation; and*
    - *nation-building.*

As stated in the previous section, NC(V) programmes have seven subjects on each level – three compulsory or 'fundamental' subjects, which are first additional language, mathematics or mathematical literacy, and life orientation (with a strong IT element)[96], along with four vocational subjects. A complete subject result for the fundamental subjects requires marks from two assessment components: i) the Internal Continuous Assessment (ICASS) and ii) the end-of-year external exam. And a complete subject result for the vocational subjects requires marks from three assessment components: i) the ICASS, ii) the Integrated Summative Assessment Task (ISAT), and iii) the external exam. The required achievement percentages for the components of the subjects are the following:

- All vocational subjects: 50%
- Life Orientation and the First Additional Languages: 40%
- Mathematics/Mathematical Literacy: 30%

There are internal and external assessment categories within the NC(V) qualification (see Table 4.4.). The external part is called the External Summative Assessment (ESASS) and is made up of the end-of-year external exam and the ISAT (for vocational subjects), which are externally set up by the DHET and thus standardised. The internal part is the ICASS and is made up of tests, practical assignments, and an internal exam (see Table 4.4), all set up by the various institutions themselves.

Table 4.4. Internal and External assessment weighting (see Appendix 9)

Category	Weighting per category	Task	Weighting per task
Internal assessment	50%	ICASS	50%
External assessment	50%	ISAT External Exam	15% 35%

The ICASS *"provides the opportunity to assess students on an ongoing basis in the normal teaching and learning environment, beyond the constraints of an examination process. It is integral in supporting the teaching and learning process. Both the student and the subject lecturer are able to evaluate student progress and determine whether remedial interventions are needed"* (see Appendix 9). The DHET places much importance on the ICASS, especially because the credibility of the programme depends on proper administration, management, conduct, recording and reporting of student performance in the tasks that constitute the ICASS component. The quality assurance (i.e. moderation, monitoring and verification) mechanisms inherent in the ICASS assessment are there to further strengthen the programme.

Table 4.5. Make-up of the ICASS and weighting (see Appendix 9)

ICASS task	Quantity of tasks	Weighting of ICASS
Tests	2	10% x 2 = 20%
Practical assignments	2	25% x 2 = 50%
Internal exam	1	30%

Initially, the practical assessments in the ICASS were to be set up by the lecturers teaching the various subjects. After finding that the standard of these assessments varied across programmes and institutions, the DHET decided to standardise the practical assessments of the vocational subjects for the ICASS as well. From 2016 these became known as 'Practical assessment tasks' or PATs, which were set up by the DHET. The practical assessments are central to the vocational nature of the NC(V) qualification as they require integration of theory and practice. The PATs from the ICASS, along with the ISATs, require students to demonstrate that they can apply theoretical knowledge to practical scenarios that simulate real-life situations, and these assessments can thus measure a graduate's readiness for employment.

The DHET has set up a general ICASS guideline for TVET colleges (see Appendix 9), which contains overarching information as well as templates for the NC(V) qualification. Templates include:

- Example of a subject assessment plan
- Example of a subject assessment schedule for students
- ICASS tasks for fundamental subjects
- ICASS tasks for vocational subjects
- Analysis grid and checklist for setting of ICASS tasks

- Example of a rubric
- Pre-assessment moderation process and checklist
- Post-assessment moderation process and checklist
- Examples of record sheets for ICASS tasks
- Examples of monitoring report templates
- Consolidated record of performance
- ICASS irregularity register

These templates are very helpful for course administrators and lecturers, and the resulting uniformity of planning, presentation, recording results and reporting across colleges is necessary for monitoring and evaluation of the various NC(V) programmes. In terms of the overall structure of the NC(V) qualification, the documentation shows that it is clear and well put-together, which facilitates consistency and adherence to relevant and appropriate standards nationally.

To further provide support and ensure consistency, the DHET compiled an ICASS and ISAT guideline for each vocational subject on all three levels for lecturers. These go into sufficient detail about the vocational subject, as well as the purpose of particular practical assessments, what learning outcomes the tasks are linked to, what equipment and resources are involved to do the tasks, what stationery is needed by the students, what infrastructure is suggested (e.g. classroom, computer lab, etc.), and the time necessary to complete the tasks. For quality control, there needs to be an internal pre-assessment moderation of the tests and internal exams (which are set up internally), and post-assessment moderation of 10% of all the assessments, including practical assessments (the PATs and ISATs), with feedback to lecturers and students. Furthermore, external moderation is undertaken by the DHET and Umalusi performs a national quality assurance by annually evaluating the quality and standard of all NC(V) assessments and their compliance to policies and guidelines.[99] This includes monitoring and evaluating the standard and administration of all summative assessments and ensuring that proper procedures were followed.

The next section goes into more detail about the NC(V) Primary Health curriculum. Harden's[100] use of 'windows' or facets of a curriculum will be used to map the NC(V) Primary Health curriculum. It is a helpful tool to recognise what is working well, and also to identify any gaps, redundancies or misalignments.[101]

4.5. PROCESS EVALUATION (ACTIONS)

4.5.1. NC(V) Primary Health curriculum overview

Harden[100] provides a useful guideline for analysing a curriculum, especially what is taught, how it is taught, when it is taught, and the measures used to determine whether the student has learnt. A curriculum is a complicated interaction of, inter alia, learning outcomes, educational strategies, course content, educational experiences, and assessment, and so he suggests using 10 windows through which to view a curriculum.[100] These windows can be arranged according to how they relate to each other in a particular programme and the representation of the windows is thus unique and dynamic. The list has been adapted slightly for the purposes of this evaluation and are the following:

- Curriculum content
- Learning outcomes
- Teaching and learning
- Learning opportunities
- Assessment
- Students
- Staff
- Learning resources
- Learning location
- Curriculum management

Figure 4.3. on the next page shows my attempt at a basic map of how I see the NC(V) Primary Health windows interact. The content of the curriculum has been placed at the centre as it was the first point of interaction with the curriculum. The interlinked interactions between students and staff around teaching, learning, and assessment within the learning environment are shown in relation to each other. Needless to say, each window will have its own sub-windows, which are not depicted here, but each window will be discussed in as much details as possible sections that follow.

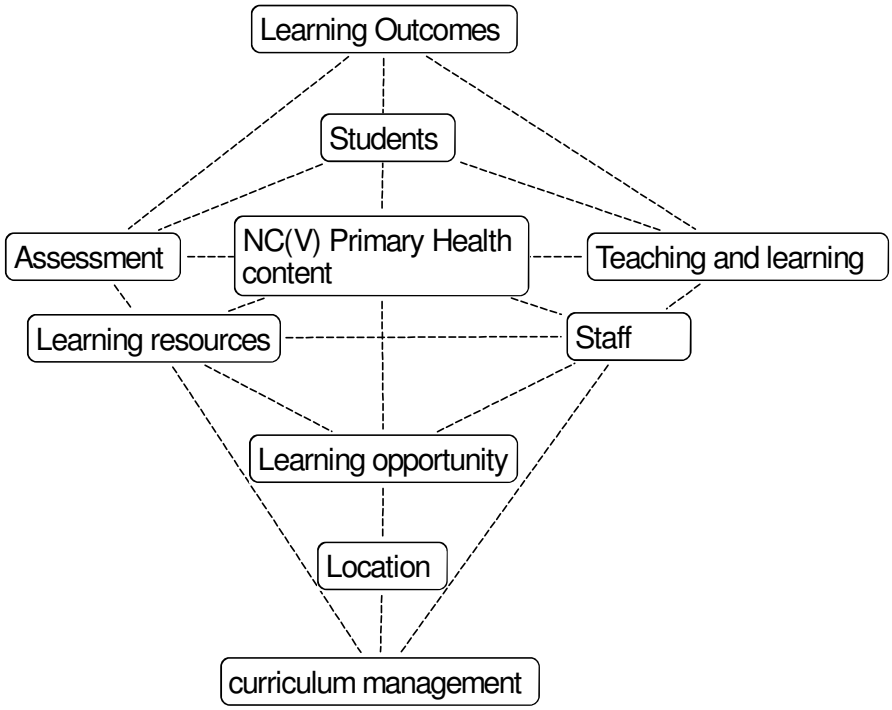


Figure 4.3. Representation of the NC(V) Primary Health curriculum

4.5.2. Curriculum content

Seven subjects are required for the NC(V) Primary Health programme (refer back to Table 4.3.). I will focus on the vocational subjects in this section, but I would like to first mention some thoughts about the fundamental subjects.

4.5.2.1. Fundamental subjects

a) First additional language

Most TVET colleges offer English as the first additional language. This provides the opportunity for students to improve their speaking and writing abilities in English, which would be advantageous. A good command of English would certainly help with verbal and written reporting, and with communication in settings where there is diversity, which is typical in South African work settings.

> "…w*hen I started [teaching] I was worried that English as a language would be a challenge. To an insignificant degree, language is an issue, but with practice the students are, over the years, eliminating that barrier...*"
> [Part-time offering lecturer]

One does ask the question, though, that if most of the work of a CHW is done in households where a vernacular language is spoken, then a student should not be disadvantaged if they struggle, for example, to convey a health promotion message adequately in English. If they are able to do it competently in the vernacular language, then this should be acknowledged. While it might be difficult to assess practically, it is still something to think about. Either way, CHWs work in households speaking their vernacular language, but interact with the health system in English (household registration forms and referral forms are in English). And so it is advantageous to improve English language abilities, while at the same time recognising the importance of communicating health education messages effectively in a language that household members will understand.

b) Life Orientation

Life orientation has a strong IT component to it, along with the life skills that are taught. Being able to successfully navigate the internet, as well as use programmes such as MSWord, Excel, PowerPoint are very valuable to students in terms of their own development, as well as for work- or study-related possibilities. Students also learn to deal with conflict, they learn problem solving skills, how to plan, and there is opportunity to develop communication skills, which are all valuable skills for working in a team.

> *"…when you go there, out there, they ask you a question and then you don't know it, sometimes you come here and you go to the ICT; it helps us to research sometimes. So, it makes it easier for us because we go there and then we research. So, if it wasn't for ICT, we won't be able to research something [sic]..."*
> [Part-time offering student]

> *"…I can help my team leader to use the laptop because my team leader, she didn't know how to use laptop. Because of me doing ICT I can able to help her with her laptop and it makes my gadget cell phone to be simpler [sic]…"*
> [Part-time offering student]

c) Mathematics

There seems to be much debate around whether students doing the NC(V) Primary Health programme need to do mathematics. Some are of the opinion that mathematical literacy is sufficient for primary health workers such as CHWs. Other TVET college managers felt that students should be given the opportunity to do mathematics, especially if they would like to continue their studies into university level. The part-time offering (through Gert Sibande College) presented mathematics. Mathematics has many benefits in growing students'

abilities in critical thinking and analysis. Also, mathematics builds skills for household- and health status data collection and interpretation.

> "…*besides having to do calculations, math[ematics] helps improve one's logical reasoning and thinking that even CHWs need [sic]…*"
> [Part-time offering mathematics lecturer]

> *"In terms of my own life…? I think now my future is bright. I can say that …because I have maths, I can apply to do something…"*
> [Part-time offering student]

In the part-time offering it was evident that the older students (mostly in their 50s) found doing mathematics challenging, while the younger students (in their 20s and 30s) seemed to manage better. Some reasons for this could be that older students have not been in a classroom environment for many years. Also, the older students would have been at school during the apartheid years, where they might not have had the opportunity to do mathematics in their schools. When it comes to debating mathematics versus mathematical literacy in CHW curriculums, we need to remember that it depends on the student. If the student can and wants to do mathematics, then that opportunity should be for there for them. It can only benefit them for their futures. If a student is struggling with mathematics, then it should not be a barrier to obtaining the qualification, and perhaps they would experience more success by doing mathematical literacy.

Based on participants' responses regarding the fundamental subjects, there certainly seems to be value in doing these subjects, especially in terms of personal growth and acquiring life skills, language skills and other important skills such as critical thinking. CHW curriculums tend to focus on health-related subject matter, but the addition of these subjects would be worthwhile to consider for CHW education.

4.5.2.2. Vocational subjects

The content of the four vocational subjects are represented in Table 4.6. and can be compared with each other. A description of the subject is given, along with why the subject is important for the learning programme, and what the critical developmental outcomes are.

Also, the table is helpful in ascertaining that the competencies mentioned in Box 1 and elaborated on in Table 4.2. are being worked towards in these subjects. The competencies are scope of knowledge; knowledge literacy; method and procedure; problem solving; ethics

and professional practice; accessing, processing and managing information; producing and communicating of information; context and systems; management of learning; and accountability.

The theoretical depth of the subjects helped students to think critically and operate on a higher level of integration. When considering the scenarios in which CHWs typically operate, it is evident that the need for well-trained CHWs is augmented. CHWs should have all of the competencies mentioned above. For example, let's consider 'problem solving': The realities and needs in any given household would be varied and complex. It is necessary for a CHW to be able to assess the scenario and problem solve within a solid reasoning process so that they can come to a reasonable solution (be it health education, referral, calling the OTL, etc).

Table 4.6. Content of vocational subjects *(bold added for emphasis) (see Appendices 8 and 9)*

	A. What is…	***B. Why is it important in the learning programme?***	***C. How do the learning outcomes link with the Critical and Developmental Outcomes?***
COPC	***What is Community Oriented Primary Care?*** *"The subject Community Oriented Primary Care, or COPC, is an approach to the **knowledge** and **practice** of **health care** and **human wellbeing**. It simultaneously brings personal and individual human health and community medicine together in **locally specific contexts**, in order to **improve health outcomes** for both individuals and the society in which they live. It is designed to develop a **health-focused set of skills** that is **interdisciplinary** and can be used across varied settings in the student's professional, civic and personal life.… It also involves **practically applying theoretically-informed concepts** in simulated or real-life contexts in preparation for active participation in health care, either as users or providers of services."* *<u>L2:</u>* *The subject involves learning about the **principles of COPC**, the **importance of individuals** and **families**, as well as the significance of the **social structure** of*	*COPC provides students with a conceptual and practical framework that will equip them:* *• to address **personal, individual** and **community health** and **disease**;* *• to work in **community based, non-governmental, state** and **private sector organisations**;* *• to enlist individuals in communities as **co-responsible collaborating partners** in health care;* *• to **integrate science** into practice to **positively influence** health care and disease management;* *• to work in **multi-disciplinary, multi-professional teams** to **solve complex problems**;* *• to approach health care and disease management as a knowledge and service continuum - from **promotion** through **prevention** to **curative** or containing **treatment, rehabilitation** and/or **palliation**.*	*By studying COPC students will be able to:* *•situate and address health care in a framework of **collaborative partnerships**;* *•identify and address problems of health and wellbeing in a way that is **locally relevant**;* *•demonstrate the ability to work effectively with others and in **teams**;* *•organise and manage their **own learning** and practice;* *•**collect, analyse** and **critically evaluate** information for the development and implementation of projects and programmes;* *•**communicate effectively** using visual, statistical and/or language skills;* *•integrate and **apply science** and **technology effectively** to investigate, develop and apply strategies for health care;* *•understand the world as a set of **interrelated systems** that are influenced by social systems (the family) and social structure (place, age, race/origin, gender and social class)*

	A. What is…	B. Why is it important in the learning programme?	C. How do the learning outcomes link with the Critical and Developmental Outcomes?
	*society on **individual** and **community health**.* *<u>L3:</u>* *Building on knowledge acquired at NC(V) Level 2, the subject focuses on the **history of COPC**, the nature and purpose of **key institutions in communities** and their **impact** on **individual** and **community health**.* *<u>L4:</u>* *With the knowledge acquired at NC(V) Level 2 and 3, the subject focuses students' attention on the **relevance of COPC** for contemporary South Africa, as well as its the **application** through a series of steps informed by the principles of the approach.*		
Public Health (PH)	***What is Public Health about?*** *"Public Health is the **science** and **art** to **promote health** and **wellness**, **to prevent** and **control disease** rather than to cure the overt disease through **organised** and **focused efforts** at **international, national, regional** and **community levels**, and **empowering individuals** to make **informed choices** on matters that impact their health and wellness.*	*Given the disease profile of South Africa and the pandemics such as tuberculosis and HIV/AIDS that need to be combated, as well as the particular challenge to empower the population to make lifestyle choices that impact their health within a resource constraint situation, 'Public Health' provides the knowledge and understanding that will enable students to be healthy and productive members of society that can care for*	*The critical and developmental outcomes are to:* *•**Identify** and **solve problems** in which responses display that responsible decisions, using **critical** and **creative thinking**, have been made.* *•**Work effectively with others** as members of a team, group, organisation and community.*

	A. What is…	B. Why is it important in the learning programme?	C. How do the learning outcomes link with the Critical and Developmental Outcomes?
	Beaglehole and Bonita (2004) define Public Health as "the collective action taken by society to protect and promote the health of entire populations; in contrast, clinical medicine deals only with the health problems of individuals. Public Health is broad and inclusive… Epidemiology, with its focus on the causes of disease at population level and the methods for their control, is the most important science contributing to public health."[1] *This subject aims to equip students with the basic knowledge of the etiology of the major diseases (infectious and non-infectious) plaguing South Africa. On completion of this subject, students should be skilled to identify causes of disease, be able to apply basic principles to prevent further infections towards controlling disease from spreading, and to report suspicious signs and symptoms, and to encourage treatment adherence to prevent drug-resistance to treatment, for example treating tuberculosis.*	*themselves, their parents, siblings, children and the community at large.*	*•**Organise** and **manage oneself** and one's activities, responsibly and effectively.* *•**Collect, analyse, organise** and **critically evaluate** information.* *•**Communicate effectively** using visual, mathematical and/or language skills in the modes of oral and/or written presentation.* *•**Use science** and **technology effectively** and critically **showing responsibility** to the **environment** and **others**.* *•**Demonstrate** an **understanding** of the **world as set of related systems** by recognising that problem-solving contexts do not exist in isolation.* *•**Reflect on** and **explore** a variety of **strategies** to learn more effectively.* *•Participate as a **responsible citizen** in the life of local, national and global communities.* *•Be **culturally** and **aesthetically sensitive** across a range of social contexts.* *•**Explore** education and career **opportunities**.*
HBM	***What is The Human Body and Mind about?***	*The human being does not function in isolation but is closely connected to the community and conditions in which he or she*	*The Human Body and Mind aims to:* *•Develop **logical thought processes** in both speaking and writing.*

	A. What is…	***B. Why is it important in the learning programme?***	***C. How do the learning outcomes link with the Critical and Developmental Outcomes?***
	"The Human Body and Mind is the study of the structure and functioning of the normal healthy body and a fundamental understanding of the human mind. The Human Body and Mind explores the way the human body and mind develop throughout the lifespan from birth to old age and death. It is also concerned with issues in the community and its people."	*exists. These all impact on his/her wellbeing. It is necessary to understand the normal functioning of body, mind and society in order to understand any illness or abnormality. Thus, The Human Body and Mind is linked to Public Health, The S.A. Health Care System and Community Oriented Primary Health Care. Health workers are essential to the country both in terms of the general health of the population and a productive economy. It is vital that lecturers have a sound understanding of the issues in order to appreciate the physical and mental problems that affect body and mind and be equipped to teach about them.*	*•Identify problems and promote **problem solving** in a community and societal context.* *• **Work effectively** with others as members of a **team**, organisation and community especially with regard to health and psychological issues.* *•Collect, organise and critically **evaluate information** within the health context.* *•**Organise** and **manage oneself** and one's activities to work effectively within the health context.* *•**Communicate effectively** with people in the community and in presenting information to the class.* *•Types and sources of information are described and explained in terms of their relevance to health.* *•**Use science** and **technology effectively** with regard to the correct use of available equipment in preparing presentations and reports.* *•Demonstrate an **understanding** of the world as a set of related structures with regard to community structures and cultural sensitivity.*

	A. What is…	B. Why is it important in the learning programme?	C. How do the learning outcomes link with the Critical and Developmental Outcomes?
SAHCS	***What is The South African Health Care System about?*** *The South African health care system is the* ***sum of all the organisations, institutions, resources, people*** *and* ***actions*** *whose primary intent is to* ***promote, restore*** *and* ***maintain health****.* *This includes efforts to influence determinants of health as well as more direct health improving activities.* *The health care system is therefore more than the pyramid of publicly owned facilities that deliver personal health services.* *It includes everyone responsible for good health, from the family in a rural village to the surgeon in an academic hospital.* *It involves all branches of government and operates within the public sector, civil society and for-profit entities.* *The South African Health Care System is one of the core vocational health fields. It aims to equip the student with knowledge and skills to work in different health modalities within the health system….* *Whilst the vocational training is grounded in the South African context, it also incorporates international imperatives.*	*The health care system of South Africa is dynamic, multifaceted and not comparable to any other health care system.* *An effective health care system evolves from an understanding of health.* *Measurable outcomes of the South African health care system are achieved when it is based on the definition that reflects current health and development issues.* *According to the South African Constitution, South African citizens have health rights which include the right of access to health care services. The legislative framework in South Africa has had a major impact on both the public and private health sectors.* *The health models and approaches which include the for-profit organizations, complementary and traditional medicine and civil society organisations are a distinct integral part of the health care system in South Africa. The South African legislative framework has placed these modalities of care to the same legal footing with other health modalities* *The education and training institutions have a responsibility to ensure that students have sufficient knowledge and skills:* *•in working with different health modalities within the health system with respect and good attitudes towards the health providers and users, and*	*<u>L2:</u>* *•The student should be able to identify and solve problems when describing the trends in the health care system.* *•The student will be able to demonstrate an understanding of the world as a set of related systems by recognising that the components of the health care system are an integral part of health and development.* *•The student should be able to demonstrate an ability to work effectively with others and in teams as a team member discussing matters related to the health care system in South Africa.* *•The student should be able to organise and manage him/her and him/her activities responsibly, using strategies/approaches to deal with her/his learning programme.* *•The student should be able to collect, analyse, organise and critically evaluate information by investigating the health care system in South Africa.* *•The student should be able to communicate effectively in presenting the current health care system.* *•The student should be able to apply science and technology effectively and critically, using the computer.* *•The student should be able to participate as a responsible citizen in the local, national and*

	A. What is…	B. Why is it important in the learning programme?	C. How do the learning outcomes link with the Critical and Developmental Outcomes?
	L3: *Building on NC(V) level 2 the subject focuses on* ***for-profit health care, traditional*** *and* ***complementary medicine,*** *and* ***civil society organisations in the South*** *African health care system.* *L4:* *Building on NC (V) level 3, the subject focuses on the* ***tertiary health care services*** *and* ***funding of health care services*** *in the South African health care system.*	*•related to the health care system which will benefit the students, families and the community.*	*global communities by identifying and learning about the trends in health care systems.* *L3:* *•The student should be able to identify and solve problems, using case studies to analyse accountability, regulation and issues of civil society and for-profit organisations as well as the traditional and complementary medicine practice.* *•The student will able to demonstrate the ability to work effectively with others and in teams, discussing emergence and contribution of NPOs and CBOs in the South African health system with classmates and groups of traditional healers.* *•The student should be able to organise and manage him/herself and his/her activities responsibly.* *•The student should be able to collect, analyse, organise and critically evaluate information by exploring complementary and traditional medicine practices in the community.* *•The student should be able to communicate effectively using visual, mathematical and/or language skills in presenting information on the current practices in traditional medicine the community.*

	A. What is…	B. Why is it important in the learning programme?	C. How do the learning outcomes link with the Critical and Developmental Outcomes?
			•The student should be able to apply science and technology effectively and critically: using internet to search and present information on the different payment mechanism for complimentary and traditional medicine within the South African and International context. *•The student should able to understand the world as a set of interrelated systems – by recognising that civil society and for-profit organisations, complementary and traditional medicine are the integral part of the South African health care system.* *<u>L4:</u>* *•The student should be able to identify and solve problems, when analysing the sources of funding for the public and private health care systems in South Africa.* *•The student should be able to demonstrate ability to work effectively with others and in teams when conducting research at the local health districts.* *•The student should be able to organise and manage him /herself and his/her activities responsibly and effectively when undertaking assigned projects.* *•The student should be able to collect, analyse, organise and critically evaluate information when investigating the disparities in financial resources across the public and private health care systems in South Africa.*

	A. What is…	*B. Why is it important in the learning programme?*	*C. How do the learning outcomes link with the Critical and Developmental Outcomes?*
			•The student should be able to communicate effectively when compiling and presenting reports. *•The student should be able to apply science and technology effectively and critically: using internet to search information on the National Health Insurance (NHI).* *•The student should be able to understand the world as a set of interrelated systems – by recognising that there is a link between the South African Constitution and funding the South African health care system.*

The vocational subjects were well developed for the most part. The levels built on each other for each subject in a logical way, and the linking between the subjects helped to facilitate a deeper understanding of the South African context and how to apply theory to reality. For example, culture and spirituality are addressed in COPC L2 and SAHCS L3, while SAHCS L3 covers traditional healers, herbalists, faith healers and alternative medicine. COPC was regarded as an optional subject at some colleges presenting the full-time programme, which was surprising, as subjects like public health and SAHCS make more sense when taught on the basis on COPC L2. Both the colleges included in this study and the part-time offering presented COPC as a compulsory subject at all three levels.

4.5.3. Learning outcomes

For each subject on each level there are explicit subject outcomes and assessment outcomes. The learning outcomes for the vocational subjects are well presented. The learning material and assessments are based on the learning outcomes, which makes preparing for teaching and learning and assessment clear and simple. COPC's learning outcomes across the three levels are represented in Table 4.7. The other subjects' learning outcomes can be accessed in Appendix 10.

Table 4.7. Learning Outcomes of COPC (see Appendix 10)

	Level 2	Level 3	Level 4
COPC	*On completion of COPC Level 2, the student should have covered the following topics:* *Topic 1: The Concept of Community Oriented Primary Care* *Topic 2: The Concept of Community as Individuals and Families in Time, Space and Place* *Topic 3: Social Stratification in the Community*	*On completion of COPC Level 3, the student should have covered the following topics:* *Topic 1: The Origins and History of Community Oriented Primary Care* *Topic 2: Organisations and Institutions in the Community*	*On completion of COPC Level 4, the student should have covered the following topics:* *Topic 1: The Relevance of Community Oriented Primary Care in Contemporary South Africa* *Topic 2: The application of Community Oriented Primary Care* *Topic 3: Planning, Monitoring and Evaluation of Community Oriented Primary Care*
	Topic 1: The concept of Community oriented Primary Care (COPC) *Subject Outcome 1.1: Explain the concept COPC* *The student should be able to:* • *Define the concept Community Oriented Primary Care* • *Identify the five principles of COPC* • *List the components of each of the five principles of COPC* • *Describe the components of the five principles of COPC.*	***Topic 1: The Origins and History of Community Oriented Primary Care (COPC)*** *Subject Outcome 1.1: Study the origins and history of COPC* *The student should be able to:* • *Describe the origins of COPC (range: South Africa circa 1940s)* • *Explain how COPC spread and developed globally (range: post WWII up take in different countries, Alma-Ata, 1980s - Cuba/USA/Spain; 1990s - South Africa, Turkey, Brazil)* • *List the key factors that influenced the adoption and implementation of COPC (range: failure to meet people's health needs, rising costs, increasing specialist/curative focus, poor collaboration within and between health services, poor professional preparation, undervalued and dissatisfied personnel)*	***Topic 1: The Relevance of Community Oriented Primary Care in Contemporary South Africa*** *Subject Outcome 1.1: Explain the relevance of COPC in contemporary South Africa* *The student should be able to:* • *List and describe the four health epidemics (range: infectious diseases especially HIV/TB; chronic non-communicable diseases especially cardiovascular, diabetes, kidney diseases and cancer; violence and trauma, especially interpersonal domestic violence and road accidents; mental illness, especially depression)* • *• Name and describe the main social and economic challenges to individual and public health (range: poverty, education, unemployment, cost and burden of disease)*

			• *Describe the main challenges of the existing health care system in SA (range: curative/specialist focus, costs, poor integration within and between sectors, inadequate service provider-user community relations, undervalued/dissatisfied service providers, public dissatisfaction, out of control illness and disease)*
	Topic 2: The concept of Community as Individuals and Families in Time, Space and Place *Subject Outcome 2.1: Study the meaning of time, place and space in society* *The student should be able to:* • *Define the concepts time, space and place* • *Explain the concepts time, space and place within society* • *Describe the role and importance of time in community oriented primary care* • *Describe the role and importance of space and place in community oriented primary care* *Subject Outcome 2.2: Outline the interrelationship between individuals, families and societies* *The student should be able to:* • *Define the concept the individual in society* • *Explain the position of individuals in society* • *Define the concept the family in society*	***Topic 2: Organisations and Institutions in the Community*** *Subject Outcome 2.1: Outline services in the community* *(range: health; welfare; safety; education; recreation; transport; telecommunication; energy; water; and sanitation)* *The student should be able to:* • *List the types of services in the community (refer to the range)* • *Explain the main purpose of each type of service.* • *Describe the ways in which each type of service is formed, owned and organised (range: public, private, not-for-profit, community)* • *Explain the way the organisation of each type of service impacts on health and well-being (refer to the range)* • *Describe the importance of each type of service to COPC (refer to the range)*	***Topic 2: Application of Community Oriented Primary Care*** *Subject Outcome 2.1: Outline the start-up and implementation processes of COPC in a community* *The student should be able to:* • *Explain how to select a physical or social community for COPC implementation* • *Describe how to identify principle institutional and organisational partners* • *Describe how to develop a shared understanding of COPC principles among stakeholders* • *Explain how to form a COPC Steering Committee* *Subject Outcome 2.2: Assess institutional and organisational resources in a community* *The student should be able to:* • *Identify key health and well-being related institutions and organisations in the local community* • *Ascertain the purpose and focus of each identified organisation or institution*

	• *Name the types of families in society (range: nuclear, extended, single parent, multi-parent, skipped generational, blended/reconstituted, child headed)* • *Draw genograms for the different family types* • *Compare family forms in a community (range: in the classroom or local community)* *<u>Subject Outcome 2.3: Analyse the role and importance of the individual and the family in communities</u>* *The student should be able to:* • *Explain the role and importance of the individual in society* • *Explain the role and importance of the family in society* • *Compare the roles and responsibilities of the individual and the family in society* • *Describe the role and importance of the individual in COPC* • *Describe the role and importance of the family in COPC* • *Compare the roles and responsibilities of the individual and the family in COPC*		• *Ascertain resources and the level of commitment to COPC of each identified organisation* • *Describe shared areas of interest, cooperation and collaboration between the organisations and* *institutions* • *Identify and describe ways of addressing organisational and institutional resource gaps* *<u>Subject Outcome 2.3: Explain and apply a community health status assessment</u>* *The student should be able to:* • *Prepare for a community health status assessment (range: create a sub-committee, agree on indicators, agree on implementation steps, agree on ethical issues)* • *Develop or adapt a survey instrument to assess the general health status of the community* • *Collect, capture and describe primary health status data in the community* • *Collect and describe secondary data on the health status of the community* • *Compile and analyse all available data on health in the community* • *Prepare and present a community health profile* *<u>Subject Outcome 2.4: Explain health care prioritization and develop an intervention strategy to address health care needs</u>* *The student should be able to:*

			• *Identify challenges and opportunities arising from the community health profile* • *Determine and prioritise health care needs from the community health profile* • *Formulate a strategic goal to address health care needs in the community* • *Develop approaches to achieve the strategic goal (range: alternate, more than one)* • *Develop an approach to implement the strategic goal (range: actions, timelines, organisational* *responsibilities and resource needs)* • *Assess the barriers to implementation* • *Select and adopt an appropriate community health intervention strategy*
	Topic 3: Social Stratification in the Community *<u>Subject Outcome 3.1: Explain age stratification and its importance in society</u>* *The student should be able to:* • *Define the concept of age* • *Name and describe the different ways in which age is socially categorised.* • *Explain the importance of age in society.* • *Indicate the importance of age in the application of COPC principles.* *<u>Subject Outcome 3.2: Explain stratification by ability and its importance in society</u>* *The student should be able to:* • *Define the concepts ability and disability*		***Topic 3: Planning, Monitoring and Evaluation of Community Oriented Primary Care*** *<u>Subject Outcome 3.1: Explain Planning, Implementation and Monitoring</u>* *The student should be able to:* • *Define the P(lan)-I(mplement)-E(valuate)-A(ction) cycle* • *Describe the key components of an action plan for an agreed health priority in the intervention strategy* • *Explain the concept of monitoring* • *Identify monitoring mechanisms in the action plan of an agreed health priority* *<u>Subject Outcome 3.2: Explain and apply Evaluation of a Community Health Plan</u>* *The student should be able to:*

	• *Name and explain the different ways that ability and disability are socially categorised.* • *Describe the importance of ability and disability in society.* • *Explain the relevance of ability and disability to the application of COPC principles.* *<u>Subject Outcome 3.3: Study race, origin and ethnic stratification and their importance in society</u>* *The student should be able to:* • *Define the concept race* • *Define the concepts origin and ethnicity* • *Compare the concepts race, origin and ethnicity and explain their importance in society* • *Describe how race, origin and ethnicity influence health in a community* • *Describe the relevance of race, origin and ethnicity to the application of COPC principles* *<u>Subject Outcome 3.4: Describe sex and gender stratification and its importance in society</u>* *The student should be able to:* • *Define the concepts sex and gender* • *Compare the concepts sex and gender and explain their importance in society* • *Describe how sex and gender influence individual health* • *Describe how sex and gender influence health in a community*		• *Define evaluation* • *Discuss the purpose and advantages of evaluating action plans or the community health intervention strategy (range: whole plan or a part of the plan)* • *Identify criteria for evaluating the action plans or community health intervention strategy* • *Describe the performance standards and the levels that must be achieved to indicate success* • *Explain ways in which evaluation of the community health evidence are collected* • *Describe the importance of credible evidence and justifiable conclusions* • *Write a monitoring and evaluation report on an action plan or the community health intervention strategy*

	• *Describe the relevance of sex and gender to the application of COPC principles* *<u>Subject Outcome 3.5: Outline stratification by social class</u>* *The student should be able to:* • *Define the concept social class* • *Name and describe the categories of social class (range: socio-economic status; upper-middle-working; rich-poor)* • *Compare the main differences between the categories of social class* • *Describe the influence of social class on individual and family health (range: life expectancy, risk of morbidity, health knowledge and agency)* • *Discuss the influence of social class on health in a community (range: mortality, dependency ratios, burden of disease, access to care and services, quality of life)* • *Describe the relevance of social class to the application of COPC principles*		

The learning outcomes of the COPC subject are clearly set out. The learning materials and assessment tasks facilitate the achievement of outcomes. For example, the level 4 COPC textbook is a practical guide to doing COPC[36] (and it has recently been updated[64]). In their practical assignment students have to identify local organisations (COPC Principle 1). The LISA (Local Institutional Support Assessment) checklist in the COPC level 4 textbook gives students the tools to accomplish the task. Also, students learn about the various epidemic conditions, and are able to apply health promotion, prevention, management and basic treatment (e.g. oral rehydration) where applicable.

4.5.4. Teaching and Learning

The DHET requires that suitable qualified lecturers present the curriculum in a supportive environment that is conducive to learning. Lecturers are encouraged to build critical reflection into learning opportunities, so that there is opportunity for students to learn about their own health and well-being, as well as being able to apply knowledge to the scenarios in which they work. These fuel the positive cycle of showing interest in- and better understanding communities and how they function. Students are then able to develop informed thinking and responsive agency, which is often seen in assertiveness and problem solving. It is also important to structure teaching and learning around the fact that it is an adult learning environment, and the students should be active participants because they bring a wealth of knowledge and experience to the classroom – we especially saw this in the part-time offering. A non-judgemental, understanding and positive environment facilitates the student to take responsibility for their education and own personal development.

4.5.5. Assessments

The general assessment structure of the NC(V) qualification has been described in section 4.3.1. This section will delve into the assessments particular to the vocational subjects of the NC(V) Primary Health programme.

Written assessments were based on the learning outcomes for each subject. Students are assessed according to five levels of competence. The level descriptions are explained in the following table.

Table 4.8. Scale of Achievement for the Vocational component (see Appendix 9)

RATING CODE	***RATING***	***MARKS %***
5	*Outstanding*	*80-100*
4	*Highly competent*	*70-79*
3	*Competent*	*50-69*
2	*Not yet competent*	*40-49*
1	*Not achieved*	*0-39*

For the part-time offering, we made use of tests and internal exams that had been set up by lecturers at GSC. However, they were usually modified to meet our own teaching (but keeping to the learning outcomes). They also usually needed to be edited and formatted. Before the practical assessments (PATs) were introduced in 2017, the practical assessments of

vocational subjects were often just open book tests with insufficient practical application. Since the introduction of the PATs that have been externally set up and moderated, there has been more opportunity to apply theoretical knowledge in practical situations. The practical assessments provide opportunity to demonstrate competencies at all levels of Miller's pyramid[102] i.e. Knows, Knows How, Shows How, and Does

See Table 4.9. for the description of the L2 ISATs for the vocational subjects. The L3 and L4 guidelines for PATs and ISATs can be seen in Appendix 9.

Table 4.9. Vocational subjects' L2 ISATs (See Appendix 10)

	Level 2
COPC	*The ISAT portfolio must contain:* *i) an information leaflet on a health problem (chosen from tobacco use, HIV/AIDS, nutrition, or infant care);* *ii) a PowerPoint Presentation about a person of similar age/gender/race-ethnicity/origin/social class as the student in his/her social context displaying the chosen health problem with an explanation of the social structural issues that underlie the chosen health problem;* *iii) a plan of action, that uses COPC principles which guides the person as primary care giver in the community; and* *iv) a poster that must demonstrate the application of the five COPC principles to help address the health problem in a way that is relevant to the person and the health challenge.* *[100]*
PH	*The ISAT consists of the following four sub-tasks:* *Sub-task 1:* *Research on other programmes offered on the campus and discussions of the ethics of observing people and how to observe people in a non-intrusive manner. Observation of 30 minutes duration of people from any place on campus, other than the cafeteria and the toilets, watching what they do related to health and wellness (coughing, sneezing, laughing etc.).* *(25)* *Sub-task 2:* *Analysis of the menu of the student cafeteria or tuck shop at the college to determine whether it caters for the lectures, support staff and students, what kind of food is sold there and the number of people who buy food there during an observation period of 30 minutes. Observation of people in the cafeteria with regard to their behaviour (coughing, sneezing, laughing etc.), and the positive or negative effect their choice of food may have on their health.* *(25)*

	Sub-task 3: *Research on the toilets of the college campus to indicate whether it is clean and if hand soap, toilet paper and hand towels or hand dryers are provided and if everything is in working order. Observation and recording of students' hand washing behaviour after they have used the toilets.* *(25)* *Sub-task 4:* *A poster of the main issues of concern in each of the three observed areas in sub- tasks 1, 2 and 3, with possible solutions for healthier lifestyles for students on campus.* *(25)*
HBM	*Instruction to students:* *You are given a case study about a 15-year old girl, Eunice Rampedi, who was injured and who is at home. Based on Eunice Rampedi's case study you will do five sub-tasks where you will:* 1. *Assist Eunice to get out of a floor bed and help her to sit in a chair.* 2. *Make use of simple diagrams of the respiratory and muscular-skeletal systems and answer questions about Eunice's body systems that are affected by her injuries.* 3. *Complete an assignment on Eunice's life stage and her psychological needs.* 4. *Conduct research on local knowledge and demonstrate your own knowledge of reproductive health.* 5. *Draw diagrams to explain the reproductive health system.* *[100]*
SAHCS	*The ISAT consist of the following three sub-tasks:* *Sub-task 1:* *Students must list the ten focus areas of public health services in South Africa by using the template provided and say for each focus area whether they think the South African government succeeds in providing public health care to South African citizens, and give reasons for their answers.* *Total for Sub-task 1: [30]*

	Sub-task 2: *2(a) Students use the questionnaire provided to investigate primary health care at a local health care facility, as experienced by people on the campus. They must interview at least ten people on the campus who do not study Primary Health. NC (V) SA Health Care System Level 2 2015 – 2017 3 Copyright reserved Please turn over* *2(b) The students must then summarise and analyse the answers given by the ten people they interviewed, and explain if they think the health care the ten people received was good or bad.* *2(c) Finally the students must draft a diagram to illustrate the various levels of health care in South Africa and indicate on which level/s the interviewees received health care.* *Total for Sub-task 2: [45]* *Sub-task 3:* *Students study and interpret a newspaper article "Healthcare provision depends on social factors" and answer questions about the content and provide possible solutions.* *Total for Sub-task 3: [25]*

As can be seen by the practical tasks, they are relevant to the tasks of a CHW and build a range of competencies that can be applied in CHW work. However, students still do not get to apply their skills in actual community settings, which remains a limitation.

4.5.6. Students

I was not able to engage with students from the full-time offering at the TVET colleges. However, one could assume that they would generally be younger students, mostly in their 20s. As they were studying full-time, they would not have worked as CHWs.

The part-time students were existing CHWs and came to the programme with varying degrees of work experience. Some students were fairly young (in their early 20s) and had recently matriculated, others were older (in their 30s) and had some post-school education (e.g. one student had a diploma in IT). There were also students who were quite a bit older (in their 40s and 50s) and had significant experience.

The challenges that came with working, studying, parenting and running a household were evident with many of the part-time students.

> *"The main obstacle that I have encountered is that some of our students are parents of their household. Parental responsibility, and spouse-household related issues at the same time as being a student has resulted to [sic] poor attendance and less attention to their academic work…"*
> [Part-time offering lecturer]

Also, for a large part of the study period, their employment at the City of Tshwane (CoT) was precarious. This caused a lot of anxiety, and CHWs were not paid for several months, exacerbating the stress. In the end, there were problems with the renewal of the CoT CHW contract and most part-time students ended up unemployed. This had a negative effect on morale and many CHW-students became despondent. Also, without any income it became difficult to attend class for those who needed to access public transport to get to the UP Mamelodi campus. Some CHW-students found other employment, which made juggling their job and attending class difficult. Thus, class attendance dwindled during the research period.

> *"…after their contract was terminated this also created a poor attendance and they were demotivated..."*
> [Part-time offering lecturer]

> *"I think we need to consider the socio-economic background of the students before we label an individual as if s/he is not academically performing in the NC(V) programme…"*

[Part-time offering lecturer]

"Some students have expressed that they come hungry to class because they do not have money to buy food… this affects participation and concentration in class..."
[Part-time offering lecturer]

4.5.7. Staff

The NC(V) Primary Health subject guidelines provide pre-requisites for the minimum qualification levels of lecturers, which include that lecturers should have a Bachelor's Degree in the social sciences, economic and management sciences (including public administration), health sciences or their equivalents. Exposure to teaching adult learners and post-graduate exposure to public health, health promotion or disease prevention would be advantageous.

a) Full-time offering
At the TVET colleges, lecturers of the vocational subjects were often professional nurses with clinical experience, as well as social workers, psychologists and lecturers with a natural sciences education background.

I saw at both college visits how dedicated the programme managers and lecturers were to the programme.

"…We developed a passion for it…"
[Full-time offering manager]

"…We put our hearts and souls into it…"
[Full-time offering programme coordinator]

They were clearly invested in the programme and proud to be part of it.

"…I am proud to be part of this course…"
[Full-time offering lecturer]

"I like that the course is challenging… "We are not teaching nonsense or kindergarten stuff [sic]…"
[Full-time offering lecturer]

"It seems to be the most difficult compared to other NCV courses…"
[Full-time offering lecturer]

There was a positive connection and relationship between lecturers and students.

"We live as a community…"
[Full-time offering lecturer]

"Lecturers tried to create a friendly environment, conducive to positive relationships..."
[Full-time offering manager]

The staff and lecturers genuinely had the students' best interests at heart. An example is how some lecturers even shared their food with students from food-insecure households.

"…students who were experiencing personal problems came to speak to lecturers..."
[Full-time offering manager]

"I shared my breakfast with students"
[Full-time offering lecturer]

b) Part-time offering

The lecturers presenting the part-time offering were appointed by the Department of Family Medicine (DFM) at the University of Pretoria (UP). Fundamental subjects were taught by qualified Maths, English and Life Orientation teachers. One of the teachers was the project leader of the part-time programme, which worked very well.

Vocational subjects were taught by various health professionals. I am a community-trained occupational therapist (OT) and have been part of this project since its inception in 2014, along with a clinical associate colleague. We both have backgrounds teaching undergraduate students at UP. Other clinical associate colleagues have also taught the vocational subjects over the years. At a point the DFM also required Family Medicine registrars to teach the vocational subjects. This worked well for registrars who were comfortable with or enjoyed teaching, but there was resistance from registrars who did not see the teaching as a priority. While nurses are also often involved in teaching CHWs, no nurses were part of the part-time offering project. This was purely

due to no nurses being in proximity to this project, and if nurses were available to teach, they would be valuable team members. Community OTs and clinical associates are certainly well-suited to teach the vocational subjects. The NC(V) Primary Health programme (both the full-time and part-time offerings) has demonstrated how well different professions can work together and teach together to the benefit of adult learners.

The interdisciplinary nature of the part-time lecturing team was a real asset to the project and an advantage to the students.

> *"Working with the different professionals … by means of discussions and ongoing feedback, brings about better learning experiences and outcomes for the community health workers, because each profession had a unique contribution towards ensuring quality training of community health workers."*
> [Part-time offering lecturer]

> *"Different people will always have something different to offer. Working in an interdisciplinary team has truly exposed me, and certainly the student[s] to different professions. The experiences that a professional brings to the table really immerses the students in the learning material. I am confident that the students are getting more than just the textbook from the lecturers."*
> [Part-time offering lecturer]

Although there was a core group of lecturers, it was, at times, difficult to find people to teach the subjects on a part-time basis. Some lecturers were only able to join the team for short periods of time, which did result in some inconsistency. Even so, the fact that there was an interdisciplinary nucleus of lecturers was key in sustaining the project.

In reflecting about the part-time offering, perhaps it would have been a good idea to have included OTLs from Mamelodi more in the presentation of the curriculum. This could have helped to build better relationships between OTLs and CHW-students, as well as facilitated a more positive perspective about the programme amongst OTLs. In future training OTLs should be more involved as fieldwork supervisors.

4.5.8. Learning opportunities

The biggest criticism of the NC(V) Primary Health programme has been that there was not enough practical and fieldwork exposure for students in real-life settings. While this was not an issue for the part-time offering, as the part-time students were already working as CHWs, but it was an issue for the full-time offering. Initially there was a work-based placement in COPC L4, but this was done away with by the DHET in 2016 in order to standardise the practical assessment tasks and to avoid issues with indemnity in community settings. The reflections from students of that placement were helpful in reinforcing the importance of fieldwork in a health training programme, though.

4.5.8.1. Practical and Workplace-based learning

During 2015, full-time level 4 students were required to do five days of workplace fieldwork as part of their practical engagement with the L4 COPC subject matter. They were required to work at a community-based health setting and reflect on what they learnt during those five days. Written reflections from one particular TVET college were accessed and analysed. Students typically went to NGOs that worked with infants, children, the elderly, people with disability, and one student even worked at a community library. While not all the students were able to write deep reflections of their experience (in English), most were able to express what they learnt during the practical placements. Themes that emerged included the value of teamwork, diversity, and consolidation with theory.

The most prevalent theme was the value of teamwork in the workplace.

> *"…working with the team improved my self confidence in such a way that I manage to talk my views [sic] and manage to stand on what I have learn [sic] in primary health…"*
> [Full-time offering student]

> *"I've learnt that teamwork is very important in order for you to achieve the goal you are working towards..."*
> [Full-time offering student]

> *"…I learn [sic] how to work as a team in order to achieve a goal. In each task we did you should put your work effort [sic] … we develop a relationship as a team."*
> [Full-time offering student]

Appreciating the value of teamwork also led to a better understanding of human diversity in thought and action. Discovering that people are diverse and think and act in different ways is a pathway to enhanced critical thinking, which remains a valuable life skill for solving problems.

> *"I learnt that people have different thoughts and they can believe in what they believe…"*
> [Full-time offering student]

> *"I learnt that working with many people is not easy, because people have different minds [sic] so I have to understand them one by one so that I will exactly know what kind of a person each is [sic]..."*
> [Full-time offering student]

Also, the theme of connection stood out. Being able to see links and connections and apply these in different scenarios is important for workplace competency. So, when consolidation of theory and practical work is recognised, it is a good sign that this process is indeed occurring.

> *"…and I also experienced that the activities that I did in that [sic] five days are linked to what I have been learning in the past two years of my studying."*
> [Full-time offering student]

While the five days of real-life work exposure was valuable, there is certainly a need for more practical engagement, especially when the course is three years long. By 2017 new practical assessment tasks were set up and implemented by the DHET so that the practical assessments could be standardised across colleges, and thus the workplace-based fieldwork was no longer required. In the part-time offering, the students were already working as CHWs, and this helped to integrate the theory and apply it in real life. CHW-students would report how they felt they were better equipped to solve problems in households because of the mix between relevant theory and real-life experience.

Academic Service Learning or longitudinal placements in community-based facilities might be useful in better preparing full-time students for the practical work required. Household visits are tricky to supervise, but full-time student placements in WBOTs or PHC teams will also be useful. NC(V) Primary Health students working with students from other disciplines is also necessary, along with better understanding of and collaboration between other health worker disciplines.

Thus, partnerships are necessary with universities, other training institutions, and community-based organisations.

4.5.9. Learning resources

a) Textbooks

Textbooks for the vocational subjects were set up according to the specific subject learning outcomes. Various experts were tasked with developing the learning material and textbooks. Some textbooks were clear and well-written, for example the COPC textbooks. Other textbooks were disjointed, incomplete and frustrating to use. The DHET had appointed reviewers to review textbooks before publication, but, in some instances, it seems that the recommendations suggested by the reviewers were not implemented and the textbooks remained inadequate.

The COPC textbooks are particularly well-written, with the L2 textbook being a valuable resource to understand COPC and the L4 textbook is a user-friendly guide to 'doing' COPC. In my opinion, both the L2 and the L4 COPC textbooks should be prescribed to health sciences students at universities.

There also needs to be a way to update textbook content to be more current. This is particularly necessary in primary health care, as there have been major developments over the past few years. For example, the textbooks were mostly published in 2014. The Public Health L2 textbook has a section about the Millennium Development Goals (MDGs). In 2015 the MDGs became the Sustainable Development Goals (SDGs), but the learning material and learning outcomes weren't changed, and students were still asked about the MDGs in the 2016 and 2017 external exams.

b) Subject guidelines

Subject guidelines have been compiled for each vocational subject at all three levels. These documents are well put together and specify the subject level focus, the assessment of the subject, the weighting of the topics of the subject, how the final mark is calculated, what is required to pass the subject and the resources required for teaching the subject. Students are provided with student versions of the subject guidelines, so that they know what is expected of them. Yet, the guidelines are lengthy and things can get muddled. For example, the COPC L3 PATs and ISAT (Appendix 11) were interlinked, and some the students got mixed up with which task goes where. There were two PATs, each with two or three sub-tasks, and the ISAT, also with three

sub-tasks. I also initially found it difficult to get my head around all the tasks and I had to read the instructions several times before I grasped them properly. When reflecting on this, I don't think the documentation can be simplified, as the detail is necessary. But perhaps there is a way of simplifying the presentation of the instructions. Documents must also be pedantically edited, as mistakes such as incorrect numbering can exacerbate confusion.

c) Other learning resources

The DHET has compiled a resource list for the NC(V) Primary Health programme (see Appendix 12). Some of the learning resources were expensive and difficult to obtain. The part-time offering was not able to provide all the equipment due to budget constraints. And, it was not viable to purchase the expensive equipment if the programme was not going to be presented over the long-term. While a torso model is helpful to learn about body systems, it is expensive and not every learning setting might be able to afford it.

Also, when assessing, we need to ask what is the purpose of the assessment and is the expensive equipment necessary for that assessment? For example, when testing a CHW's ability to teach a household member to do a breast self-examination, is the torso model really necessary? The CHW would not have a torso model with them in the household, so we should rather assess them according to how they would do it during a household visit, which would typically be a demonstration using their own body in a discreet and professional way.

Other materials that needed to be made available were flipcharts, pens, pencils, highlighters, glue, exam pads and scissors. The stationery required to do the PATs and ISATs were provided to the students in the part-time offering by UP.

d) Khuphula

GSC makes use of Khuphula for their online educational platform. The part-time lecturers from UP were given access to their subjects on Khuphula, which was a most useful resource, allowing for the sharing of material between lecturers from the two institutions. Again, an example of a partnership that made sharing across platforms possible and beneficial.

4.5.10. Learning location

a) Full-time offering

Regarding the full-time offering, I visited two TVET college campuses. Both were large and secure spaces, with several buildings housing the various college departments. On the one campus some of the buildings were so old that they had been declared a national monument. The buildings, despite being so old, were beautifully maintained. The other campus also appeared well-maintained for the most part, and an atmosphere of busy-ness stood out in the main administration building as staff and students went about their day. At both campuses, the NC(V) Primary Health departments had sufficient classrooms, offices and storage spaces. Lecture halls were large with moveable desks, so each student could sit at their own desk, but the desks could also be moved together into clusters for groupwork. There were data projectors and white boards to assist in teaching. The one campus had a room outside that was set up to simulate a one-bedroomed informal home that would typically be found in peri-urban and semi-rural communities, where students were able to roleplay interactions. At both TVET colleges I was not able to observe students in the learning environment as the college management would not allow this due to the protests that had occurred a short while before my visits.

b) Part-time offering

For the part-time offering, the University of Pretoria (UP) facilities were used at the Mamelodi campus. As the CHW-students all lived in Mamelodi, it made it easier for them to access the campus. Some were able to walk to campus, but others needed to take public transport. This proved difficult when they were no longer employed and couldn't afford to get to campus. Those students regrettably missed a lot of class work.

The UP Mamelodi campus is very well-maintained and is a pleasant space to be in. Classes were presented in lecture halls, which were unfortunately designed in old-style rows of flip-up seats. This made group interaction difficult. Working data projectors were in most lecture venues, with green chalk boards. The computer laboratory was also used often for classes, with sufficient computers for students to use. A white board and data projector were also available in the computer laboratory.

c) Campus disruptions

During 2016 and 2017 university campuses nationally were affected by #FeesMustFall protests. At the same time TVET college campuses were also experiencing student protests due to student frustrations with TVET problems, such as funding problems and allegations of corruption. As a result, campuses were closed for extended periods of time and students missed considerable class time. Regarding the part-time offering, though, classes could continue for the most part, as the Mamelodi campus is a peripheral campus and there was less political activity there than on the central campus. Also, the NC(V) Primary Health students were not registered with the university and were seen as guests at the campus.

While no campus is perfect, the three campuses I was able to observe were acceptable learning environments for the full-time and part-time students. This might not be a given in other TVET spaces, though.

4.5.11. Curriculum management

a) Part-time offering

One of the lecturers, a maths teacher by training, was the project leader of the part-time programme at the DFM during the research period. He handled the administrative and logistical tasks, and managed the team, making sure we did things according to DHET and GSC guidelines. It was most valuable that one of the lecturers was immersed in the implementation and management of the part-time programme. It required a lot of flexibility, but also commitment to the goal. At any given time, there were demands that needed to be juggled. For example, planning the internal assessment schedules for seven subjects is a complicated task. Add to that the reality that there were times when the campus was closed due to protests, or when CHWs went to court about their unfair dismissal, only for the case to be postponed, or that the practical assessments took much longer than anticipated. The assessment schedule thus had to be re-organised on several occasions, while balancing the requirement to finish the assessments by a certain date before the exams begin.

Also, with the part-time programme, there simply was not enough time to work through the curriculum in as much depth as the full-time offering. Students attended classes on Thursday and Fridays. If many students missed the classes then the work had to be repeated, even though there wasn't actually enough time to do so.

The part-time offering's project coordinator was instrumental in trying to achieve the closest fit possible between the 'declared' curriculum (what the DHET has complied), the taught curriculum (what the part-time lecturers taught) and the learned curriculum (what the part-time students learnt).[99] Reflection by lecturers and students remains a useful technique to facilitate this.

4.6. PRODUCT EVALUATION (OUTCOMES)

The outcomes of the NC(V) Primary Health programme are considered in terms of overall positive and negative outcomes. The national results in terms of pass rates will also be looked at, and the part-time offering results will be compared to these.

4.6.1. NC(V) Primary Health programme outcomes

The positive and negative aspects of the NC(V) Primary Health programme, as well as the intended and unintended outcomes were considered. Positive themes that emerged included hope, second chances, and deep commitment and dedication to the programme. Negative themes such as frustrations over the underestimation-, disregard and criticism of the programme were evident and the cancellation of the primary health programme resulted in tangible devastation to staff and students.

4.6.1.1. Positive aspects

The research interaction with the TVET colleges was mostly positive. Deep commitment and dedication to the NC(V) Primary Health programme was expressed by students, lecturers and managers.

There was a clear sense of hope at the possibility of second chances and a better future. The positive ripple effect of transformative knowledge was described, along with a feeling of pride at being able to contribute meaningfully to the community.

> *"I won't quit…never… I want to reach my goal… I want to be a better someone. Even if people may criticise and say all sort [sic] of things, I won't…"*
> [Part-time offering student]

"The student has pieces of gold in their own hands."
[Full-time offering manager]

"Their own lives and the lives of their children have improved… they are better citizens…and there is a ripple effect to family, neighbours, community members."
[Full-time offering lecturer]

Students have been able to obtain a qualification that is legitimate and has provided them with specific skills and knowledge. The qualification is an asset regarding potential work in the NGO sector and in health.

"…they have very good knowledge and understanding of primary health care, anatomy and physiology…"
[Full-time offering lecturer]

It also has provided many students with second chances, and the ability to articulate to higher education options. Many students simply did not have a matric that was good enough to get into university, but they did well enough in the NC(V) Primary Health to get into university – particularly those who did Mathematics. Some students have been accepted into other higher-level courses, such as a disability worker programme (NQF level 5), nursing degrees, social work and even the clinical associate course.

4.6.1.2. Negative aspects

The NC(V) Primary Health evaluation was overshadowed by the unfolding uncertainty around the programme. The DHET and HWSETA were apparently supportive initially of the colleges who were first to implement the NC(V) Primary Health programme. According to a college manager the impression was created that the first graduates of the programme will be absorbed into PHC teams and that they would "*absolutely have a place*". However, this did not happen, and the first NC(V) Primary Health graduates across the country struggled to have their qualification recognised and to find work. From one of the colleges, 27 students graduated in 2015. Apparently only five of them got work, mostly in private companies such as mines, doing health and safety.

Based on interviews with various people in management, the impression was created by the DoH and DHET that graduates would be absorbed into PHC teams. When the time came for graduates

to get jobs, they were left out in the cold, as such. It seemed that the National Department of Health had made no plan for their possible inclusion into any of its programmes or divisions. Understandably, frustration was rife and protest erupted. Eventually, the Ministers of Health and Education met and agreed to terminate the NC(V) Primary Health qualification at TVET Colleges at the end of 2016. This was devastating to many students and lecturers from all the TVET colleges that had presented the NC(V) Primary Health qualification.

Comments from full-time offering lecturers and programme managers about the suspension of the programme:

> *"Our hearts are broken"*
>
> *"It's had an immense psychological effect"*
>
> *"The atmosphere is not good"*
>
> *"Everything worked against us"*
>
> *"We are seen as people who are liars, because the government didn't come to the party…"*
>
> *"Check on the main objectives of this course… The country has failed everyone…These are the people next to the community. It is the biggest mistake to stop this course..."*

Part-time students' comments:

> "*[They] have killed our dreams*"
>
> *"We were hoping that this course would help improve our lives."*
>
> *"NC(V) is being cancelled because CHWs have a voice through this qualification."*

At one college, there were two lecturers who were foreign nationals from other African countries, who were highly skilled. When the programme was paused, they were the first to be let go. And, because of challenges with employment in South Africa, especially as a foreigner, it was not certain whether they would be able to find employment again. One can only imagine the stress on them and their families.

There seems to have been a lack of conversation between the DHET and NDoH. Many people were upset with the phasing out of the course, and perceived government's decision as short-sighted.

"People don't realise the value of the course. If primary health can be done, then people won't get sick"
[TVET manager]

Other negative aspects were that the part-time CHW-students expressed frustration that some CHW colleagues and managers criticise the programme and do not value what they have learnt or how they contribute.

The extended timing of the course was a concern to part-time CHW-students, especially when they heard that the programme was going to be phased out.

"I have a diploma. I have wasted my time here. We were misinformed. It seemed that we would become something with this qualification, but all of that was false hope."
[Part-time offering student]

The timing of the programme is three-years for the full-time offering, and four years for the part-time offering. So, while the programme has incredible theoretical depth, perhaps it just is too long, especially since students do not obtain a degree.

4.6.2. National results of the NC(V) Primary Health programme

The national results of the various NC(V) programmes being offered at TVET colleges across the country were obtained from the Department of Higher Education and Training (DHET). The results for 2014, 2015, 2016 and 2017 are shown in Appendix 13. The 2018 results were not available at the time of writing the thesis.

Eighteen NC(V) programmes are offered at TVET colleges across the country. These include programmes to do with agriculture, engineering, education, finances, hospitality, marketing, logistics, and tourism. The NCV(V) Primary Health programme is the only NC(V) programme dealing with health at TVET level.

In 2014, 1696 students were enrolled in the NC(V) Primary Health at level 2 and 779 students were enrolled at level 3. As it was a new course that only started in 2013, there were no learners enrolled at level 4 yet. While Primary Health did not have the least enrolments, courses such as Engineering and Office Administration had very large numbers of learners enrolled (13 316 for

Engineering L2, and 18 855 for Office Administration L2). Even so, what is very interesting is that the Primary Health programme consistently had the highest pass rate when compared to all the other programmes.

Table 4.10. National results for the NC(V) Primary Health programme

NC(V) Primary Health Pass rate	2014	2015	2016	2017
Level 2	50,4%	56,3%	63,2%	66,1%
Level 3	63,6%	60,3%	68,2%	77,9%
Level 4	n/a	56,4%	56,1%	61,0%

National pass rates for the NC(V) programmes have been worked out by dividing the number of students who passed by the number who wrote the exam. If the pass rate was determined by dividing those who passed with the number of students that enrolled at the beginning of the year, then the pass rates would be lower. For example, the 2017 pass rate for level 2 would be 39,9%, level 3 would be 65,3%, and level 4 would be 53,1% (see Table 4.11. on the next page). Even so, the pass rates for the NC(V) Primary Health programme, whether worked out according to those who wrote versus those who enrolled is still consistently higher than the average pass rate for all the NC(V) programmes.

Table 4.11. National pass rates in relation to dropout rates

	2014		2015		2016		2017	
	Pass rate (Wrote) %	Pass rate (Enrolled) %	Pass rate (Wrote) %	Pass rate (Enrolled) %	Pass rate (Wrote) %	Pass rate (Enrolled) %	Pass rate (Wrote) %	Pass rate (Enrolled) %
L2	50,4	40,8	56,3	38,3	63,2	44,1	66,1	39,9
	Students dropped out: 322 Dropout rate: 19%		Students dropped out: 692 Dropout rate: 31,9%		Students dropped out: 682 Dropout rate: 30,2%		Students dropped out: 278 Dropout rate: 39,7%	
L3	63,6	58,5	60,3	51,8	68,2	58,7	77,9	65,3
	Students dropped out: 62 Dropout rate: 8%		Students dropped out: 136 Dropout rate: 14,1%		Students dropped out: 151 Dropout rate: 13,9%		Students dropped out: 119 Dropout rate: 16,3%	
L4	n/a	n/a	56,4	53,1	56,1	52,5	61,0	53,1
	n/a		Students dropped out: 32 Dropout rate: 5,8%		Students dropped out: 37 Dropout rate: 6,4%		Students dropped out: 100 Dropout rate: 13,0%	
Total	26,5	23,3	38,2	30,2	45,1	36,4	55,6	36,4

What is also interesting to see is that the dropout rate for level 2 enrolments is high (between 19% and almost 40%), but gets less for level 3, and level 4 has the lowest dropout rate (between 5,8% and 13%). So, most students drop out early in the programme.

While there are many factors that could contribute to a good pass rate, one could make some assumptions about the course and how it has been set up and presented. It is highly likely that the Primary Health programme is a very good programme compared to other NC(V) programmes. It is presented well-enough across the country to yield the best pass rates. This is important to note in the light of the programme being cancelled. Course managers and lecturers were disappointed by the phasing out of the programme and questioned why it happened, especially since it was clear that the programme was doing well i.e. the pass rate was one of the best of all the NC(V) programmes. During interviews with TVET course leaders and managers it seemed that they were reticent to provide their assumptions as to why the course was stopped.

> *"This is the best course ever. Why close [sic] the course?"*
> [TVET Manager]

It was thus very difficult to acquire an understanding of what was really going on. When reading between the lines, however, there was a sense that the DHET did not seem to want to deal with the protests that had erupted about the course, and thus the easiest way around it for them would be to cancel the programme. Thus, good results are not the only factor in determining the success of a CHW training programme. There needs to be an understanding of and navigation through the political undercurrents and influences that ultimately influence the training.

4.6.2.1. The current situation with the part-time offering

The full-time NC(V) Primary Health course is no longer being presented at TVET colleges. The UP FMD and GSC remain committed to continue presenting the programme to the current part-time students enrolled in the programme, so that they can obtain their qualification.

The part-time offering is presented over four years, with the level 2, 3 and 4 subjects spread out over the four years. Pass rates of the part-time offering are in line with the pass rates of the full-time offering. Of the 35 CHWs in the initial 2014 intake, most dropped out early in the course, leaving 18 students at the end of the first year (48,5% dropout). Another two dropped out during the second year, leaving 16 students for year three and four. After four years of study, 16 students wrote the final exams, of which ten passed and have thus successfully completed the NC(V) Primary Health qualification (62,5% pass rate if calculating those who wrote the exam [n=16], but 55,5% if calculating the pass rate from those who were in the programme by the end of the first year [n=18]). Two of the students who passed have been accepted into the BCMP (Clinical Associate Programme) at the UP FMD to study further, although one of them has since dropped out. Another graduate is currently doing excellent work as a CHW with an NGO, embracing opportunities to engage with provincial health decision makers at several meetings. The remaining six students from cohort 1 wrote the supplementary exams early in 2018 and passed their level 4 vocational subjects, but four of them did not pass level 4 mathematics. These four students remain in the programme, hoping to pass mathematics at the end of 2019.

The second group started at the beginning of 2016 with 29 students. Of this group, nine had dropped out by the end of the first year (31% dropout rate). Sixteen students remained by the end of the second year, with 14 students still enrolled by the start of the third year in 2018. These 14 students will continue the course till the end of 2019. Unfortunately, it is unlikely that there will be funding for students to continue past 2019, and GSC will not be registering any NC(V) Primary

Health students. So, if any students do fail the year then they will not be able to obtain the NC(V) Primary Health qualification at level 4. A few CHW-students from cohort 2 are struggling to pass level 3 mathematics.

Thus, the case for mathematics is one that should be seen in a fluid way. For those CHW-students wanting to improve their matric marks or articulate to higher education, mathematics has been very valuable to them. For others, mathematics has been a stumbling block, especially for the older CHW-students who are not likely to study further. Regarding future CHW education, it is suggested that mathematics be structured as optional, and that students do mathematical literacy, but those wanting to and able to do mathematics should certainly be given that opportunity.

4.7. CONCLUSION

The NC(V) Primary Health programme is well-structured within the TVET system, despite the challenges that exist. TVET enjoys international commitment and support, and South Africa would do well to overcome these challenges to ensure that this dimension of post-school education works properly.

Much of the strength of the NC(V) Primary Health programme was due the interdisciplinary nature of the curriculum and the teaching thereof. For the most part, the curriculum was rigorously set up, the learning material was appropriate, the programme was well-presented, and it produced competent students who are able to contribute to society. Students were able to access second-chances and experience hope. Relevant and appropriate content was taught in a way that facilitated agency within students. The commitment of lecturers to the students was evident and contributed to growth. In particular, the subject COPC was foundational for competence in primary health. Thus, as far as those criteria are concerned, it has been a successful programme.

Yet, there were many frustrations in the implementation of this programme, with the main problem being the decision by the DHET to stop the programme after only four years. We also have to be honest in recognising the high dropout rate (in all the NC(V) programmes, and also in the NC(V) Primary Health programme). This research did not specifically look at the reasons for students dropping out, as this would be difficult to determine for the full-time offering nationally. But some reasons for students dropping out did surface during the research, such as financial problems, the course work being too difficult or too long (three to four years of study for a qualification that

is not recognised), language issues, difficulty managing full-time study, or part-time studying and working for the CHW-students, to name some reasons.

But despite the challenges, competent students have graduated from the programme. Students who are able to understand and apply significant theory, who are able to think critically and solve problems, and who are able to identify and respond to injustices encountered within their communities. There certainly is much to be learnt from this programme and its implementation, and it is hoped that these lessons will be recognised and reflected upon, and not simply discarded because of malaise that came with the discomfort of an unnerving time and unsettled spaces. Careful, respectful and thoughtful regard must be given to the training of CHWs, as people's lives - individuals, families, and communities – are deeply and directly affected by the training and associated vocational prospects or lack thereof.

The evaluation of the NC(V) Primary Health programme makes a necessary contribution to the on-going pursuit of better understanding post-school education in a country that is battling a crippling education crisis, along with the adversity of unemployment. The health system is also in dire straits, and so the evaluation adds to furthering our knowledge about how to properly train CHWs within health system reform.

4.8. SUMMARY

Objective 1 was about the NC(V) Primary Health programme as a whole. Stufflebeam's CIPP evaluation model was applied to structure the evaluation of the programme. Relevant documents pertaining to the NC(V) Primary Health course were reviewed, including subject guides, textbooks, manuals, and policy documents. Student assessments were analysed where available and relevant. In addition, the inputs of key stakeholders and experts, as well as the observations made, were analysed for emerging themes so that the outcomes of the programme could be discussed.

The following chapter deals with Objective 2, and uses the Capability Approach to further explore how the NC(V) Primary Health programme has contributed to the delivery of PHC, human resource development, and the personal growth and aspirations of students.

CHAPTER 5: CONTRIBUTION OF THE NC(V) PRIMARY HEALTH PROGRAMME (OBJECTIVE 2)

5.1. INTRODUCTION

This chapter considers the second objective, which consists of three aspects: i) how the NC(V) Primary Health programme contributed to the delivery of PHC to individuals and families in defined geographical areas, ii) how the programme developed human resources, and iii) how the programme developed personal learning and guided aspirations.

Community Health Workers (CHWs) are an important cadre of health worker in South Africa. However, despite general commitment by stakeholders to primary health care re-engineering (rPHC), the legitimacy, scope and position of CHWs are still not properly established. They remain differently trained and there is varying consensus regarding their registration, remuneration and career path. Key to the development of frontline workers like CHWs is adequate education and training. The Capability Approach (Sen, 1980) is useful to guide discussions around how best to train CHWs. The following sections will attempt to address Objective 2 by considering key thoughts around the capabilities of CHWs, the capabilities required for CHWs to indeed be invaluable to health and health service delivery, and how CHW education and training can be structured around these capabilities.

5.2. THE CAPABILITY APPROACH

The capability approach emanates from the work of Amartya Sen, an Indian economist and philosopher who won the Nobel Prize in Economics in 1998 for his work in welfare economics[103], which essentially challenged the mainstream ways of thinking. Sen's approach allowed for the practical application of Dewey's core message, that *"the ultimate aim of production is not production of goods, but the production of free human beings associated with one another in terms of equality"*[104]. Thus, economic models were challenged with radical notions of justice, and the influence thereof is seen today in how we report on health and well-being, in particular The Human Development Report.[103,105]

While there has been criticism of Sen's work, especially as some scholars feel his work is incomplete[105], the idea of capability has evolved over the past few years. It is precisely the so-called 'incompleteness' that has allowed the application of the approach to grow and emerge within various disciplines. Several scholars, such as Martha Nussbaum, Ingrid Robeyns, Elaine Unterhalter, Melanie Walker and others, have done further work with versions of 'capabilities approaches'[106] or capability theories[107] emerging to guide application in the fields of philosophy, social sciences and education. The capability approach has, in recent years, been increasingly regarded in higher education discourse and practice, and its application has also been considered in medical student training[108].

Sen defined a capability as "*a person's ability to do valuable acts or reach valuable states of being; [it] represents the alternative combinations of things a person is able to do or be*."[109] The capability approach basically asserts that human beings are defined by 'functionings', which are made up of 'beings' and 'doings' i.e. what you are and what you do. Furthermore, these functionings are being and doing what people value and have reason to value e.g. being nourished, literate and employed[110]. 'Capabilities' are the opportunities or potential[109] to achieve and enjoy those beings and doings.[105,110] Using the opportunities that exist for being and doing, or the ability to pursue and realise goals that are valued, is 'agency'[110]. And, the interplay of functionings, capabilities and agency, determines wellbeing. When this interplay is optimal, there is freedom.[105,110]

5.2.1. Functionings, Capabilities and Agency

To expand further, in the capability approach 'functionings' are the activities that we value as human beings. It is what we are and what we do ('beings' and 'doings'). As Wilcock states, *"People spend their lives almost constantly engaged in purposeful 'doing' even when free of obligation or necessity"*.[111] Kielhofner adds that it is *"the doing of work, play, or activities of daily living within a temporal, physical and socio-cultural context that characterizes much of the human life."*[112]. 'Doing' or 'not doing' are powerful determinants of wellbeing or disease[109] and this can be seen in the Ottawa Charter for Health Promotion (WHO, 1986) where *"Health is created and lived by people within the settings of their everyday life; where they learn, work, play and love".* Functionings thus relate to many different dimensions of life – including survival, health, work, education, relationships, empowerment, self-expression and culture.[110]

Wilcock goes further to demonstrate the synthesis of 'doing, being, and becoming', which proves helpful in understanding capability. She states, "*Doing, being and becoming affects health on an individual basis through the integrative systems of the organism, on a social level through shared activity, through the continuous growth of… technology and socio-political activity, and on a global level through development affecting the natural resources and ecosystems. Any or all of these can have negative or positive effects on health and all are inextricably linked."*[111] In other words, capabilities are the real freedoms or opportunities that a person has to achieve functionings. Robeyns uses the example of travelling, where travelling is a functioning, but the real opportunity to travel is the capability. If someone does not travel it might be because they choose not to, but it might be because they are not free to travel or are not able to travel.[105,107] Capability thus considers whether the person could travel if they wanted to. This approach certainly illuminates the Ottawa Charter further in understanding that *"... to reach a state of complete physical, mental and social well-being, an individual or group must be able to identify and to realize aspirations, to satisfy needs, and to change or cope with the environment*" (WHO, 1986).[111]

The capability approach situates people as active participants in development. Yet, agency depends on social, economic and political arrangements[109], and thus the capability approach allows deeper understanding of the complexities that exist around doing health promotion and training health workers, and particularly CHWs, for health system reform.

5.3. CONSIDERING THE CAPABILITIES OF CHWS

5.3.1 Roles and competencies of the CHW

CHWs visit households in designated areas to perform screening health assessments, so that household (HH) members can be educated according to their health needs and referred if necessary. The Department of Health's policy framework and strategy document for WBPHCOTs[62] (usually referred to as ward-based outreach teams, or WBOTs) includes the most recent scope (see Box 2):

Box 2: Most recent CHW scope of work[62]

"The full scope of work for WBPHCOTs includes maternal and child health, HIV/AIDS, TB, STIs, non-communicable diseases including diabetes, hypertension, mental health, substance abuse and prevention of injuries.

Each WBPHCOT will offer integrated health care to the households and individuals within its catchment area.

The core components of the integrated services are to:

- *Promote overall health and well-being within households and communities.*
- *Provide information, health education and promote healthy behaviour and disease preventions.*
- *Conduct structured household assessment to identify health needs.*
- *Provide appropriate direct basic services including treatment and screening for minor health problems/needs, counselling and psychosocial support for individuals or households.*
- *Facilitate appropriate referral for health, rehabilitation and social support services as needed for individuals or households.*
- *Provide adherence support for people on medication and support follow-up care, including delivery of chronic medication.*
- *Provide rehabilitative and palliative care as their scope and training allows.*
- *Facilitate community mobilisation and create awareness on health and diseases through awareness campaigns and mobilise around community needs.*

The focus of CHWs will be on health promotion, screening and disease prevention (as defined by scope of work)."

Thus, the CHW needs to be able to do home visits, complete health assessments with household members, identify needs, refer where necessary, and provide information, health education, and support.

The City of Tshwane contract stipulates core- and generic competencies that are required of CHWs to fulfil their roles. These are:

Core Competencies of CHWs

- *Conduct a comprehensive household assessment*

- *Promote health and prevent diseases*
- *Provide psychosocial support*
- *Identify and manage minor health problems*
- *Conduct community assessments and mobilise around community needs*
- *Offer basic first aid and treat minor ailments*
- *Conduct a home visit*
- *Interview community members and interpersonal communication skills*
- *Demonstrate the ability to assist community members to access services*
- *Refer complicated problems to the team leader*
- *Promote and work with other sectors and undertake collaborative community-based interventions*
- *Advocate for improved health and community services*
- *Conduct health promotion, prevention of diseases and education sessions for communities and its members*
- *Understand the principles of PHC and the interventions and services supporting it*
- *Up to date knowledge and understanding of the health system, the services offered at various facilities and the referral system*

This list seems disjointed as it does not follow a logical order and there is repetition of tasks. It attempts to expand on the roles of the CHW, but, while some points are certainly clear (e.g. "*conduct a home visit*"), other points seem somewhat general, e.g. "*Promote health and prevent diseases*", without specifying which activities are within the scope of the CHW (like educating about washing hands, or the importance of clean drinking water). This contract and the expected core competencies were problematic to CHWs working for the CoT as they felt the descriptions of some of the competencies were unclear. With a statement such as "…*mobilise around community needs*" one is inevitably left asking "what does this mean?" and "how do we do this?" It would be beneficial if contracts with CHWs could be more specific around their roles and scope, and that opportunities existed for discussion around any queries or uncertainties from the CHWs.

The contract continues by listing generic competencies for CHWs and team leaders, which are the following:

Generic Competencies

- *Communication*

- *Health promotion and education*
- *Team work*
- *Problem solving*
- *Self-management*
- *Recording*
- *Service coordination*

If these roles and competencies are expected from a CHW, then one is also led to ask what this means in terms of training. How do we train competent CHWs? And how do we make sure there are competent team leaders to lead the CHWs? The capability approach provides structure for a deeper analysis of these roles and competencies. In Table 5.1. below, the generic competencies are expanded on in terms of functionings (i.e. 'being' and 'doing'), as well as in terms of capability (i.e. what is required to achieve the being and doing?). Generally accepted components[113] that make up the competency are accessed from literature and written in italics, along with my own thoughts, based on experience, around what is required (not in italics). These are used to guide answering what is needed to achieve capability for the generic competencies in the 4th column (although these are certainly not exhaustive and can be amended).

Table 5.1. Analysis of generic competencies in relation to the capability approach

Job Description	**Generic Competencies** (What is required to do the job)	**Functionings (Being and Doing)** (Related to the generic competencies)	**Capabilities (Freedom to Be and Do** (What is required to be able to **Be** and **Do** the competencies?)
-Conduct community, household and individual health assessments and identify health needs and risks (actual and potential) and facilitate the family or an individual to seek the appropriate health service; *-Promote health of the households and the individuals within these households* *-Refer persons for further assessment and testing after performing simple basic screening* *-Provide limited, simple health interventions in a household (e.g. basic first aid, oral rehydration and any other basic intervention that she or he is trained to provide)* *-Provide psycho-social support and manage interventions such as treatment defaulter tracing and adherence support.*	Communication	**Being:** Communicator – being a good communicator **Doing:** Communicating – communicating effectively	For example:[113] *"-Communicate in a respectful tone and manner* *-Listen actively and communicate effectively with others* *-Write clearly and accurately in a variety of contexts and formats* *-Listen and ask questions to understand other people's viewpoints* *-Communicate issues in a timely manner* *-Be aware of and responsive to verbal and non-verbal communication styles* *-Recognise cultural differences in communication* *-Use effective cross-cultural communication skills"*
	Health Promotion and education	**Being:** Health Promoter – being a promoter of health **Being:** Educator – being an educator of health **Doing:** Promoting Health in communities **Doing:** Educating household- and community members about health	For example: -Have adequate knowledge of health and disease -Understand the causes of disease -Understand the importance and benefits of health -Understand the burden of disease and how it affects households -Identify household and community needs -Recognise cultural differences in perceptions of health and disease -Convey information accurately, appropriately and respectfully -Facilitate understanding and behaviour change
	Team work	**Being:** Team worker – being a valuable team member **Doing:** Team work – working as a team	For example:[113] *"-Work within the dynamics of a group* *-Show commitment to the team's purpose and goals*

			-Accept and provide feedback in a constructive and considerate way *-Share information and encourage others to do the same* *-Support and motivate the group to perform at its best* *-Recognise the role of conflict when appropriate* *-Build professional relationships* *-Show accountability to the team and follow through on your commitments* *-Work effectively with different personalities across a variety of social and professional situations* *-Consider diverse, intercultural perspectives and working styles"*
	Problem solving	**Being:** Problem solver – being a solver of problems **Doing:** Solving problems positively	For example:[113] *"-recognise the human, interpersonal and technical sides of a problem* *-access, analyse and apply knowledge and skills from various disciplines* *-think critically and strategically* *-apply knowledge and skills from past experiences to new situations* *-assess situations and identify problems* *-explore possible solutions in an innovative and creative way* *-evaluate solutions to make decisions"*
	Self-management	**Being:** self-manager – being able to manage yourself **Doing:** Personal management – managing yourself optimally	For example:[113] *"-Act with honesty, integrity and personal ethics* *-Recognise your personal efforts and the efforts of others* *-Acknowledge diverse opinions and accept differences* *-Manage your personal health and emotional well-being* *-Take responsibility and demonstrate resiliency and accountability for yourself*

			-Plan and manage your personal time, finances and other resources *-Assess, weigh and manage risk in the face of uncertainty* *-Recognise your strengths and areas for improvement* *-Adapt to new/*different *environments and cultures"*
	Recording	**Being:** Recorder – being a recorder of relevant information **Doing:** Recording information accurately	For example: -Know the value of the data being recorded -Know which data to record and why Also:[113] *"-interpret relevant information* *-demonstrate numerical* and English language *literacy* *-use gathered data to draw conclusions* *-document your sources of information* *-use appropriate technology to record and process information"*
	Service coordination	**Being:** Service coordinator – being a coordinator of services **Doing:** Coordinating services to benefit households	For example: -See the big picture and be able to "join the dots" -Know what services exist -Understand the value of those services -Be connected to the services Also:[113] *"-Have well-defined goals and outcomes* for intervention *-determine appropriate strategies* for intervention *-adapt to changing work priorities and workplace practices* -Be able *to monitor a project or task* *-establish priorities* for intervention *-carry out multiple tasks or projects at the same time"*

In setting out the competencies in terms of functionings and capabilities, there is a great deal more clarity regarding what is required of a CHW in order to execute their tasks. One also is better able to contemplate the value of the roles of the CHW. The capabilities can thus be used to guide the education and training curriculums of CHWs, as well as the teaching and learning opportunities. For example, while the 'service coordinator' competency might be seen as more of a team leader role, CHWs can (and should) be given opportunities in their education to grow in this competency, especially since they are the one's doing the referrals. In other words, do CHWs know which services exist (the COPC approach facilitates this knowledge); do they know where to refer the household member to according to the need; are they able to check whether the referral was made (here the CHW and team leader relationship is important); do they, or are they able to, follow-up with the household member as to whether the member accessed the service they were referred to; are there limits or barriers regarding what services a household (HH) can access, is the CHW able to facilitate the prioritisation of interventions with the household members?

5.3.2. Performance measurement

In the CoT contract the performance of the CHWs is measured by:

- *Number of citizens registered (at least 12 registrations per week)*
- *Number of follow up visits (At least 15 follow ups per week).*

This is where CHWs employed by the CoT had their biggest issue with the contract. According to CHW-students in a focus group, the measurement of performance was deemed unrealistic as there are many barriers to getting households registered and conducting follow-ups. Realistically, most CHWs work four days out of five in the field, as in the CoT Fridays are typically used for further work-based learning (or are meant to be). Thus, over four work days CHWs would have to do three registrations per day and around four follow ups per day. That would require a minimum of seven household visits per day. While this might initially sound doable, one needs to consider that there are very real challenges hampering this achievement. One issue is that CHWs have to work in pairs for safety reasons. This means that while visiting a household, one CHWs can record a registration or follow-up, while the other one can't. So, if six households are visited in a day, each CHW can only record three visits. A pair of CHWs would have to visit at least 14 households in a day to each be able to record seven registrations/follow-ups. This is clearly not feasible.

Another issue that the CHW-students raised is that wards vary, and thus CHWs working in different wards cannot necessarily achieve the same statistics. Some CHWs work in wards

where many residents are unemployed (e.g. an informal housing area), and thus they are able to find people at home on a work day. However, other CHWs work in wards where more residents work and they would typically not find many residents at home during working hours. Those CHWs would have to visit more households to actually register or follow up a HH, and they were apparently told that they would then need to work afterhours to register HHs in those areas. Or some CHWs work in areas where they have to walk further to reach households, while others don't need to walk as far. Again, one cannot expect the same outcome, as they would not be able to achieve the same statistics. Other barriers mentioned include the fact that CHWs have encountered scenarios where they are not welcome and the resident won't let them in. How does one account for households approached, but not registered? These differences are not being factored in when CHWs are being measured according their performance in achieving an unrealistic statistic. At the time of the study, CHWs reported that they were only measured according to their "*stats*" (i.e. the number of households registered and followed-up in a month) with no other measure or method to score the quality of their work. And the unfairness is only exacerbated when, according to some CHWs, their team leader only sends them on their way at 10:00 because "*she said she was busy*".

The reality is that just getting to a household to potentially register it is difficult enough. The measurement of the performance of CHWs must certainly be questioned. Where performance is measured in the way the CoT contract is set up, it seems to be very much based on a on a "return on investment" paradigm[114]. The worker is trained and paid, and must thus deliver. Clearly very little consideration exists regarding legitimate barriers and the capabilities required for doing the work. One wonders if those setting the performance measurement targets have ever accompanied CHWs on a typical day's work?

The CHW working within the WBOT is a human being coming from a context. When the CHW is paid very little (R2500 is not enough to sustain anyone's livelihood and it is below minimum wage), and their work demands of them to walk really far in the hot sun with shoes that are broken and they can't replace because they can't afford to, then one begins to better understand the frustrations that exist among CHWs. It is not so much whether they can or can't or don't want to do the work, it is clearly rather a question of their capability to do the work.

5.4. CHW EDUCATION AND CAPABILITY

When considering human development and capability, education is seen as instrumental, empowering and redistributive[114]. Education and its outcomes thus have value. Human

development considers the ways in which education enhances freedom – it nurtures critical reflection and has crucial links with healthy democracy, thus bringing empowerment.[114,110] Ideally, the training of CHWs should be concerned with building human capabilities (through investment in people) and with using those human capabilities optimally (through an enabling framework for growth and employment)[110]. Robeyns explains further, however, that the degree to which a person can transform a resource (like education) into a functioning is called a 'conversion factor'.[105] Conversion factors are either personal (e.g. metabolism, physical condition, intelligence), social (e.g. public policies, social norms, hierarchies, power relations, patriarchy, race), or environmental (e.g. the built environment in which a person lives/works).[105] These conversion factors can either facilitate or constrain opportunities and there needs to be conscious and deliberate understanding of the contexts in which CHWs work and live when thinking about CHW education.

Throughout the research process, CHW-students expressed aspects of their realities (conversion factors) that either facilitated or hindered their growth. Also, observations were made while teaching and assessing CHW-students, and these observations were discussed with the other part-time offering lecturers to enhance clarity and depth. This information proved valuable in better understanding the interplay between the opportunity for further education and the lived realities of the CHW-students. In other words, just providing the opportunity for obtaining a qualification is not enough. There needs to be consideration of everything that affects the accessing and maintaining of the opportunity. The challenges that affected the CHW-students included lack of funds to buy food, and thus coming to class hungry; and lack of funds for public transport, and thus not getting to class and not benefitting from the learning opportunity that occurred in class. Adult education brings with it adult responsibilities, so there were times when CHW-students could not attend class because they had a sick child who needed to be taken to the clinic, or an elderly parent who needed care. One older CHW-student had an adult daughter who had been raped and she continued to need to deal with the consequences of the assault, such as the daughter running away from home and attempting suicide.

The reality of the conversion factors can be seen especially in the assessment of CHW capabilities. Do the assessments really measure the capability of the CHW? Typically, CHWs come from a range of ages and backgrounds. Some have been CHWs or home-based carers (HBCs) with NGOs for many years. They have a wealth of experience and knowledge. Often their work is done in contexts that they are familiar with (i.e. the household), which often is similar to their own household, and they work in their vernacular language. A large portion of their knowledge is conveyed in discussion with community members. Currently, assessments

of CHWs doing formal curriculated programmes are done in written English. While there is place for certain aspects of knowledge and understanding to be tested in this way, surely there is a better way to test the ability of a CHW to engage meaningfully with household members, determine what problems exist and the context of the problems, being able to give advice and convey information in a respectful and appropriate manner, and refer accordingly?

Freire's concept of critical consciousness is key to guide those who are involved in CHW training and education. *Who* is teaching, who is *being taught*, and *how* they are being taught matter as much as *what* is being taught.[115] And it is through engagement in dialogue that critical thinking and hope can emerge.[116]

Training and assessment must be based on an understanding of the inherent value of the CHW. This value cannot be determined in a list of statistics at the end of the month that only consider how many households were registered and how many follow-ups were done. Rather, how many households were visited, what happened at the households, and what are the outcomes of the visit (e.g. accurate screening, meaningful health education, potentially life-changing referral). Figuring out how best to do this is not easy. Sen himself said it is almost always easier to observe and measure functionings than capabilities[105]. It is likely to be an iterative process and it inevitably varies from scenario to scenario. But not doing this is counterproductive and not conducive to valuing the contribution of the CHW. Using the capability approach in the training of CHWs is liberating and helps us to value who they are, what they do, and what they and the community members they work with can become.

Thus, it's not just what CHWs know, although this is important. Of course, competent CHWs are needed and they need to know what needs to be known in order to be a good CHW. But it is also about the way CHWs know. And this is really where we begin to engage at a deeper level with the biggest asset that CHWs have – embeddedness in communities. It's the way that CHWs know how people think and the way things work in their communities. A way of knowing the challenges a household may face when they don't have running water. What happens in a household where there is a disabled child that is left in a dark room? Why someone is not taking their medication? The medical professionals see a 'defaulter' – someone who fails to complete their course of medication. The person has 'failed'. But perhaps the person does not have enough food. The medication makes them nauseous. They are unemployed, so they cannot afford the transport to get to the clinic to fetch their medication. Or if they do go, they are treated badly, they have to wait in a long queue while feeling unwell, or there is no stock of their medication. So, has the person who is not taking their medication 'failed'? Or is the failure, rather, that they have been failed.

5.5. CAPABILITY IN THE NC(V) PRIMARY HEALTH PROGRAMME

5.5.1. PHC provided to individuals and families in defined geographical areas

The CHW contribution within PHC is increasingly well-recognised. In fact, some nurses have apparently felt threatened, which shows their lack of understanding of the CHW cadre.

> *"They [nurses] said 'We will not let you take the bread out of our mouths'…"*
> [TVET college manager]

> *"…the nurses would be taking up the referrals and say 'Who are these people? What do they know? How can they refer to me?'…"*
> [Consultant to the DoH]

This attitude has made it challenging for CHWs, and there have been reports of CHW referrals deliberately not being processed. There have also been accounts of relationships with team leaders souring because, according to a CHW-student, the "*team leader doesn't like it when I challenge her*". While it goes without saying that CHWs need to be respectful of their team leaders, one can also understand their frustration when a team leader is not doing what she is meant to be doing (e.g. processing a referral). If a CHW follows up on the referral, the team leader might see that as challenging her and react defensively. This means that the referral is not made and, ultimately, the household bears the negative consequences of not being referred to the necessary service.

In terms of delivering PHC, it was not possible to obtain statistics regarding the delivery of PHC services by the CHW-students versus CHWS who didn't participate in the NC(V) Primary Health programme. Information regarding any differences in the ability to provide the services is based on interactions with the CHW-students and what they said in focus groups. According to the CHW-students, they feel well-equipped to do their work. In fact, they reported that they felt more equipped to provide education in households than their colleagues who hadn't done the NC(V) Primary Health programme.

> *"You know, if people, if … the household asks questions, she will only explain like two sentences and that's it. Most of the time, I give most of the information because of this NC(V)."*
> [CHW-student]

A part-time offering graduate reported her perspective of her contribution:

"Community health workers can help bridge the gap on tuberculosis by finding clients not on treatment, promoting treatment adherence support for those on treatment and their families. CHWS can also refer clients presenting with TB symptoms to health facilities for further testing. This training has really helped me."
[CHW-student]

Another CHW-student mentioned:

"People from my place come to talk to me. They ask me for help"
[Part-time offering student]

"I learnt more things, like living a healthy life style and how to teach people on how to live a healthy lifestyle. And how to take of care of other people outside there, especially patients…[sic]"
[Part-time offering student]

There is also a case for the generalist community health worker versus the disease-specific worker. One graduate mentioned that, in her experience, a specific worker such as an HIV worker, might inadvertently cause discrimination and stigmatisation as community members will assume that there is HIV in that household. This perspective reinforces the case for the well-trained generalist worker.

Students have been able to obtain a qualification that is legitimate and has provided them with specific skills and knowledge. The qualification is an asset to work in the NGO sector and in health.

"…they have very good knowledge and understanding of primary health care, anatomy and physiology…"
[Full-time offering programme manager]

Knowing what to do and why is important in providing good services. The NC(V) Primary Health programme has facilitated a deep understanding of the CHW role and scope.

"As a community health worker, my role is to promote and prevent. Then in COPC I have learnt my role and I have learnt the principles of COPC and I have learnt the different types of families in our communities and I have learnt to work with people."
[CHW-student]

There was also a sense of being over-burdened in what is expected of the generalist CHW and CHW-students expressed a need for understanding and clarity.

> *"CHWs can't also do HBC…"*
> [CHW-student]

> *"But in our Ward… we've got a problem. Our protocol and our work ethics says we must not do home-based, we should do the registration. Now we found the patient who is bed-ridden, the Team Leader who is up there, he refer the family to us. He said we are going to do home-based and then even the massage, everything, so which is not even on our contract or on our protocols. So, the registration must wait so that you can do this… Even on the 10-days training they said, if you find someone who's bed-ridden, maybe before you can attend to them… you can wash that person. Maybe find that person messing himself, you can wash him and give him food and maybe refer him to the home-cased carers... But now, it's what they are doing, which is not in our protocol…[sic]"*
> [CHW-student]

Additionally, CHW-students felt that although they could do the work, if they didn't have a proper uniform or supplies then they might not be taken seriously by community members. They also felt that their salary was not sufficient in relation to the work they did and what was expected of them.

> *"So, we are earning the little salary, we doing all the hard work and when we enter the household you look like maybe, you are sweating, how… how can they, the patient, take you serious [sic]?"*
> [CHW-student]

5.5.2. Curriculated qualifications and human resource development

There is no doubt that an accredited, curriculated qualification creates opportunities. The NC(V) Primary Health's positioning within the NQF has been advantageous. People without a matric could enrol in the course and, in completing the qualification, achieve a level 4 vocational qualification. Some people might say it is equivalent of a matric, but that is debatable, as some aspects of the course were perceived to be better than a matric. The qualification also allowed those with a matric that wasn't good enough to enter higher education to improve their chances for a university education, especially by improving their

mathematics and English marks. Three to four years of study is a long time, but it did provide second chances for many people.

> *"If this course is discontinued, we will not be able to further our studies. We were hoping that this programme will help us further our studies."*
> [Part-time offering student]

The NC(V) Primary Health programme was also advantageous in equipping students with other skills for learning and development. Burch, Sikakana, Gunston et al[117] write about the generic pre-university skills needed for success in medical school. The reality is that university entrants have diverse educational backgrounds, and thus varying learning skills. These skills are helpful to consider, not just for medical students, but all students studying further in health. The pre-university generic learning skills[117] are:

- *Information handling skills*
- *Technical and numeracy skills*
- *Computer skills*
- *Organisational skills*
- *Managing own learning skills*
- *Presentation skills*

The NC(V) Primary Health programme covered these generic skills and students were able to develop these skills through engaging with the primary health curriculum. The fundamental subjects provided opportunities to learn and further develop information handling skills, technical and numeracy skills, and computer skills. Navigating the requirements of the whole programme facilitated opportunities for students to grow in their organisational and learning skills, as well as develop presentation skills. Despite the many challenges that come with socioenvironmental issues like poverty, much personal growth in students doing the part-time offering has been observed and the increase in their confidence has been evident.

> *"The other thing I have learned is… I have grown, like most of the subjects I didn't know and I wanted to learn them, but for me I thought that they were difficult. Then after studying them and doing everything, so now I am confident that I will do better and everything…"*
> [Part-time offering student]

NC(V) Primary Health graduates are likely to be able to navigate the challenges of higher education because of their development during the programme. Strong graduates would be good candidates to study further in social work or in the health professions such as nursing,

the clinical associate programme, or the healthcare professions such as occupational therapy, physiotherapy, nutrition, and radiography.

An important aspect to working as a CHW is being respected.

> *"Now I see myself as a respected person because of what I am doing. People in the community, they respect me now and I have learnt much to respect them…"*
> [Part-time offering student]

For many CHW-students the NC(V) Primary Health qualification provided legitimacy to the job.

> *"The community recognises the work that a policeman does and therefore takes them seriously. If the community knows that there is a qualification for CHWs then we will certainly be taken seriously."*
> [Part-time offering student]

The issue of a career pathway was pertinent among CHW-students. There is currently no clarity regarding the possibility of a career pathway, which remains a frustration to CHWs.

> *"There should be career path for CHWS. The community feels that we had nothing else to do with our lives and that is why we have chosen to become CHWs."*
> [Part-time offering student]

5.5.3. Individual learning, employment and personal aspirations

Capability describes a state of being and a way of doing.[64] In terms of learning, capability is the confident integration of knowledge and skills, based on values and a commitment to learn, and being motivated to apply one's abilities to problems in familiar as well as changing situations through active learning.[64] A good example of this was an older CHW-student in her early 50s who has been a CHW for many years (in the NGO sector). She struggled with aspects of the NC(V) Primary Health curriculum, especially mathematics, and also applying the theory from the vocational subjects in assessments. But she showed immense perseverance, as in her context it is not common for a woman in their 50s to be "at school" studying. She told how she'd often thought she should give up, because it was difficult for her and people were wondering why she's doing this. But she did not give up as she realised that the course will benefit her. Her husband has also encouraged her to continue.

The WBPHCOT policy[62] states that CHWs must have a matric, and those who don't will be phased out. While one understands the need to improve the competence of CHWs, this is

probably not a good idea. When being critically conscious of this, and considering it through the lens of capability, then whether you have a matric or not is surely not the defining factor in a good CHW. What is important is how well the CHW can do the work within the context. Also, in South Africa, the principle of recognition of prior learning is fundamental in overcoming the educational injustices of the past. Surely it remains an issue of justice precisely within the area of CHW training. There are many CHWs who do not have a matric, who have served their communities with compassion and strength, through difficult times, without payment, and they have a meaningful impact in households, yet purely because of not having a matric, they are deemed inadequate for the job? Perhaps this can be a requisite for new CHWs entering the system, but there should be recognition of prior learning and abilities for existing CHWs.

For the CHW-students there has certainly been an increase in confidence, and growth in agency was evident for adult learners.

> *"It has been challenging, especially on my side, because I have got so many years that I have not touched books and I have not read, but I have gained so much knowledge and so much education… I have learnt a lot."*
> [Part-time offering student]

Some more part-time students' comments show their growth and personal aspirations:

> *"I want to be a better someone..."*

> *"As a learner I realised that each and every year we are learning new things and that education is more power [sic]…."*

> *"I have learnt much about the community and what our community needs. That is what I have learnt about."*

> *"I have learnt and grown up as a learner because I can able to explain [sic] to community members about health and give health talk to my family and I have grown up psychologically…"*

> *"Yes, about changes in my life, I used to play in the street with boys doing drugs. Now I have changed because health begins at home. It started by myself, now I have good self-esteem. I have confidence and I know I am going somewhere."*

And the good feeling to seeing yourself changing the lifestyle… In the community, like [sic], I see as we are going to make changes to our community. So that is the great thing we are going to do."

CHW-students stated that they want to be recognised as legitimate workers, with a prospect of progressing within the cadre. And, remuneration remained an issue.

"There should be career path for CHWS."

"CHWs should be recognised … so that the community can take us seriously."

"Some jobs don't even require training and they are earning twice our salary."

The reality of the long duration of the programme was problematic to CHW-students. They were also frustrated by the uncertainty of the NC(V) Primary Health programme:

"…You cannot take somebody who has the diploma, I've wasted my other time somewhere, I come here again and after the 4 years I don't get anything. It's, to me, it's a total waste of time. That's why I said from the beginning, they were supposed to give us clarity on what's actually going on with this course…"
[CHW-student]

"It's like we know we are coming to school for ourselves. We are coming to benefit ourselves but some of us we cannot go to school for 8 years, it's too much. We've got kids… So, for four years we hope that they will recognise, they will take us as the proper community health workers…"
[CHW-student]

When considering the capability approach to learning, however, it is the very uncertainty that comes from challenges and disturbances in life that creates a learning need.[64] And this is where the NC(V) Primary Health programme provided the tools for students to grow by learning to review, think, read, and reflect. The programme content required students to engage with theory and ideas that are potentially stretching, the assignments necessitated reading and reflection, and because of this, lecturers could facilitate reflection and discussions in classes that were meaningful.

5.5. CONCLUSION

According to the research participants, the NC(V) Primary Health programme has facilitated students becoming competent in how they provide PHC services in households. CHW-students report that they are better equipped to do health promotion, education, and referrals within households than colleagues who have not done the programme. The qualification has also provided opportunities for students to progress to higher education.

The question about over-training has arisen in debates about CHW education, and the NC(V) Primary Health can indeed be viewed as over-training when considering what is currently expected of CHWs and what they are paid. However, this level 4 curriculated qualification has potentially opened doors for many precisely because it is on a level 4. The NC(V) Primary Health programme developed a type of CHW who can think critically, problem solve, and probably even lead a team. It is up to the policy makers, though, to determine how this can be possible within the structure of WBOTs. Thus, it is not so much an issue of over-training CHWs, but rather the lack of career pathways for CHWs in South Africa. This is important to consider in light of South Africa's skills development priority.

The capability approach provides a most helpful lens through which to consider the work and training of CHWs. While basing expectations of roles on competencies is valuable for the fulfilment of the CHWs scope, seeing the work and training of CHWs in terms of the capability approach helps to anticipate, prepare for and overcome the barriers that CHWs face in executing their work.

5.5. SUMMARY

Chapter 5 considered the second objective, which consisted of three aspects, namely, how the NC(V) Primary Health programme contributed to the delivery of PHC in communities, the development of human resources for PHC teams, and the realisation of aspirations of those doing the programme. The capability approach was applied to make sense of these aspects and facilitated a deeper understanding of the realities that CHWs encounter in doing their work in resource-constrained settings.

The following chapter expands on Objective 3, and explores lessons learnt in the implementation of the NC(V) Primary Health programme.

CHAPTER 6: LESSONS LEARNT FROM THE IMPLEMENTATION OF THE NC(V) PRIMARY HEALTH PROGRAMME (OBJECTIVE 3)

6.1. INTRODUCTION

The third objective investigated the lessons learnt from the implementation of the NC(V) Primary Health programme. Since the programme is no longer being offered at TVET colleges, it is of significance to learn from what worked and what didn't. This chapter considers some overarching findings of the evaluation of the NC(V) Primary Health programme and discusses insights gained from the unique partnerships that existed in the implementation of both the full-time and part-time offerings.

The design and implementation of a national qualification is in and of itself a complicated endeavour. The NC(V) Primary Health was no different, with several role players and stakeholders involved within specific contexts, with certain objectives and intentions, and varying degrees of connection. The full-time NC(V) primary health offering was initiated by the Departments of Health (DoH) and Higher Education and Training (DHET), with the support of the HWSETA and implemented by TVET colleges nation-wide. The part-time offering was possible due to novel and innovative partnerships between local government, two higher education institutions and the private sector. These partnerships inevitably bring complexity.

Using a partnership analysis tool[81], the nature of these partnerships will be presented, along with a description of how well the partnerships worked and barriers that existed. Outcomes of the partnerships will be elaborated on in conjunction with Morieux's 'smart' rules to help navigate complexity. These are six simple yet powerful rules that can be applied to improve systems. The first three are about '*enabling'* – providing the information needed to understand where the problems are and empowering the right people to make good choices. The second three involve '*impelling'* – motivating people to apply all their abilities and to cooperate.[82] The perspective of Morieux's rules could be helpful in guiding recommendations for optimising partnerships in CHW education and training.

6.2. ANALYSIS OF THE PARTNERSHIPS

The partnerships described in this chapter were analysed using a specific partnership analysis tool, set up by VicHealth (a health promotion foundation in Australia) to determine the quality

and effectiveness of multisectoral, health promotion-related partnerships. According to VicHealth[81], the tool is a resource for organisations working in partnerships to assess, monitor and maximise the effectiveness of the partnerships. The tool uses three activities[81] to analyse the partnerships:

- Activity 1: Assessing the purpose of the partnerships
- Activity 2: A map of the partnerships
- Activity 3: Completion of a checklist (see Appendix 14) that defines key features of successful partnerships for health promotion. The use of the checklist facilitates reflection on the established partnerships and focuses on strengthening the partnerships.

This tool was selected for its relevance to the given scenario, for its credibility (it has been tried and tested), as well as for it being a current tool (last updated in 2016).[81] It was applied to both the full-time and the part-time offerings and information was obtained from relevant documentation (such as policies, guidelines, and reports pertaining to the NC(V) Primary Health programme), in-depth interviews with the key informants, and focus group discussions (with full-time lecturers and part-time CHW students).

6.2.1. Description of the partnerships involved in the NC(V) Primary Health

6.2.1.1. Full-time offering

As mentioned, the NC(V) Primary Health programme was initiated in 2011 by the national DoH and developed by the DHET and HWSETA to provide a curriculated qualification within the post-school education sector that would produce relevantly qualified people who could work in health, particularly as CHWs. The first enrolment of full-time NC(V) Primary Health students began in 2013 at 12 selected TVET Colleges across the country, with 14 colleges eventually presenting the qualification. Almost 300 (see Appendix 13) of the first full-time NC(V) Primary Health students graduated at the end of 2015. By the end of 2017 around 1000 students had passed level 4 since the inception of the programme.

In the full-time offering, the newly established primary health departments at TVET colleges needed to partner with colleagues from other departments who were teaching the fundamental subjects (mathematics/mathematical literacy, English, and life orientation) across the NC(V) programmes. The primary health staff were generally made up of diverse groups of people with a variety of skills, with most lecturers coming from nursing or the social sciences. Various capacities of lecturers were noted, with some lecturers having PhDs, while others had no post-

graduate training. Several lecturers at the various colleges wrote some of the textbooks and learning material that were prescribed in the NC(V) Primary Health course. Also, the TVET colleges were differently resourced, with some having the resources they required for teaching and learning, while others struggled without even a photocopying machine.

To support the implementation of the NC(V) Primary Health programme at TVET colleges nationally, the DHET partnered with the Department of Family Medicine (DFM) at the University of Pretoria (UP) to provide support and training to TVET lecturers from all the colleges presenting the NC(V) Primary Health programme. Workshops with lecturers from around the country were held in Pretoria during 2014 and 2015, where sharing of information and teaching materials was encouraged across institutions. The workshops also provided the opportunity for TVET lecturers to engage with representatives from the DHET regarding the NC(V) Primary Health programme.

6.2.1.2. Part-time offering

In the part-time offering project, various stakeholders across sectors came together to present the NC(V) Primary Health qualification to a group of existing CHWs in the City of Tshwane (CoT) with the intention to determine whether this particular qualification could meet the learning requirements of CHWs and thus produce qualified and competent CHWs. Also, this was the first CHW qualification registered at NQF level 4, thus allowing those who obtain the qualification to articulate further into the higher education system and potentially provide opportunity for advancement and career opportunities.

In 2014 the Family Medicine department at UP, in agreement with the DHET, partnered with the Gert Sibande TVET College (GSC) in Mpumalanga to present the NC(V) Primary Health curriculum to a pilot group of CHWs employed by the CoT department of health in order to improve their training. Memorandums of agreement were signed between the three entities, with the DFM driving the partnership. GSC was one of the first TVET colleges to implement the NC(V) Primary Health qualification and they had a strong programme going. Also, there were no TVET colleges in Pretoria that offered the NC(V) Primary Health course.

The curriculum was presented on a part-time basis over four years at the UP Mamelodi Campus by UP lecturers, who were appointed by the DFM. The curriculum had been developed by the DHET and HWSETA and was made available to the UP DFM lecturers by GSC's course manager and lecturers. UP DFM lecturers were given access to GSC's online blackboard portal 'Khuphula' and were able to obtain all the necessary resources for the

particular subject they were teaching (such as subject guidelines, assessments instructions, memos, tests, and past exam papers). Funding for the project was initially provided by a private investment company, but they later withdrew and the funding was taken over by the UP DFM, with the DFM absorbing costs pertaining to lecturers' salaries and transport, and students' textbooks and stationery. While this is not sustainable over the long run, it was done so that the students could complete their qualification.

6.2.2. Purpose of the partnerships

In determining the purpose of a partnership, two key questions[81] are asked:

- Why is the partnership necessary in this particular project?
- What value is it trying to add to the project?

Health system reform is very much based on the establishment of primary health care teams (or ward-based outreach teams) made up of CHWs who deliver health promotion and disease prevention services to households.[25] It is thus necessary to train CHWs properly so that they are well-equipped to do their work. The NDoH has identified to need to train CHWs as part of primary health care re-engineering (rPHC), and the DHET and HWSETA have worked hard to develop the NC(V) Primary Health qualification to meet these learning needs.

Different structures and expertise are required when formal, curriculated education and training is envisaged, as there are processes and legislation that govern the implementation of formal training i.e. an NQF level 4 qualification can only be presented through a TVET college. For the full-time offering, the DHET had to determine which of the existing 50[99] TVET colleges were willing and able to present the NC(V) Primary Health programme. In the part-time offering the unique collaboration between two higher education institutions allowed for CHWs to be registered as students at a TVET college (GSC) and be taught an accredited curriculum by university lecturers (UP) at the university campus, with the prospects of better career opportunities or articulating to further study. In addition, this study allowed for the NC(V) Primary Health programme to be evaluated through a university ethics committee-approved (46/2016) research project.

At GSC and Northlink TVET colleges, the primary health teaching teams were mixed in terms of age, gender and race, and the lecturers mostly had nursing, social work or teaching backgrounds. In the part-time offering, the curriculum was presented by a diverse team of lecturers appointed by the UP DFM. The lecturers included those trained as Mathematics-, English- and Life Orientation teachers, clinical associates, family medicine registrars, and an

occupational therapist (OT) (myself). The teachers had teaching experience, and all the health professionals in the group had experience working in primary health care and in community engagement. The OT and the clinical associates were also lecturers at UP, and had experience in the tertiary academic environment. One of the mathematics teachers was the project coordinator.

Full-time students either needed to pay out of their pockets, or they relied on NSFAS funding to access NC(V) qualifications at TVET colleges, which remains a struggle for many. The part-time project could not have been implemented without funding to cover the CHW-students' fees and learning materials, and to pay the salaries of the lecturers who were specifically appointed to this project. The funding was initially provided by a private insurance company, but they withdrew from the project and funding was taken over by the DFM. This situation was certainly unique to the part-time offering.

Also peculiar to the part-time offering was that the CHW-students were employed by the CoT, so they needed permission and time off to participate in the programme. It would not have been possible to implement this formal training programme without agreement between the employer and the education institution.

Thus, various partners brought specific facets and much-needed resources to the implementation of the NC(V) Primary Health programme. Table 6.1. depicts the various partnerships and the functions of each role player.

Table 6.1. NC(V) Primary Health programme partnership role players and their specific roles

Partnership role players:	**Roles**
National Department of Health (NDoH)	-Initiated the development of a curriculated education programme in health.
Department of Higher Education and Training (DHET), and the Health and Welfare Sector Education and Training Authority (HWSETA)	-Funding of the NC(V) programmes presented at TVET colleges across the country. -Developed the NC(V) Primary Health curriculum. -Supported the part-time offering partnership.

Umalusi Council for Quality Assurance in General and Further Education and Training.	-Provides annual quality assurance of the NC(V) assessments nationally.
Technical, Vocational Education and Training (TVET) colleges	-Fourteen TVET colleges across the country presented the NC(V) Primary Health programme. These colleges varied in terms of resources, with some being well-resourced while others were not.
TVET college students	-Full-time NC(V) Primary Health students enrolled at the various TVET colleges. They were mostly younger students who were either trying to get a level 4 qualification instead of gr 12. Or they were students who had matriculated, but wanted to improve their marks.
Gert Sibande TVET College (GSC)	-GSC was one of the first TVET colleges to present the full-time NC(V) Primary Health programme. They had a good programme going and much experience. -Part-time CHW-students were registered at GSC (thus on GSC's administrative system). -Management at GSC provided assistance and guidance to the UP-programme manager regarding the implementation and teaching of the NC(V) Primary Health programme, and GSC lecturers provided course content to the part-time UP-lecturing team.
Department of Family Medicine (DFM) at the University of Pretoria (UP)	-Experts at the DFM contributed to the development of the NC(V) Primary Health curriculum by writing the COPC L2, L3 and L4 textbooks for the programme. -The DFM provided support and training to NC(V) Primary Health lecturers at TVET colleges nationally.

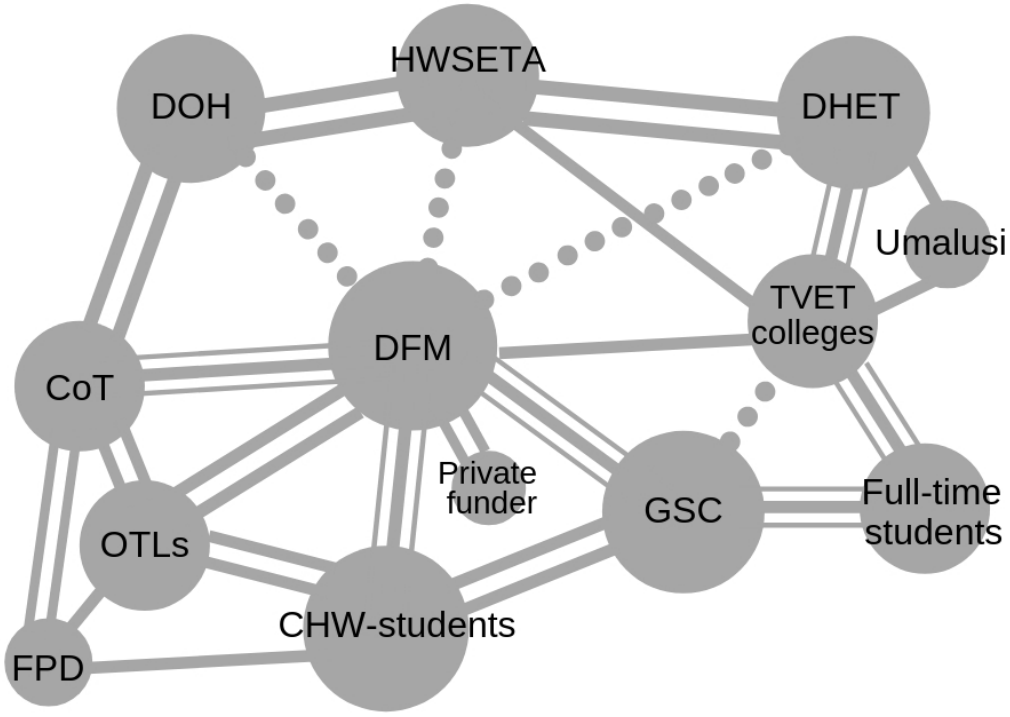
	-The DFM initiated the part-time offering partnership as part of determining how best to train CHWs. -Lecturers presenting the NC(V) Primary Health curriculum to the part-time CHW-students are appointed by the DFM and paid by UP.
City of Tshwane (CoT) DoH	-Management at CoT partnered with the UP DFM and made the opportunity available for existing CHWs employed by the CoT DoH to enrol in the programme on a part-time basis. CHWs were thus given time off work to attend classes.
CHWs working in various WBOTs in Mamelodi, City of Tshwane	-Several CHWs responded to the opportunity to enrol in the programme. Thirty-five places were available for the first intake in 2014, but many dropped out along the way. Sixteen CHW-students from the first cohort wrote L4 exams at the end of 2017. In 2016 a second cohort of 29 CHW-students enrolled, also with many dropping out. Fourteen CHW-students are continuing with L4 of the programme in 2019. CHW-students range in age from their early 20s to mid-50s, some with no working experience, some with other qualifications, and some with extensive experience as community workers.
Foundation for Professional Development (FPD)	-Partnered with the CoT to provide the '10-day training' orientation to all CHWs working in WBOTs in the CoT. The CHW-students had all been through this training, and the NC(V) Primary Health programme built on this foundation of knowledge.
Outreach team leaders (OTLs)	-WBOT team leaders needed to accommodate the CHW-students in their

	teams who were doing the NC(V) Primary Health programme part-time.
Private sector insurance company that provided initial funding	Initially provided funding for 35 places in the part-time offering, but withdrew from the project and the DFM took over the funding.

The next section shows how these role players related to each other in the development and implementation of the NC(V) Primary Health programme.

6.2.3. Mapping the partnerships

Role players were mapped in relation to each other and in terms of the nature of the relationship along a continuum, which ranges in strength from *networking,* to *coordinating*, to *cooperating,* and to *collaborating*.[81] Figure 6.1. shows my interpretation of the connections between the role players.



Legend: nature of the relationship between partners[81]

Networking:

"*Involves the exchange of information for mutual benefit*"

Coordinating:

"Involves exchanging information and altering activities for a common purpose"

Cooperating:

"*Involves exchanging information, altering activities and sharing resources"*

Collaborating:

"Includes enhancing the health promotion capacity of the other partner for mutual benefit and a common purpose"

Figure 6.1: Mapping the partnerships for the full-time and part-time NC(V) Primary Health offerings

6.2.4. Reflection on the partnerships

Partnerships were also analysed by filling in the partnership analysis checklist (see Appendix 14). The results indicated where partnerships were or were not working well. The full-time offering role players in the partnerships that were analysed were the DoH, the DHET, the HWSETA, the TVET colleges presenting the NC(V) Primary Health programme, and the full-time TVET students. As mentioned in Chapter 3, it was not possible to conduct the research with all 14 TVET colleges, nor was it possible to access the full-time students due to the tensions at some campuses during the research time period. The partnership analysis was thus based on information obtained primarily from in-depth interviews with key informants (a NDoH consultant, a TVET college manager, NC(V) Primary Health programme managers at two TVET colleges, and full-time offering lecturers) and from the focus group with full-time offering lecturers. The part-time offering partnership analysis included the DHET, the UP DFM, GSC, the CoT, the CHW-students. Information was obtained from in-depth interviews with key informants (a NDoH consultant, a TVET college manager), focus groups with CHW-students, and written reflections of part-time offering lecturers. Table 6.2. presents the reasoning for scoring in each section.

Table 6.2. Brief explanation of checklist scoring for the full-time and part-time offerings

	Full-time offering	**Part-time offering**
1. Determining the need for the partnership	-There was initial commitment to developing and implementing the NC(V) Primary Health programme by the role players. This waned over time with the NDoH eventually not supporting the programme and the DHET discontinuing the programme at TVET colleges.	-Role players were committed to this novel partnership. It continued despite the halting of the NC(V) Primary Health programme nationally, so that the existing CHW-students could finish and obtain their qualification.
2. Choosing partners	-The TVET colleges fall under the auspices of the DHET. -The DHET and NDoH typically work in silos.	-This was a novel collaboration with the intention of educating CHWs in a way that had not previously been done.

	-The NDoH seemed disconnected from the NC(V) Primary Health programme during implementation.	-There were strong connections between GSC, the UP DFM and the CHW-students. -Relations between the CHW-students and the CoT became strained over time due to issues with their contracts and working conditions.
3. Making sure partnerships work	-Over time it became evident that communication was not ideal between the main government department role players. -Good communication seemed to exist between individual full-time lecturers and students.	-Strong support for the project came from the UP DFM and GSC. -Good communication existed between the UP DFM and GSC, as well as between the UP DFM and the CHW-students.
4. Planning collaborative action	-For the most part, each role player went on with their roles independently of each other. -The hierarchical nature of the relationship between DHET and TVET colleges, or between TVET colleges and students, typically didn't allow for collaborative decision-making.	-There was intentional collaboration and communication between the main role players in order to sustain the project, especially between the UP DFM and GSC.
5. Implementing collaborative action	-The NC(V) Primary Health programme has standardised guidelines set up by the DHET for implementation, teaching, and assessment. These	-The UP DFM adhered to the NC(V) Primary Health guidelines as set up by the DHET. -The CHW-students reported that the curriculum

	seemed to have been adhered to by the TVET colleges. -The curriculum was well put-together and seemed to benefit students. -Informal reciprocity was evident between full-time lecturers and students, but not between TVET managers and the DHET.	had benefitted them in their learning and work. -Regular contact was maintained between the UP DFM project manager and the GSC course manager. -The UP DFM made a considerable resource investment into the project for it to be sustained.
6. Minimising the barriers to partnerships	-Differences among role players seemed not to be expressed or handled due to the hierarchical nature of the relationships. -Full-time lecturers and TVET management were very committed to the programme, though.	-Some differences were addressed and solutions achieved between the UP DFM and GSC, i.e. GSC accommodating UP DFM in adapting the NC(V) Primary Health programme for a part-time setting i.t.o. teaching and learning schedules, for example. -A core group of UP DFM part-time lecturers remained dedicated and committed to the project and to the CHW-students.
7. Reflecting on and continuing the partnership	-The DHET is not continuing the partnership and has discontinued the NC(V) Primary Health programme nationally. -There are thus no longer resources available for the programme. -The NC(V) programme reporting mechanisms and	-The part-time offering has made use of the same NC(V) Primary Health reporting mechanisms as the TVET colleges, as required by the DHET. -The UP DFM has committed to continue the part-time offering and is providing the resources

	Umalusi quality control have ensured documentation of outcomes, though, which contributes to the review of the programme as a whole.	needed for the CHW-students to complete the qualification. -GSC has agreed to register the CHW-students again for 2019, even though they are not registering full-time NC(V) Primary Health students any longer. -The UP DFM part-time lecturing team works well together, celebrating achievements and contributions, which makes for a positive working environment.

The partnership analysis tool checklist lists the ranges of scores[81] according to the following descriptions:

- ***35–84*** *The whole idea of a partnership should be rigorously questioned.*
- ***85–126*** *The partnership is moving in the right direction but it will need more attention if it is going to be really successful.*
- ***127–175*** *A partnership based on genuine collaboration has been established. The challenge is to maintain its impetus and build on the current success.*

The full-time offering scored 93 and the part-time offering scored 139 (see Appendix 14). While the implementation of the full-time NC(V) Primary Health programme at TVET colleges nationally started off well, it was short-lived due to the disintegration of trust between the NC(V) Primary Health students and the DHET and DoH, resulting in the programme being stopped. The partnership was ultimately not successful. The part-time offering scored better in terms of the partnerships involved, and this was likely because it was a deliberate and novel project, with committed people and the necessary support to make things work. Although the part-time offering is also finite and will finish at the end of 2019, reflecting on the partnerships can contribute positively when applying the lessons learnt to future partnerships.

6.3. RESULTS AND DISCUSSION

6.3.1. Strong partnerships

As can be seen in the depiction of relationships between partners in Figure 6.1 and also from the results of the checklist, strong collaborative connections existed between some entities, and these findings were reinforced by what was said by role players in interviews and focus groups.

- Between UP FMD and GSC: reciprocity and sharing of knowledge, expertise and resources were evident in the relationship between UP FMD and GSC in the presentation of the part-time offering. Management at GSC was most generous in sharing information and resources with the part-time offering project coordinator.

  "I just wanted to say thank you, thank you. You won't believe how much you've helped and just guided…. I mean, I could call you any time – I actually want to thank you for that. The experience I've gained is really valuable. It's really helped…"
  [NC(V) Primary Health part-time offering project coordinator to GSC management]

- Between UP FMD lecturers and the CHW-students enrolled in the NC(V) Primary Health part-time offering: Lecturers from the UP FMD and the CHW-students built a strong relationship during the four years. Lecturers were committed to seeing the students succeed in completing the qualification and supported the students wherever possible. Students appreciated, for the most part, how lecturers related to them.

  "I would like to thank the lecturers, especially … Last year, it started off rough, [but] … then he listened to us… and that really helped us a lot."
  [CHW-student]

  One or two relationships were not always positive due to cultural misunderstandings and age differences, but students generally acknowledged the beneficial and accommodating nature of the student-lecturer relationship.

  "…because at the end of the day, I'm here to learn – she is here to teach me, so we need to work together... I think that whenever people work together, there is a potential for conflict hey? And, um, and I think, to add to that dynamic of different cultures and different understandings of things, you know, I think this is a very real challenge in a diverse society."
  [CHW-student]

Lecturers also acknowledged that the learning was mutual, and they stated that they benefitted from interactions with students.

"...that the students also bring a great deal of knowledge from their experiences to the classroom."
[Part-time offering lecturer]

- Between the various UP lecturers presenting the NC(V) Primary Health course: These connections were particularly strong. Lecturers got on well and a positive team dynamic was facilitated by the project leader (a mathematics teacher by profession). Lecturers were committed to teaching the programme and were driven by their belief that the programme provided students with hope and second chances. Working in a team of various professions provided opportunity for growth and a strengths-based focus. Students benefitted from exposure to various health- and teaching professionals and their unique experiences.

  "The interdisciplinary team helps in problem solving. With the variety of backgrounds that the different disciplines bring it helps to bring different ideas in a pool to work with when problem(s) need to be solved [sic]..."
  [Part-time offering lecturer]

  "… it provides students the opportunity to learn the relevant subjects from people who are qualified and [have] experience in that field. As colleagues, we can have a process of knowledge sharing in our collaboration [sic] …"
  [Part-time offering lecturer]

- Between TVET college lecturers and full-time students at GSC and Northlink: It was evident during the site visits to both of these two colleges that lecturers had good and meaningful lecturer-student relationships with their students. They were clearly very invested in the NC(V) Primary Health programme and the futures of their students. They were equally devastated when the programme was stopped, especially about what would happen to colleagues who had lost their jobs and students who couldn't continue with the qualification.

  "We live as a community… they [the students] come to me with their personal issues… I shared my breakfast with them…"
  [Full-time offering lecturer, who had lost his job due to the discontinuation of the programme]

"Our hearts are broken"
[Full-time offering lecturer]

- Between UP FMD and CoT-employed WBOT team leaders: UP FMD was committed to supporting WBOT team leaders. Leadership from UP FMD presented on-going training to the team leaders ('master classes') so that they could better understand the concept of COPC and improve their management skills.

- Between UP FMD and the NC(V) Primary Health lecturers from TVET colleges nationally: The UP FMD presented workshops that provided training and support to TVET college lecturers. These workshops were occurred three times over 2014 and 2015. It was difficult to keep up due to the logistics of getting lecturers to Pretoria from all over the country, and also because the DHET decided to discontinue the programme in 2016.

There were also relationships that didn't work out or became strained over time. These are explained in the section that follows.

6.3.2. Not-so-strong partnerships

Regarding the NC(V) Primary Health programme as a whole there were partnerships at national level that did not work out, with serious consequences.

- Students and lecturers of TVET colleges were frustrated by the lack of communication from the DHET and the NDoH. A TVET college manager reported that the NDOH had not "*come to the party*" in terms of absorbing NC(V) Primary Health graduates into PHC teams across the country, as had been expected. Also, the DHET did not seem to have communicated properly within the health and education sector regarding the NC(V) Primary Health qualification and what it is about, so that the qualification could be recognised when NC(V) Primary Health graduates apply for work or to study further.

  "…but I think there was a communication breakdown somewhere because obviously between National and Provincial the message didn't come through...".
  [TVET college manager]

  "…some tertiary institutions are not aware of this programme, which makes it a challenge to get the necessary entry requirements for the students..."
  [Part-time offering lecturer]

When the first NC(V) Primary Health graduates from various TVET colleges across the country struggled to find work and be recognised for their qualification, frustration and violent protest erupted at campuses across the country, which eventually led to the DHET deciding to discontinue the NC(V) Primary Health qualification at TVET Colleges at the end of 2016. This was devastating to many students and lecturers from all the TVET colleges that had presented the NC(V) Primary Health qualification. Despite this, the UP FMD and GSC committed to continue presenting the programme to those CHW-students enrolled in the part-time programme, so that they can obtain their qualification.

- There were challenges with communication between the DHET and DoH and the TVET colleges' management.

  "*Okay… we also could've done more maybe to really seek partnerships from the top level, you know, go out and, but we thought really, we were under the impression that it is going to be done. The Department of Health wanted the qualification. The HWSETA was on board. We thought this thing has been done, so we can just sort of implement… I think the communication was not always up to standard…"*
  [TVET college manager]

In the part-time offering, relationships became strained over time between CoT management and CHWs, as well as between WBOT members and CHW-students.

- Weak connections occurred between CHW-students and some WBOT team leaders. While there were reports of good team leaders, some CHW-students reported during focus groups that there were problems with relationships between them and some of the team leaders (mostly retired professional nurses).

  "And the problem is that our team leaders, they don't, they don't commit to us…"
  [CHW-student]

  Some CHW-students also reported that team leaders felt threatened by the skills students were acquiring through the NC(V) Primary Health qualification, e.g. their computer skills, and, while the team leaders who weren't computer literate initially asked the CHW-students for help with computer-related management tasks, they later seemed to resent students' abilities.

"…from some of the comments from the students, it seems that their knowledge and experience from the learning is not always openly welcomed by their team leaders and their fellow colleagues at their health posts..."
[Part-time offering lecturer]

- Differences between CHW-students doing the NC(V) Primary Health training and those CHWs not doing the qualification in the CoT were perceived. The CHW-students felt like they were being treated differently, even disadvantaged because they were enrolled in the NC(V) Primary Health course. Some team leaders were reported to have questioned why anyone would want to study for four years, especially when there is no difference in salary between those who have the NC(V) Primary Health qualification and those who don't. This fuelled mistrust between CHWs and team leaders.

- Connections between CHWs and the CoT also deteriorated, as there were problems with the renewal of the CHW contracts. CHWs were unhappy with the contract, as they felt the required number of household visits were unreasonable and unachievable. The salary had also remained unchanged since 2014 and they were, understandably, not happy about that either and thus they did not want to sign it. Those who did sign the contracts were in any case not absorbed into the second phase of the WBOT rollout that occurred under the Gauteng Province DoH from June 2017. Thus, most CHW-students enrolled in the part-time NC(V) Primary Health offering were unemployed from 2017. This caused much frustration and disillusionment amongst the CHW-students, as well as difficulties in attending classes as they had no income and thus no money for transport to the Mamelodi campus. By March 2018, however, the union (SAMWU – the South African Municipal Workers Union) representing the CHWs who didn't sign the contract won a case against the CoT for unfair dismissal of the CHWs. But the wheels turn slowly, and most of the CHW-students in the NC(V) Primary Health part-time offering remain unemployed.

6.3.3. Some lessons learnt from the partnerships

The successful partnerships described in this chapter are examples of partnerships that can exist between sectors, provinces, institutions, departments, professions and between people. Each partner brought a unique contribution, and, in combination, created opportunities. Training of CHWs has historically been fragmented precisely because entities work in silos. A pragmatic way to overcome this is to consciously work in partnership. The connections between national government (the DHET), local government (CoT) and academic institutions

(GSC and UP DFM) were based on much negotiation and investment into the relationships between specific individuals from these entities who were committed to driving the project and seeing it succeed. The part-time collaboration between the University (UP) and the TVET college (GSC) was particularly novel, and this uniqueness demonstrated the possibilities that arise when there is a willingness to work together for a common goal.

Adequate CHW training is best done with an interdisciplinary team approach. The interdisciplinary teaching team members should be competent, skilled and experienced in various combinations of clinical work, teaching practice, and community engagement. Working across disciplines in CHW education is optimal and beneficial to students and lecturers.

A curriculated and accredited education programme, such as the NC(V) Primary Health, provides possibilities for further education within the NQF framework and potential job opportunities, which are most valuable in terms of a student's future. However, the reality remains that jobs are scarce, and so the qualification on its own does not guarantee reaching aspirations. Many full-time students who have completed the NC(V) Primary Health programme still remain unemployed, which is unfortunate, and largely outside of their control. CHW-student have also ended up unemployed, as their contract were terminated by the CoT. So, in the end, the NC(V) Primary Health qualification could not guarantee students a job.

Also, the numbers of students who graduated from this programme are relatively small when compared to the need. So, while the programme made a difference for these individuals, and this should not be dismissed, it is also necessary to acknowledge that a programme taking up this much time and cost is difficult to sustain. There were many logistical problems with both the full-time and part-time offerings, and a large proportion of students dropped out along the way. Based on the NC(V) national results, though, this is not uncommon for students enrolling in TVET colleges (see Appendix 13). And, funding remained a challenge in both offerings, which will likely also be a factor in any large-scale, national training programme.

We need to acknowledge that successful training of CHWs requires working partnerships, which need to be enhanced through proper structuring, monitoring and evaluation.

6.3.4. Simplicity within the complexity

Proper education and training for CHWs is not negotiable. It is essential that we get it right. Yet, it remains a complex endeavour. Complexity certainly brings challenges, and it also brings

opportunities. How we respond (or don't respond) to the complexity is often where the problem lies. That is precisely why we need to be realistic and pragmatic in how we think about and present CHW education and training.[43]

Morieux's 'smart' rules[82] help to steer through complexity. The first three are about '*enabling'* so that problems can be identified and stakeholders can make good choices. The second three rules involve '*impelling'* so that people can be motivated to cooperate.

Rule 1: Understand what your people/co-workers/team members do

This is true within the WBOTs, but also in a larger circle with regard to other health professionals, managers, and policy makers. Understanding the important contribution of CHWs in PHC is half the battle won in terms of recognising their value, and thus making sure they are properly educated and trained. A strong body evidence of meaningful CHW programmes across the globe is steadily growing, and the value of CHWs is no longer disputed.

Understanding each other's roles facilitates accurate referral. As an occupational therapist I understand well the frustration of being misunderstood and unappreciated. But I also know that when others finally understand what you do and how important your contribution is, then there is opportunity for collaboration. CHWs also need to understand what other professionals and other health service providers do, so that accurate referrals can be made. Being taught by and interacting with various health professionals is an effective way to achieve a deeper knowledge and understanding of each other's contribution in the health system. It also makes sense that the people who are teaching CHWs have an understanding of the context that CHWs typically work in, especially understanding what households looks like and the challenges that exist in local communities.

CHW-students felt unappreciated by team leaders and colleagues. They wanted to be recognised for what they were putting into the course (i.e. working and studying and the challenges that came with that), as well as for what they got out of the course i.e. that they were competent to do certain tasks (sometimes even more competent than their team leaders because of their training). Reciprocally, CHWs also need to understand the constraints and pressures that team leaders and managers sometimes have.

Rule 2: Reinforce integrators

Integrators are "*those individuals or units whose influence makes a difference on the work of others.*"[119] This is about giving CHWs, who are in essence integrators, a stronger voice,

especially as they are seen as the link between the health system and the community. The better they are trained to do the work, the better they can be integrators. CHWs who have done the NC(V) Primary Health programme are potentially a most valuable group of people, as they have been given the opportunity to integrate theory with practice and reality, and are thus able to comment accurately to policy makers and management. An example of this is an NCV(V) Primary Health part-time offering graduate who now works for an NGO was able to give valuable information to NDoH leaders during a meeting recently. She said that the combination of her training and experience gave her the confidence to speak up and raise issues pertaining to CHWs and the community. She also said that the leaders took note *and she was heard.* This example reinforces the message that CHWs need to be heard by leadership at all levels. How to achieve this remains challenging, but being deliberate in including well-trained and experienced CHWs in meetings, discussions, and forums is a step in the right direction.

Rule 3: Increase/expand the total quantity of power

Often the people with the least 'power' in an organisation shoulder most of the burden of cooperation and get the least credit.[119] This is true of CHWs, who are often frustrated by obstacles in their work, but are not able to do much about the obstacles. CHW-students in the NC(V) Primary Health part-time offering are aware of their lack of power, but they have also realised their value in the community and within the health system. Their agency has increased through gaining knowledge and insight. Acknowledging their contribution will increase their 'power', as such, and this is likely to lead to more cooperation and collaboration.

Creating a new 'powerbase'[119] for CHWs will also enhance agency. This can be done by making sure there is legitimacy to the work of the CHW by establishing a CHW registration body. Health professions bodies such as the Health Professions Council of South Africa (HPCSA) and the South African Nursing Council (SANC) seem reluctant to absorb the CHW cadre, and there is thus no regulatory body for accountability at this stage, which leaves CHWs in a 'no-man's land'. This issue can no longer be avoided and decision-makers need to find consensus in this regard.

The crafting of a career pathway for CHWs within the national health workforce is a priority that requires forward-thinking and openness to new possibilities. Surely well-trained CHWs can lead WBOT teams? A way to do this would be to ladder CHW education on the NQF levels, so that there is the possibility of for articulation into higher education, but also a pathway within the cadre.

The capability approach lens provides for 'power' to be interpreted as the freedom that occurs when there is optimal interplay between functionings, capabilities and agency, i.e. are there opportunities for CHWs to access education to grow in themselves and in their role.

Rule 4: Increase reciprocity

Individual success is dependent on the success of others. It has come up over and over in this research that it is best to work collaboratively and in partnerships. This starts with acknowledging team members' value and contribution. We all have a piece of the 'puzzle', and we need to work together to build it in the best interests of those we serve. Respect for and acknowledgment of the value of each other's contributions makes for better teamwork and enduring partnerships. This was evident among the core team of UP DFM lecturers, as acknowledging and being gracious about each other's limitations and challenges fostered a stronger bond.

A lot of focus has been on the nursing practitioner's role in CHW training. This is indeed necessary, as nurses are the obvious choice for training CHWs. But it is not just nurses who can or should train CHWs. Various health service providers, such as occupational therapists and clinical associates, are well-matched to teach CHWs. Also, social workers can make a valuable contribution to training. Interdisciplinary collaboration should be seen as non-negotiable and foundational to training CHWs in an integrated way. Acknowledgement of and respect for the legitimacy of each profession's contribution, and that of the CHWs, are essential so that we can learn from each other. Also, curriculum experts, academics and researchers should be involved in CHW education and training too. Here is an opportunity to work collaboratively and with novelty, but also building on what has gone before.

Rule 5: Extend the shadow of the future

Enable people to see how their success is aided by contributing to the success of others. This is an important message from the grassroots to get across to the powers-that-be, i.e. if CHWs are well-trained and well looked after, then the community benefits, and ultimately the whole health system benefits.

CHWs should not be underestimated. I have learnt that CHWs are amazing people who work really hard and help many people on a daily basis, in ways that no-one else can. Because they are from the communities that they serve, they have access to spaces and conversations and realities that other health service providers don't necessarily have, particularly because of language and culture or setting. Clarity regarding how to properly train CHWs for the work

they do is needed at levels where policy is generated, so that training can be well-structured and sustained over the long run.

Thus, their training must be taken seriously as ultimately people's livelihoods are at stake. Threats to the partnerships included political agendas, implementation inconsistencies, misunderstandings and financial constraints. The creation of unrealistic expectations should be diligently avoided. At the same time, hope is a powerful motivator, and where hope can be authentically instilled, then people's lives can certainly be changed for the better. Agency is empowering, but it can also threaten those in positions of power. This can be seen in the fallout between CHW-students and some of the WBOT team leaders. Partnerships do not work where there are imbalances of power.[118] A huge barrier to a working partnership is when role players feel they are not being heard. CHWs felt strongly that their team leaders do not speak for CHWs. CHWs have their own voices and should be given opportunity to use their voices in an appropriate way.

It is necessary to get input from all stakeholders when planning a CHW education programme. The voices 'on the ground;' i.e. the students, the CHWs, and the community members, are particularly valuable to guide the development and implementation of CHW education programmes.

Rule 6: Reward those who cooperate

It must be beneficial to cooperate, and there must be consequences for those who don't cooperate.[82,119] Efforts for collaboration in CHW education and training must be taken seriously. This requires humility and a willingness to share. Collaboration between training institutions is vital and indeed possible, as these alliances can facilitate overcoming logistical and operational barriers. In fact, we should incentivise sharing. As the world moves toward open sources, there really is no better time than now to share ideas, curriculums, content, experiences, insights, etc. Also, the 'uberisation' of various sectors has paved the way for innovative ways to work collaboratively, yet uniquely, on app-based platforms towards the same or similar goals – which in the context of this work remains the improved health, well-being and quality of life of people living in under-resourced and under-served communities.

And, when things don't go as planned or as promised, then people's lives can be negatively impacted. A lot of deliberation goes into determining the financial cost of reform and how much PHC teams actually cost or what will be saved. However, human costs also need to be considered. What impact does the training have on people and on communities? And what are the consequences when educational opportunities are discontinued? These are necessary

questions to ask when designing and implementing a CHW education programme. The NC(V) Primary Health programme's implementation, and then unexpected 'phasing out', has shown that a clear plan is important. It is necessary to commit to the plan, to be consistent, and not to simply discard the plan when things get difficult. As mentioned, the creation of expectations that can't be realised can affect people's lives very negatively.

6.4. CONCLUSION

It is well-accepted that collaborative efforts are both necessary and valuable when it comes to improving health systems. However, this is not always easy to achieve and sustain. So, learning from projects that aim to work in partnerships, such as the NC(V) Primary Health full-time and part-time offerings, remains useful and important.

Partnerships between higher education institutions worked well to enhance sharing of resources and information. Partnerships across professions and health disciplines fostered interprofessional learning and awareness. Deliberate partnerships across sectors are essential so that the required human, financial, structural and community resources can be optimised in the implementation of health system reform. We need to acknowledge that successful and proper training of CHWs requires precisely these novel partnerships, which should be strengthened through proper structuring, monitoring and evaluation.

The potential contribution of well-trained CHWs is important in PHC re-engineering. This cadre of worker should not be underestimated nor undervalued. The NC(V) Primary Health programme has shown that the development of people through education can bear fruit in terms of personal development and improved competencies.

There are many challenges that continue to exist in the health system. Despite the acknowledgement of 'silos' within the health sector, and between the health sector and other areas such as higher education, it is difficult to overcome these divisions and segmentations. Partnerships are certainly a concrete way to overcome these barriers, and the more effective partnerships that are established and successfully maintained, the better for the health services providers and the beneficiaries.

6.5. SUMMARY

This chapter considered the unique partnerships that existed between national government departments, higher education institutions, students, local government, CHWs, and the private sector in the part-time NC(V) Primary Health qualification. A partnership analysis tool was used to reflect on the partnerships that enabled the implementation of the full-time and part-time offerings of the NC(V) Primary Health programme, as well as on the partnerships that did not work out. Morieux's smart rules were applied to guide the reflection and help make sense of the complexity of the partnerships.

Recommendations could thus be formulated regarding the optimal training of CHWs through effective partnerships, which will be expanded on in the next chapter.

CHAPTER 7: RECOMMENDATIONS FOR CHW EDUCATION (OBJECTIVE 4) AND CONCLUSIONS

7.1. INTRODUCTION

While there is a strong historical basis for the work of community health workers (CHWs) in South Africa, we still face challenges regarding their regulation, role and scope, training, management, and remuneration. This is despite policy which clearly points health system reform in the direction of community-oriented health care. With global focus increasingly on CHWs, especially in low- and middle-income countries (LMICs), it is imperative to work towards addressing these challenges. This concluding chapter summarises the findings of the research by comparing the NC(V) Primary Health programme to recent international guidelines and South African policy, answers the research question, and elaborates on the implications of the findings, along with discussing recommendations for CHW education and training. Limitations of the research are acknowledged and suggestions are made for future work.

7.2. SUMMARY OF THE RESEARCH

The research set out to contribute to the discourse around CHW training and education by evaluating the NC(V) Primary Health qualification to determine its adequacy, appropriateness, effectiveness, and relevance. The pragmatic study used qualitative methods to evaluate the NC(V) Primary Health programme. Stufflebeam's CIPP (context, input, process, product) model was used to give structure to the evaluation, which considered the context of health system reform in South Africa, helping us to see where the NC(V) Primary Health programme fitted, how the qualification was put together, how it was implemented, and what the outcomes of the programme were. Furthermore, this specific programme was evaluated through the lens of the Capability Approach in terms of its contribution to primary health care delivered to individuals and families in communities, how human resource development within the health workforce was advanced, and how the qualification was conducive to individual learning as well as employment- and personal aspirations. The evaluation also provided the opportunity to document lessons learnt from the implementation of the NC(V) Primary Health programme nationwide and thus make recommendations regarding CHW education and training for South African ward-based primary health outreach teams.

7.2.1. Comparison of the NC(V) Primary Health programme with CHW programme guidelines and the current policy framework and strategy

The recent publication of the 'WHO guideline on health policy and system support to optimize community health worker programmes'[51] is timeous for giving direction to CHW programmes worldwide. The guideline presents recommendations to policy makers regarding CHW programmes and focuses on three overarching categories of CHW programmes, which are i) selecting, training and certifying CHWs, ii) managing and supervising CHWs, and iii) integrating into health systems and gaining community support.[52] Based on research from around the globe, there is strong evidence that CHWs are effective in dealing with pertinent health challenges[52] and the WHO recommendations guides how CHWs are trained, managed, and supported so that they can be even more effective in their roles. The WHO guideline is thus very useful for building on policy and strategy regarding CHW training for WBOTs in South Africa. The guideline's recommendations are shown in Table 7.1. below, and the findings from the evaluation of the NC(V) Primary Health programme (both the full-time and part-time offerings) are compared to these recommendations.

The NC(V) Primary Health programme is about the training and certification of CHWs, but throughout the research process other issues were raised by the research participants. These are also included in the table below, as they had to do with the management and supervision of CHWs and their integration into the health system. So, although these aspects don't necessarily pertain directly to the NC(V) Primary Health programme, they do give comment about the current context and functioning of ward-based outreach teams (WBOTs), and CHW education cannot be seen in isolation of these. It is thus helpful to also place the most recent national Department of Health's (NDoH) 'Policy framework and strategy for ward based primary healthcare outreach teams 2018/19–2023/24'[62] alongside the WHO recommendations and the research findings in Table 7.1.

The policy framework and strategy document gives structure to the formalising of WBOTs as part of achieving health and well-being for the population through a strengthened health system.[25] The goals of the policy framework and strategy are to i) improve working conditions of WBPHCOTs; ii) improve human resource recruitment, selection, placement, development and management regarding WBPHCOTs, iii) standardise the WBPHCOT scope of work and ensure standardised application in all nine provinces of South Africa, and iv) improve and maintain the monitoring and evaluation system for the WBPHCOT programme (see Appendix 3).[62] In Table 7.1. these goals are matched with the overarching categories of the WHO

guideline and their objectives are aligned with the relating WHO recommendations, and with research findings presented accordingly.

Table 7.1. The NC(V) Primary Health programme in relation to the WHO recommendations and the NDoH policy framework and strategy for WBPHCOTs

WHO Recommendations[51]		***Policy framework and strategy for WBPHCOTs 2018/19-2023/24[62]***	**The NC(V) Primary Health programme in relation to the WHO recommendations and the WBPHCOT policy framework and strategy**	
Selecting, training and certifying CHWs		***<u>Goal 1:</u> Improve working conditions of WBPHCOTs*** ***<u>Goal 2:</u> Improve human resource recruitment, selection, placement, development and management*** ***<u>Goal 3:</u> Standardise the WBPHCOT scope of work and ensure standardised application***	Full-time offering	Part-time offering
1. Selection	• *Specify minimum educational levels;* • *Require community membership and acceptance;* • *Consider personal capacities and skills; and* • *Apply appropriate gender equity to context.*	• *Objective 7: Ensure appropriate implementation and management of recruitment, selection… processes for all members of WBPHCOTs.* *"The minimum requirements for CHWs should be matriculation (Grade 12) subject to training programme. Where possible, recognition of prior learning principles will be applied to CHWs who are already in the system and who have undergone relevant training."*	• Some full-time students enrolled to complete NQF levels 2 to 4 as they did not have a matric. • Others had completed grade 12 and wanted to improve their marks at level 4, and thus improve their job prospects or opportunities for further study in higher education. • Students enrolling at TVET colleges typically come from the surrounding communities. • I was not able to determine the gender distribution	• All participants in the part-time offering had a matric. • Some CHW-students also had other post-school qualifications. • All the CHW-students were residents of Mamelodi and were initially working as CHWs in various WBOTs in the Mamelodi area. • Capacities and skills of CHW-students were mixed, as their ages varied considerably (between 20 and 55 years old). • Although older CHW-students might have struggled with

			among NC(V) Primary Health full-time students, although the Umalusi report shows that generally more females than males enrolled at TVET colleges during the study period.[99]	learning the theory, they had rich experience. • Most CHW-students were females, with one male in each cohort continuing to level 4.
2. Pre-service training duration	• *Base on CHW roles and responsibilities;* • *Consider pre-existing knowledge; and* • *Factor in institutional and operational requirements.*	• *Objective 2: Standardise roles and responsibilities of… CHW…* • *Objective 7: Ensure appropriate implementation and management of … skills development… for all members of WBPHCOTs.* • *Objective 9: Ensure standardised implementation of the approved scope of work.* • *Objective 10: Confirm training content and method for ensuring the WBPHCOTs are capacitated to provide required services.*	• The NC(V) Primary Health curriculum is based on CHW roles for PHC re-engineering (rPHC). • Three years of full-time study is long, but, obtaining an NQF L4 qualification is valuable.	• The NC(V) Primary Health curriculum is based on CHW roles for PHC re-engineering (rPHC). • CHW-students expressed concern regarding scope of work expectations e.g. they felt it was not possible to do home-based care (HBC) while registering households and doing health promotion and disease prevention activities. • CHW-students felt that four years of study was too long, especially since it made no difference to their career progression as CHWs. • Obtaining an NQF L4 qualification did not make a difference to CHW-students as they all had matric, but improving their marks at L4 helped some to access higher education.

3. Curriculum to develop competencies	• *Train on expected preventive, promotive, diagnostic, treatment and care services;* • *Emphasize role and link with health system; and* • *Include cross-cutting and interpersonal skills.*	• *Objective 2: Standardise roles and responsibilities of… CHW…* • *Objective 7: Ensure appropriate implementation and management of … skills development, dispute resolution, and occupational health and safety processes for all members of WBPHCOTs.* • *Objective 9: Ensure standardised implementation of the approved scope of work.* • *Objective 10: Confirm training content and method for ensuring the WBPHCOTs are capacitated to provide required services.*	• The NC(V) Primary Health programme is a well-structured curriculum It provides a very good theoretical basis and there are clear outcomes. • The curriculated programme was able to build and assess capacities consistently. • Life skills and ICT skills were developed. • Mathematics/mathematical literacy and English literacy skills were developed. •	• The NC(V) Primary Health programme is a well-structured curriculum It provides a very good theoretical basis and there are clear outcomes. • The curriculated programme was able to build and assess capacities consistently. • Life skills and ICT skills were developed. • Mathematics and English literacy skills were developed. • For some, mathematics was a stumbling block. For others, it facilitated improved study prospects.
4. Training modalities	• *Balance theory and practice;* • *Use face-to-face and e-learning; and* • *Conduct training in or near the community.*	• *Objective 10: Confirm training content and method for ensuring the WBPHCOTs are capacitated to provide required services.*	• Very good theoretical basis. • Opportunity to grow in practical skills (e.g. presentation skills, data handling skills…) • There is limited opportunity for real-life application of theory. • TVET colleges were differently resourced, with some having well-equipped computer laboratories, while others didn't even have a photocopy machine.	• Very good theoretical basis. • Opportunity to grow in practical skills (e.g. presentation skills, data handling skills…) • Could be integrated in actual work, i.e. CHW-students could apply theory to their work as CHWs. • Campus was in the community where CHW-students lived and worked. • Classes were mostly presented in computer

				laboratory, and thus students had access to computers and the internet while attending classes.
5. Offer competency-based formal certification upon successful completion of training		• *Objective 10: Confirm training content and method for ensuring the WBPHCOTs are capacitated to provide required services.*	• In South Africa, the NC(V) programmes are designed to help learners achieve an NQF level 4 educational level. • NQF level 4 qualification provides opportunity to articulate to higher education • Level 4 NC(V) initially not recognised in the workplace and at higher education institutions, which was problematic. • Graduates waited long to receive certificates from DHET.	• NQF level 4 qualification provides opportunity to articulate to higher education • Improved Mathematics and English skills helped some to access higher education.
Managing and supervising CHWs		***Goal 1: Improve working conditions of WBPHCOTs*** ***Goal 2: Improve human resource recruitment, selection, placement, development and management***	Full-time offering	Part-time offering
6. Supportive supervision	• *Establish appropriate supervisor-CHW ratios;*	• *Objective 1: Standardise the WBPHCOTs' management structures at provincial and district level*	• (Not applicable to full-time offering)	• The part-time offering CHW-students had contact with their team leaders, but some OTLs felt threatened by the

	• *Train and resource supervisors to provide meaningful, regular performance evaluation and feedback; and* • *Use supervision tools, data and feedback to improve quality.*	• *Objective 2: Standardise roles and responsibilities of …clinic manager, …CHW team leader…* • *Objective 7: Ensure appropriate implementation and management of recruitment, selection, appointment, placement, remuneration, skills development, dispute resolution, and occupational health and safety processes for all members of WBPHCOTs.* • *Objective 8: Ensure adequate supervision and support for CHWs as well as for WBPHCOT leaders.*		programme or were negative towards the programme. • CHW-students felt that the focus on household registration and the statistics required as evidence of 'performance' was unfair and limited them from being able to do health promotion and disease prevention, as well as follow up in households. • CHW-students felt frustrated by some OTLs who didn't process the referrals made by CHWs.
7. Remuneration	• *Include resources for incentives in health system resource planning; and* • *Provide a financial package commensurate with the job demands, complexity, number of hours, training and roles that*	• *Objective 2: Standardise roles and responsibilities of… CHW…* • *Objective 3: Complete the CHW investment case to obtain the required budget over the MTEF period for a well-resourced and well-functioning institutionalised CHW programme.* • *Objective 7: Ensure appropriate implementation and management of … remuneration… for all members of WBPHCOTs.*	• Full-time students were frustrated by the lack of employment prospects once they had qualified.	• Issues with remuneration affected learning, and CHW-students were not paid during the months of dispute around their contracts. • This caused despondency and demotivation.

	CHWs undertake.			
8. Contracting agreements	• *For paid CHWs, establish agreements specifying roles, responsibilities, working conditions, remuneration and workers' rights.*	• *Objective 4: Complete and maintain the national CHW information database and use the information to confirm existing CHWs in teams required to serve specific communities.* • *Objective 7: Ensure appropriate implementation and management of recruitment, selection, appointment, placement, remuneration, skills development, dispute resolution, and occupational health and safety processes for all members of WBPHCOTs.*	• Full-time students were frustrated by the lack of employment prospects once they had qualified.	• CHWs in the CoT had problems with contract they were expected to sign. • CHW-students said the skills they had acquired in the NC(V) Primary Health programme helped them to recognise the problems in the contract, as they were more aware of worker rights.
9. Career ladder	• *Create pathways to other health qualifications or CHW role progression;* • *Retain and motivate CHWs by linking performance with opportunities; and*		• Some graduates have found work in other areas (e.g. working in a bakery), others have not found work, despite their qualification.	• NC(V) provided skills to progress in their work, but, in reality, no opportunity currently exists to progress within the CHW cadre. This has resulted in a sense of despondency, although some do see the inherent benefit of further education in terms of their personal growth. • By 2018 most CHW-students from cohort 2 were no longer working for the CoT due to the contractual problems.

	• *Address regulatory & legal barriers.*			• Some CHW-students from cohort 2 have found other jobs (e.g. cashier) and are trying to balance working and studying.
Integrating into health systems and gaining community support		***Goal 1: Improve working conditions of WBPHCOTs*** ***Goal 2: Improve human resource recruitment, selection, placement, development and management*** ***Goal 3: Standardise the WBPHCOT scope of work and ensure standardised application*** ***Goal 4: Improve and maintain the monitoring and evaluation system for the WBPHCOT programme***	Full-time offering	Part-time offering
10. Target population size	• *Consider population size, epidemiology, and geographical and access barriers; and* • *Anticipate expected CHW workloads, including nature and*	• *Objective 2: Standardise roles and responsibilities of… CHW…* • *Objective 5: Define an adequate ratio of WBPHCOTs to population and households allowing for differential geographic distribution, and considering problems with access in rural areas.* • *Objective 6: Ensure that WBPHCOTs are fully staffed and equitably distributed throughout South Africa.*	• Not applicable to full-time offering as students were full-time and were not working as CHWs.	• CHW-students felt the expectation around performance stipulated in the contract was unreasonable and not possible to achieve. • Working as CHWs while studying was difficult. When the contract dispute occurred, most CHW-students did not work, and were able to spend more time on their studies (although they were more stressed due to the

	time requirements of the services provided.	• *Objective 9: Ensure standardised implementation of the approved scope of work*		uncertainty of their employment).
11. Collection and use of data	• *Enable CHWs to collect, collate and use health data on routine activities;* • *Train CHWs and provide performance feedback based on data; and* • *Minimize reporting burden, harmonize requirements and ensure data confidentiality and security.*	• *Objective 12: Review and standardise current indicators and data collection tools across all provinces.* • *Objective 13: Establish the required structures at national, provincial, district and PHC facility level for data collection and reporting.* • *Objective 14: Ensure submission of monthly activity data from PHC facilities into the DHIS, quarterly progress reports, as well as a five yearly outcome and impact reports from NDoH and provinces.*	• NC(V) Primary Health curriculum trained students well in data collection (surveys), data handing (plotting graphs), use of data, and skills to present the data (PowerPoint presentations, posters, pamphlets etc.) • The curriculum provided an understanding of ethics in data collection.	• NC(V) Primary Health curriculum trained students well in data collection (surveys), data handing (plotting graphs), use of data, and skills to present the data (PowerPoint presentations, posters, pamphlets etc.) • The curriculum provided an understanding of ethics in data collection.
12. Types of CHWs	• *Adopt service delivery models comprising CHWs with general tasks as part of*	• *Objective 2: Standardise roles and responsibilities of… CHW…* • *Objective 5: Define an adequate ratio of WBPHCOTs to population and households allowing for differential geographic distribution, and considering*	• COPC was an optional subject at some TVET colleges offering the NC(V) Primary Health programme. These colleges were not included in the study, but it would be interesting to	• Good theoretical and practical understanding of generalist CHW tasks. • The basis of COPC as the foundational subject contributed to this.

	integrated primary health care teams; and • *CHWs with more selective tasks to play a complementary role based on population health needs, cultural context and workforce configuration.*	*problems with access in rural areas* • *Objective 6: Ensure that WBPHCOTs are fully staffed and equitably distributed throughout South Africa.* • *Objective 9: Ensure standardised implementation of the approved scope of work.*	determine if students were adequately prepared for CHW work if they had not done COPC as a subject.	
13. Community engagement	• *Involve communities in selecting CHWs and promoting programme use; and* • *Engage relevant community representatives in planning, priority setting, monitoring, evaluation and problem-solving.*	• *Objective 6: Ensure that WBPHCOTs are fully staffed and equitably distributed throughout South Africa.*	• Limited opportunity for community engagement, but students were from the surrounding community and applied what they had learnt to their own families and neighbourhoods. • It did not appear that communities were included in the planning and implementation of the NC(V) Primary Health programme.	• CHW-students were able to apply what they learnt to their everyday lives and work. • CHW-students gave anecdotal feedback about what community members have said to them regarding health needs.

14. Mobilization of community resources	• *CHWs to identify community needs and develop required responses;* • *CHWs to engage and mobilise local resources; and* • *CHWs to support community participation and links to health system.*	• *Objective 11: Ensure, as part of the Ideal Clinic programme, that WBPHCOTs have adequate physical space in clinics to prepare for their day in the field and to meet their data recording and reporting responsibilities.*	• COPC curriculum and practical assignments (PATs) provided opportunity to learn about the identification of community resources.	• COPC curriculum and practical assignments (PATs) provided opportunity to learn about the identification of community resources. • CHWs in WBOTs in Mamelodi worked from a health post in their specific ward.
15. Supply chain	• *Ensure CHWs have adequate and quality-assured commodities and consumables through the overall health supply chain; and* • *Develop health system staff capacities to manage the*	• *Objective 1: Standardise the WBPHCOTs' management structures at provincial and district level*	• Not applicable to full-time offering as students were full-time and were not working as CHWs.	• CHW-students reported lack of supplies to do their work. • CHW-students complained about the lack of a proper uniform. • CHW-students said that some team leaders did not respond to requests for supplies, such as batteries for blood pressure machines, or test strips for glucometers.

	supply chain, including reporting, supervision, team management and mHealth.			

The NC(V) Primary Health programme seems to have produced well-trained CHWs (or primary health workers) and it has met many of the aspects of the WHO recommendations and the WBPHCOT policy framework and strategy. We can also see that the WBPHCOT policy framework and strategy goals and objectives mostly match well with the WHO recommendations. There are also gaps and mismatches between the programme and the policy, though. The policy framework and strategy does not say much about the training of CHWs – for example, Objective 10 states *"Confirm training content and method for ensuring the WBPHCOTs are capacitated to provide required services*", which shows that there is still not consensus regarding CHW education and training, as it still needs to be confirmed. Also, the policy framework and strategy does not mention anything about a potential CHW career ladder. This analysis helps to answer the research question, after which recommendations will be made for CHW training in South Africa.

7.2.2. Answering the research question

The question posed in this research was "is the National Certificate (Vocational) Primary Health qualification adequate, appropriate, effective, and relevant training for community health workers in primary health care teams in South Africa?" The answer to this is summed up by answering the sub-questions based on the adjectives used:

a) Adequate (sufficient, satisfactory, acceptable): *is the NC(V) Primary Health qualification good enough as training for CHWs?*

Yes, it is more than adequate as it provided a solid and comprehensive theoretical basis that empowered students to think critically, question sensibly and solve problems. This is not something that is necessarily expected from CHWs, so the NC(V) Primary Health curriculum has benefitted its students in terms of these life skills.

And no, because more practical fieldwork could have been incorporated. The part-time offering worked particularly well as CHW-students were able to apply their learning in their work, and vice versa. This contributed to increased confidence and competence in performing their work. But the full-time offering students did not have enough 'real life' experience in community settings, although they did gain practical experience such as doing presentations, making pamphlets, and conducting surveys.

b) Appropriate (suitable, compatible*): is the NC(V) Primary Health qualification a good fit for CHW training?*

Yes, the fact that the qualification was on NQF level 4 is important, as it potentially provided opportunities for students to articulate into higher degrees and opened doors for further opportunities.

And no, because for the CHW-students doing the programme part-time, there was no benefit in terms of securing their posts, progression within the WBOT, or increase in salaries. It might be argued that they are over-trained for what is expected of them currently in WBOTs. And since there is currently no career pathway for CHWs in South Africa, one can understand the sentiment of "what is the point?"

c) Effective (successful in producing result, ready for service): *does the NC(V) Primary Health qualification produce properly trained CHWs?*
Yes, it does. In fact, they are very well trained. Graduates understand relevant theory and are able to apply it in real-life scenarios. Their comprehensive knowledge, ability to think on their feet and problem-solve particularly stood out. The interprofessional nature of the training was most valuable. One is left with the question of whether we can achieve the same qualities in a CHW with shorter training?

d) Relevant (closely connected to matter at hand): *Will CHWs with the NC(V) Primary Health qualification align with/fit into health system reform and PHC re-engineering?*
Yes, the NDOH is faced with the challenge of training around 55 000 CHWS to work in at least 9 000 WBOTs around the country.[62] Any good training for CHWs is thus relevant, and the NC(V) Primary Health programme has produced at least 1000 level 4 graduates since 2015 across the country (estimated from the national results in Appendix 13). The foundational understanding of COPC makes NC(V) Primary Health graduates well-positioned to be assets in teams working at PHC level. The programme implementation also showed us that novel ways of education and training are possible through partnerships and collaboration.
And no, because the NC(V) Primary Health programme produced too few and too highly qualified CHWs. They could, however, be utilised as team leaders, but it is uncertain whether this will ever become a reality due to the current lack of a career pathway.

The NC(V) Primary Health programme is no longer being presented. There are nonetheless valuable lessons to learn from its development and implementation for current and future training of CHWs, especially when we consider these lessons in relation to the WHO 'Guideline on health policy and system support to optimize community health worker programmes'[51], which is the most recent perspective of CHW programmes globally.

7.3. RECOMMENDATIONS FOR CHW TRAINING IN SOUTH AFRICA

The recommendations emanating from this research will be presented according to the three overarching categories of the WHO recommendations from the guideline.

7.3.1. Selecting, training and certifying CHWs for WBOTs

Regarding the selection of CHWs, the current South African policy for WBPHCOTs[62] states that CHWs will need a matric to raise the standard of CHWs. However, the NC(V) Primary Health programme has shown that through the TVET system people can access the second chance they might need if they weren't able to get a matric. This is important when thinking about the structuring of CHW education, as insisting that only those with a matric are capable of doing the work, would be denying many people the opportunity to access this pathway. Also, the recognition of prior learning (RPL) remains a fundamental value, especially when considering the older CHWs who have years of most valuable experience from the pre-democracy years.[5] So, while the policy needs to stipulate an entry criterion, there also needs to be flexibility in this regard. New CHWs can be required to have a matric or NCF L4 certificate, but at the same time, experience needs to be valued and the sharing of that experience should be facilitated. Also, it needs to be acknowledged that older CHWs can learn relevant theory, they might just need more support. It is recommended that policy makers consider an RPL strategy for older CHWs, where they are required to perform a standardised competency test. In this way we can prevent another lost opportunity to utilise the wealth of skills and experience that older CHWs have.

Regarding gender in the selection of CHWs, it was observed that although most CHWs in South Africa are female, male CHWs are able to access populations that women might not be able to, such as youth at risk and substance users. Thus, men should be encouraged to become CHWs as they have an important contribution to make.

Based on the results of this study, the CHW-students want to be properly educated. Proper education is sufficient in content, curriculated, with enough time to learn, and decolonised. Also, training and education must be sensible, sustainable, collaborative and aligned to the legislative framework. Even though the NC(V) Primary Health programme is no longer being presented, a similar structuring could be followed and CHW training should be laddered on the NQF framework. Pre-service CHW education is foundational i.e. the training or education that needs to be done before being able to do the work. This training should be sufficient in level, content, and duration (not too short, and not too long). The current 10-day training phases seem to be a good starting point. But CHW-students say it is too short in duration, and cannot provide sufficient depth to equipping CHWs. Thus, it could be seen

as the first step in orientation and training for baseline competencies[52], with further educational opportunities being laddered from there.

In other words, an education plan for CHWs could be worked out for training to be at NQF level 2, 3 and 4, but with exit possibilities at each level. So, a basic knowledge of what is required to do the work of a CHW can be offered at NQF level 2 and all CHWs employed in WBOTs would need to do this level. It could be presented part-time over a year and could occur in the workplace (i.e. no need for students to be on a campus for an extended time). Referring back to Olaniran et al's categories[43] of CHW training, this would then be a level 1 para-professional. More in-depth training could be at NQF level 3 to build knowledge and skills, thus leading into a level 2 para-professional. NQF level 4 would be possible for those who would like to progress to eventually be team leaders or articulate into higher levels of education. The NQF level 3 curriculum could be presented on a part-time basis at regional training centres and the level 4 curriculum could be presented at TVET colleges.

Workplace learning should follow the 'Work-i-Learn model'[64] which is an appropriate structure to facilitate ongoing learning, especially since CHWs have such varied training and experience. It is based on the capability approach and allows for experiential learning as well as formal weekly Work-i-Learn sessions that are participatory, inclusive, and cooperative to develop health and health care capacity.[64] The national Work-i-Learn training schedule could even be accredited according to the NQF level.

The NC(V) Primary Health programme was also an example of how theoretical knowledge can enhance practical and social competencies to engage effectively with household members.[52] Content taught in the vocational subjects such as public health and the South African health system was integrated and relevant. The work done in the NC(V) Primary Health curriculum should not be wasted, and much of it can be used in future education endeavours. In particular, CHW education and training should be based on the COPC approach, as this is foundational to the work of CHWs in WBOTs.

In terms of certification, the DHET, the NDoH, the HWSETA, and the Quality Council for Trades and Occupations (QCTO) should continue to work together to formulate a national CHW occupational qualification that progresses to level 4, which could help determine a career pathway for CHWs. The policy framework and strategy for WBPHCOTs stipulates the different responsibilities of the different levels of the health system regarding the implementation of the policy framework and strategy.[62] When specifically focussing on education and training roles and responsibilities at these different levels, the document states that training is the responsibility of provincial departments of health, by "*ensuring that appropriate and adequate training programmes for new and existing members of WBPHCOTs are in place.*"[62] The district level needs to *"develop, implement, and maintain a capacity building*

system for all CHW team members within a multidisciplinary team context'[62]. However, there is a case to be made for a pre-service NQF-aligned education curriculum to be set up nationally, that is supported and implemented at provincial level, and work-integrated training that is implemented at district level to focus on local needs.

7.3.2. Managing and supervising CHWs

Through engaging with CHW-students during this research, it became evident that there were issues with management and supervision at national, municipal and WBOT levels. In general, human resources management functions vary dramatically for CHWs[52], which is problematic. Recommendations 6 to 8 focus on the importance of supportive supervision, appropriate remuneration, well set-up contracts, and clarity about roles, working conditions and rights. These create the potential for career advancement opportunities (recommendation 9). Pathways need to be created for CHW role progression. If there is a career path then training can be laddered and people can be educated accordingly. This could open the way for CHWs to progress to more senior levels, and CHWs with the NC(V) Primary Health qualification at level 4 (or the equivalent) could become WBOT team leaders.

All WBOT members would benefit from team building and teamwork training. Also, it is very important to continue training team leaders and facility managers in leadership and management skills, and also about the work of CHWs. Training team leaders should also facilitate that they themselves are supportive of CHW training. Improving OTLs' management skills would likely improve issues around the lack of supplies, for example, which contribute to a more positive working environment.

It is important to provide opportunities and platforms for CHWs to reinforce their roles so that they feel they have a voice. CHW representatives should be part of management and leadership meetings. Team leaders attend meetings as representatives of CHWs, but this is not sufficient as they are not CHWs. Even when supportive of CHWs, OTLs cannot fully represent CHWs when decisions are made. Proper training and education of CHWs can enhance their advocacy and further equip them to represent themselves and their needs.

7.3.3. Integrating into health systems and gaining community support

WBOTs and CHWs have been formalised in the South African health system.[62] The next step is to work towards the integration of CHWs into the health workforce. Crucial to this is to work out how CHWs can be registered and legitimised within the system. This will require appropriate and realistic

planning, implementation, and measurement of performance, as well as adequate resources and supplies[52] on the side of health system decision-makers, which speak to recommendations 10, 12, and 15. While the WBPHCOT strategy document indicates how many posts are needed to meet the country's health needs (9159 WBPHCOTs and 54 956 CHWs are required to serve the South African population)[62], these posts need to be made available and enough CHWs need to be formally employed.

There is an understanding that CHWs need training in health promotion, disease prevention, and disease management, but there are certain essential skills that are not as obvious. The inclusion of mathematical literacy or mathematics, language skills, life skills and skills in ICT (information and communication technology) appeared to benefit students in the NC(V) Primary Health programme, as they felt they were able to communicate more effectively, think more critically and problem solve more productively. Building these skills contributes to the realisation of recommendation 11 and CHW training should not neglect to include these skills.

The NC(V) Primary Health programme was based on the COPC approach, which provides the basis from which effective primary health care can be done within and by the community, making health a daily reality.[64] The COPC approach really is fundamental to CHW training and facilitates the community engagement that is strived for in recommendation 13.

As mentioned elsewhere, there are many individuals and groups who have done and do good work around CHW training in South Africa. However, it seems to be occurring in silos without being aware of each other. This is not conducive to building an integrated and sustainable national CHW education plan. It will be valuable to set up a national committee or task team to work on CHW training in South Africa from a fresh perspective. This team should include CHWs themselves, along with lecturers who have experience teaching CHWs (especially from the TVET colleges), academics, researchers, health professionals, government representatives from the NDoH and DHET, HWSETA representatives, QCTO representatives, private training entities (such as FPD), and representatives from civil society organisations (CSOs) and community members. Communities are an integral part of this discourse[121] and the resulting action, because CHW programmes are one of the most practical and accessible ways to facilitate community participation. WBOT teams allow for real engagement with community members, and doesn't just pay lip service to it.

The WHO policy recommendations have been developed based on years of research and evidence regarding CHW programmes worldwide. There are many examples of successful large-scale CHW programmes[120] in LMICs (including Afghanistan, Bangladesh, Brazil, Ethiopia, India, Indonesia, Iran,

Nepal, Pakistan, Rwanda, Zambia, and Zimbabwe) that South Africa can learn from (where there is political will, there is a way).

7.4. RESEARCH RECOMMENDATIONS

7.4.1. Research opportunities based on the limitations of this study

There were limitations to this study, as mentioned in section 3.10. of Chapter 3. This research focussed on one specific CHW education programme, the NC(V) Primary Health, which has unfortunately been phased out during the time of the study. In-depth comparisons of various CHW education and training programmes, implemented in the past and at present in South Africa, could deliver further interesting and valuable insights about what works best. Also, expansion about pre-service education and on-going training for CHWs will be worthwhile research, especially if it is based on the COPC approach and viewed through the lens of capability.

The timing of the study was particularly challenging with violent protests erupting at universities and at TVET college campuses across the country. While this reality made it difficult to have contact with TVET college students, the political milieu of post-school education spaces offers much insight into the challenges we face in South Africa, which include issues of power, patriarchy, gender, poverty, class, and race. We can never again look at higher education superficially. Health sciences faculties at universities across the country have embarked on the journey of decolonisation. It is necessary to do the same with CHW education. In fact, precisely because of the necessity for contextual relevance and competence in CHW training, those involved in CHW training and CHWs themselves are likely to be well-suited to make meaningful contributions to decolonisation work. Thus, every effort should be made by lecturers within the health sciences to include the experiences and voices of CHWs in their teaching, learning and research activities.

This research study did not include perspectives from household members, who are the beneficiaries of WBOT services. It would be most worthwhile to gather the perspectives and experiences of community members regarding the work of CHWs, and most especially their input in terms of the education and training of CHWs. Household members could give valuable information about their own healthcare needs, what they perceive CHWs to be doing well, and where they experience gaps in CHW training.

Similarly, more research could be done with WBOT team leaders (OTLs) and managers to gain their perspectives and input about the education and training of CHWs.

7.4.2. Other research opportunities emanating from this study

The interprofessional nature of the NC(V) Primary Health programme, in both the compilation and teaching of the curriculum, reminds us that interprofessional work amongst health professionals and CHWs is pivotal. An opportunity exists for deepening interprofessional work, especially within the decentralised training that South African Health Sciences faculties are pursuing. CHWs can be strategic and valuable partners in the training of health science students in rural, semi-rural and other under-resourced areas, and these partnerships are important research opportunities.

A glaring gap in research and practice is career laddering or pathways for CHWs. This is a fertile area of research and there is room for novel approaches and possibly even space to challenge the biomedical hierarchy we still see in health systems. This is particularly relevant in South Africa as we grapple with insufficient numbers of health workers to meet our country's health needs. And we have high unemployment rates. Here is an opportunity to develop a cadre of worker whose potential impact can be most significant at a national scale.

Research focussing on the voices of CHWs should be prioritised. These narratives should be widely published and made available to policy makers, lecturers, and researchers. And commitment should be made to ensuring that CHWs themselves present the research at conferences and academic meetings, as well as at government meetings with decision-makers. As CHW programmes become integrated into national health systems, the strategies of community engagement should not be neglected or forgotten, and the voices of community members should be given precedence. Research on the effects of involving local people in the planning and support of CHW programmes is also needed.[121]

Even though this study was about the education of CHWs, problems around the recognition, support, management and remuneration of CHWs were persistently evident. Further research around these issues can contribute to solutions and promote advocacy for improvement. CHWs themselves have become further empowered through this education to address these issues and their agency is increasingly evident. Community members and health professionals can and should be allies in this as we commit to universal health coverage and achieving the SDGs.

7.5. CONCLUSION

CHWs are vital role players in addressing health concerns in under-resourced communities. In order for them to fulfil their roles and be relevant within contexts of poverty, they need to be trained adequately, appropriately, and effectively. And their education needs to be sustainable. The

opportunity to make a meaningful impact on the well-being of communities at scale is within reach if CHWs fulfil their potential.

While the NC(V) Primary Health programme will not continue, there are conclusions that stood out from the evaluation of this programme, which should be considered for current and future CHW training. These include the following:

- Recognition: Recognising the value of the CHW cadre, demonstrated through the establishment of a regulatory body and decent remuneration, will help to emphasise the importance of proper education and training for CHWs.
- Commitment: Medium- to long-term commitment to proper (NQF-aligned) and sustainable CHW education and training is required by all stakeholders.
- Collaboration: The planning, implementation, and monitoring and evaluation of CHW education and training is best done in collaborative partnerships. Novel ways to overcome silos need to be explored.
- Balance: Roles and responsibilities should be clarified further, without over- or under-estimating CHWs' contribution, so that CHW education and training can be appropriate and relevant.
- Community: CHW education and training curriculums should be based on the COPC approach, as this gives CHWs the theoretical knowledge and practical tools to do community-oriented PHC.
- Capability: CHW education and training outcomes should focus on the capabilities of CHWs (i.e. be based on the capability approach) and not just the capacities or competencies of CHWs.

Proper CHW education is the means for CHWs themselves to find and use their voices, to be taken seriously, and to lead the way. So, let's listen to the voices of those on the ground – listen to students, listen to CHWs, and listen to the community.

Policy makers should also take note of the recent WHO recommendations for CHW programmes[51], because CHWs are a valuable human resource that can make a huge difference and contribute to leaving a remarkable legacy of positive change in how we improve health in low- and middle-income communities, and they need to find a way to legitimise this cadre of worker. The Minister of Health, Dr Motsoaledi, has shown commitment to this when he states that "*Formalising WBPHCOT teams will increase the number of much needed healthcare workers, as well as contribute to human resource development in the health sector. It is anticipated to lead to visible improvements, not only in equity and access to care, but also in managing the quadruple burden of disease with a strong focus on fostering the well-being of mothers, children and other vulnerable groups. The department will build the required capacity within WBPHCOTs and provide the necessary resources and support required by these teams for them to operate effectively and efficiently*"[62] This commitment needs to be

implemented by the provincial Departments of Health and the WHO recommendations give helpful and pragmatic guidelines to achieve this. National, provincial, municipal and WBOT leadership would do well to familiarise themselves with these guidelines to enhance their support of CHWs.

7.6. SUMMARY

Chapter 7 summarised the findings of the research project by comparing the NC(V) Primary Health programme to recent international guidelines and South African policy, which helped to answer the research question. The implications of the research findings were discussed, as well as the limitations of the research, and recommendations for CHW education and training as well as further research were made.

This work endeavoured to contribute to the body of knowledge pertaining to the education and training of CHWs, particularly in South Africa. Let us continue to work towards strengthening the raison d'être of CHWs, as they are indeed wonderful, wonderful people. Based on my experiences working in communities, the working relationships and friendships I have with community workers, my involvement in the NC(V) Primary Health part-time offering, and from this research, I am convinced that CHWs have the "*light to fight the shadows*", and proper education and training will strengthen their voices as they use their "*words to change a nation*".[122]

REFERENCES

1. USAID. Community Health Framework – Distilling decades of Agency experience to drive 2030 Global Goals [Internet]. 2015 Oct. Available from: https://www.chwcentral.org/usaid-community-health-framework-distilling-decades-agency-experience-drive-2030-global-goals

2. Wikipedia, the free encyclopedia [Internet]. Feldsher. [updated 2017 Dec 27; cited 2019 Jan]. Available from: https://en.wikipedia.org/wiki/Feldsher

3. Wikipedia, the free encyclopedia [Internet]. Barefoot doctor. [updated 2018 Dec 20; cited 2019 Jan 19]. Available from: https://en.wikipedia.org/wiki/Barefoot_doctor

4. WHO. Bulletin of the World Health Organization [Internet]. China's village doctors take great strides. 2008 Dec; Volume 86(12):909-988. Available from: https://www.who.int/bulletin/volumes/86/12/08-021208/en/

5. Van Ginneken N, Lewin S, Berridge V. The emergence of community health worker programmes in the late apartheid era in South Africa: An historical analysis. Soc Sci Med [Internet]. 2010 Sep [cited 2018 Sep 30];71(6):1110-8. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2941026/ DOI: 10.1016/j.socscimed.2010.06.009

6. Nethercott AS. Forty Years of Malaria Control in Natal and Zululand. S Afr Med J [Internet]. 1974 Jun; 48:1168-70. Available from: https://www.ajol.info/index.php/samj/article/viewFile/168365/157853

7. Kautzky K, Tollman SM. A perspective on Primary Health Care in South Africa. In: Barron P, Roma-Reardon J, editors. South African Health Review 2008 [Internet]. Durban: Health Systems Trust; 2008. p17–30. Available from: https://pdfs.semanticscholar.org/23a9/9b4b771f0048313925193bfe4206f7d25bd7.pdf

8. Marcus TS. Community Oriented Primary Care: Origins and history. Pretoria: self-published; 2014.

9. Gofin J, Gofin R. Community-oriented primary care and primary health care. Am J Public Health [Internet]. 2005 May [cited 2019 Jan];95(5):757. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1449247/pdf/0950757.pdf

10. Gofin J, Gofin R. Community Oriented Primary Care (COPC): History and Principles. In: Gofin J, Gofin R, editors. Essentials of Global Community Health [Internet]. Sudbury, MA: Jones & Bartlett Publishers; 2011. p45-67.

11. Perry HB, Zullinger R, Rogers MM. Community Health Workers in Low-, Middle-, and High-Income Countries: An Overview of Their History, Recent Evolution, and Current Effectiveness. Annu Rev Public Health [Internet]. 2014;35:399–421. Available from: https://mpoweringhealth.org/wp-content/uploads/2015/05/139749687581929.pdf DOI: 10.1146/annurev-publhealth-032013-182354

12. WHO. Newell KW (ed). Health by the People [Internet]. Geneva: World Health Organization; 1975 [cited 2019 Jan]. Available from: https://apps.who.int/iris/bitstream/handle/10665/40514/9241560428_eng.pdf?sequence=1

13. Tollman SM. The Pholela Health Centre - the origins of community-oriented primary health care (COPC): An appreciation of the work of Sidney and Emily Kark. S Afr Med J [Internet]. 1994 Oct 10 [cited 2018 Sep 22];84(10):653–658. https://www.ajol.info/index.php/samj/article/download/149397/138893

14. World Health Organization. Declaration of Alma Ata [Internet]. Geneva: World Health Organization; 1978. Available from: http://www.who.int/publications/almaata_declaration_en.pdf

15. Perry HB, Akin-Olugbade L, Lailari A, Son Y. A comprehensive description of three national community health worker programs and their contributions to maternal and child health and primary health care: case studies from Latin America (Brazil), Africa (Ethiopia) and Asia (Nepal) [Internet]. CHW Central; 2016 Dec 31 [cited 2019 Jan]. Available from: http://www.chwcentral.org/sites/default/files/Perry-CHW%20Programs%20in%20Brazil%2C%20Ethiopia%20and%20Nepal-2016.pdf

16. Lehmann U, Sanders D. Community health workers: What do we know about them? The state of the evidence on programmes, activities, costs and impact on health outcomes of using community health workers [Internet]. Geneva: World Health Organization; 2007 [cited 2016 Jan 11]. Available from: http://www.who.int/hrh/documents/community_health_workers.pdf

17. Abramson JH, Kark, SL. Community Oriented Primary Care: meaning and scope. In: Connor E, Mullan F, editors. Community Oriented Primary Care: New Directions for Health Services Delivery Conference Proceedings. Division of Health Care Services, Institute of Medicine [Internet]. Washington (DC): National Academy Press; 1983 [cited 2019 Jan]. Available from: https://www.ncbi.nlm.nih.gov/books/NBK234608/pdf/Bookshelf_NBK234608.pdf

18. Tollman SM, Pick WM. Roots, Shoots, but Too Little Fruit: Assessing the Contribution of COPC in South Africa. Am J Pub Health [Internet]. 2002 Nov;92(11):1725-8. Available from: https://ajph.aphapublications.org/doi/pdf/10.2105/AJPH.92.11.1725

19. Coovadia H, Jewkes R, Barron P, Sanders D, McIntyre D. The health and health system of South Africa: historical roots of current public health challenges. The Lancet [Internet]. 2009;374:817–834. Available from: http://depts.washington.edu/sphnet/wp-content/uploads/2013/01/Coovadia.pdf

20. Digby A. The Bandwagon of Golden Opportunities? Healthcare in South Africa's Bantustan Periphery. S Afr Hist J [Internet]. 2012;64(4):827-51. Available from: https://doi.org/10.1080/02582473.2012.670262 DOI: 10.1080/02582473.2012.670262

21. Buch E, de Beer C. Health and health care in Mhala: An overview. Conference paper No.192. Second Carnegie Inquiry into poverty and development in southern Africa, 13-19 April 1984, Cape Town. Available from: http://saldru.com.uct.ac.za/bitstream/handle/11090/210/1984_buch_ccp192.pdf?sequence=1

22. Ijsselmuiden K. The nutritional status of inhabitants of Northern Gazankulu and the response of the Health services. Conference Paper No. 208. Second Carnegie Inquiry into poverty and development in southern Africa, 13-19 April 1984, Cape Town. Available from: http://opensaldru.uct.ac.za/bitstream/handle/11090/292/1984_ijsselmuiden_ccp208.pdf?sequence=1

23. Section 27 [Internet]. Meeting the challenges of HIV treatment and prevention through independent mobilisation and work through the SA National Aids Council (SANAC) – a ten-point agenda for saving and bettering lives; 2010 Oct 14. Available from: http://section27.org.za/wp-content/uploads/2010/10/Civil-society-consensus-statement.pdf

24. Pillay Y, Barron P. The implementation of PHC re-engineering in South Africa [Internet]. 2011. Available from: https://www.phasa.org.za/wp-content/uploads/2011/11/Pillay-The-implementation-of-PHC.pdf

25. Department of Health [Internet]. Strategic Plan 2014/15-2018/19; [cited 2015 Jun 17]. Available from: http://www.health-e.org.za/wp-content/uploads/2014/08/SA-DoH-Strategic-Plan-2014-to-2019.pdf

26. Health and Welfare Sector Education and Training Authority (HWSETA) [Internet]. Sector Skills Plan Update 2013-2014; [cited 2015 Jun 16]. Available from: http://www.hwseta.org.za/wp-content/uploads/2014/10/hwseta-ssp-2014.pdf

27. QCTO [Internet]. Health Promotion Officer (Community Health Worker); [2014; cited 2016 Jan 12]. Available from: http://www.qcto.org.za/index.php/health-promotion-officer

28. Google Dictionary [Internet]. Definition of ‘adequate’; [cited 2018 Aug 10]. Available from: https://www.google.com/search?client=safari&rls=en&q=definition+for+adequate&ie=UTF-8&oe=UTF-8

29. Merriam-Webster dictionary [Internet]. Definition of ‘adequate’; [cited 2018 Aug 10]. Available from: https://www.merriam-webster.com/dictionary/adequate

30. Merriam-Webster dictionary [Internet]. Definition of ‘appropriate’; [cited 2018 Aug 10]. Available from: https://www.merriam-webster.com/dictionary/appropriate

31. Google Dictionary [Internet]. Definition of ‘effective’; [cited 2018 Aug 10]. Available from: https://www.google.com/search?client=safari&rls=en&q=definition+for+effective&ie=UTF-8&oe=UTF-8

32. Merriam-Webster dictionary [Internet]. Definition of ‘effective’; [cited 2018 Aug 10]. Available from: https://www.merriam-webster.com/dictionary/effective

33. Google Dictionary [Internet]. Definition of ‘relevant’; [cited 2018 Aug 10]. Available from: https://www.google.com/search?client=safari&rls=en&ei=ecBtW9nbDsnOgAaUo4joAw&q=definition+for+relevant+&oq=definition+for+relevant+&gs_l=psy-ab.3..0i22i30k1l10.63726.67251.0.67957.18.12.0.0.0.0.834.1984.5-2j1.3.0..2..0...1.1.64.psy-ab..15.3.1983...0j35i39k1.0.eDjNE7tXmck

34. Merriam-Webster dictionary [Internet]. Definition of 'relevant'; [cited 2018 Aug 10]. Available from: https://www.merriam-webster.com/dictionary/relevant

35. Meltzer S. Frontline Health Workers Coalition. A commitment to Community Health Workers – Improving Data for Decision Making; 2014. [cited 2017 Apr 01]. Available from: https://www.frontlinehealthworkers.org/sites/fhw/files/uploads/2014/09/CHW-Report.pdf

36. Marcus TS. Community Oriented Primary Care, L2 Primary Health. Cape Town: Pearson Education; 2013.

37. The South African Qualifications Authority. What is the South African Qualifications Authority? [Internet]. [2014; cited 2016 Jan 13]. Available from: http://www.saqa.org.za/show.php?id=5658

38. de Vos AS, Strydom H, Fouché CB, Delport CSL. Research at grass roots. 3rd ed. Pretoria: Van Schaik Publishers; 2005.

39. Heywood M. The broken thread: Primary Health Care, Social Justice and the Dignity of the Health Worker. Briefing Paper for Public Positions Theme Event, WISER [Internet]. Johannesburg; 2014 Sep 1. Available from: http://eres-open.pcmd.ac.uk/staffdev/pres/research%20paradigms%20med%20ed.pdf

40. Saldanha J, Omasta M. Qualitative research: Analysing life. California: Sage Publications, Inc. 2018. p156-7.

41. Trochim WMK. Deduction and Induction. Research Methods Knowledge Base [Internet]. [updated 2006 Oct 20; cited 2016 Jan 12]. Available from: http://www.socialresearchmethods.net/kb/dedind.php

42. Ratvich SM, Riggin M. Research & Rigour: How Conceptual Frameworks Guide Research. Los Angeles: Sage Publications Inc; 2012. p42-3.

43. Olaniran A, Smith H, Unkels R, Bar-Zeev S, van den Broek N. Who is a community health worker? – a systematic review of definitions. Glob Health Action [Internet]. 2017 [cited 2017 Mar 28];10(1). DOI: 10.1080/16549716.2017.1272223

44. O'Donovan J, O'Donovan C, Kuhn I, Ehrlich Sachs S, Winters N. Ongoing training of community health workers in low-income and middle-income countries: a systematic scoping review of the literature. BMJ Open [Internet]. 2018 [cited 2018 Aug 31];8(4);p1-10. Available from: https://bmjopen.bmj.com/content/8/4/e021467 DOI: 10.1136/bmjopen-2017-021467

45. Schneider H. The emergence of a national community health worker programme in South Africa: Dimensions of governance and leadership [Internet]. PhD thesis. University of Cape Town, School of Public Health and Family Medicine; 2017 Apr. Available from: https://open.uct.ac.za/bitstream/handle/11427/25422/thesis_hsf_2017_schneider_helene.pdf?sequence=1

46. Schneider H, English R, Tabana H, Padayachee T, Orgill M. Whole-system change: Case study of factors facilitating early implementation of a primary health care reform in a South African province. BMC Health Serv Res [Internet]. 2014;14(1). Available from: https://doi.org/10.1186/s12913-014-0609-y

47. Schneider H, Okello D, Lehmann U. The global pendulum swing towards community health workers in low- and middle-income countries: a scoping review of trends, geographical distribution and programmatic orientations, 2005 to 2014. Hum Resour Health [Internet]. 2016;14(1):65. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5081930/pdf/12960_2016_Article_163.pdf DOI 10.1186/s12960-016-0163-2

48. Scott K, Beckham SW, Gross M, Pariyo G, Rao KD, Cometto G, Perry HB. What do we know about community-based health worker programs? A systematic review of existing reviews on community health workers. Hum Resour Health [Internet]. 2018;16:39. Available from: https://doi.org/10.1186/s12960-018-0304-x

49. White MS, Govender P, Lister HE. Community health workers lensed through a South African backdrop of two peri-urban communities in KwaZulu-Natal. Afr J Disabil [Internet]. 2017 Aug. Available from: https://doi.org/10.4102/ajod.v6i0.294

50. Walker P. HIFA Thematic Discussion on Community Health Workers, 16 January – 24 February, 2018.

51. WHO guideline on health policy and system support to optimize community health worker programmes [Internet]. Geneva: World Health Organization; 2018 Oct. Available from: http://apps.who.int/iris/bitstream/handle/10665/275474/9789241550369-eng.pdf?ua=1

52. WHO guideline on health policy and system support to optimize community health worker programmes. Selected highlights [Internet]. Geneva: World Health Organization; 2018 Oct. Available from: https://apps.who.int/iris/bitstream/handle/10665/275501/WHO-HIS-HWF-CHW-2018.1-eng.pdf?ua=1

53. Mayosi BM, Benatar SR. Health and Health Care in South Africa — 20 Years after Mandela. Special Report. N Engl J Med [Internet]. 2014 Oct 2 [cited 2018 Sep 23];371(14):1344-53. Available from: https://www.ncbi.nlm.nih.gov/pubmed/25265493

54. National Planning Commission, Department of the Presidency, Republic of South Africa. National Development Plan 2030 Our Future – make it work [Internet]. Pretoria: South African Government; 2012. Available from: https://www.gov.za/sites/default/files/NDP-2030-Our-future-make-it-work_r.pdf

55. South African Government. National Development Plan 2030 (summary) [Internet]. Pretoria: South African Government. Available from: https://www.gov.za/issues/national-development-plan-2030

56. Austin-Evelyn K, Rabkin M, Macheka T, Mutiti A, Mwansa-Kambafwile J, Dlamini T, El-Sadr WM. Community health worker perspectives on a new primary health care initiative in the Eastern

Cape of South Africa. PLoS ONE [Internet]. 2017;12(3). Available from: https://doi.org/10.1371/journal.pone.0173863

57. Marcus TS, Hugo J, Jinabhai CC. Which primary care model? A qualitative analysis of ward-based outreach teams in South Africa. Afr J Prim Health Care Fam Med [Internet]. 2017;9(1). Available from: https://doi.org/10.4102/phcfm.v9i1.1252

58. Moosa S, Derese A, Peersman W. Insights of health district managers on the implementation of primary health care outreach teams in Johannesburg, South Africa: A descriptive study with focus group discussions. Hum Resour Health [Internet]. 2017;15(1). Available from: https://doi.org/10.1186/s12960-017-0183-6

59. Kinkel H-F, Marcus T, Memon S, Bam N, Hugo J. Community oriented primary care in Tshwane District, South Africa: Assessing the first phase of implementation. Afr J Prm Health Care Fam Med [Internet]. 2012;5(1). Available from: http://dx.doi.org/10.4102/phcfm.v5i1.477

60. Bam N, Marcus T, Hugo J, Kinkel H-F. Conceptualizing Community Oriented Primary Care (COPC) – the Tshwane, South Africa, health post model. Afr J Prm Health Care Fam Med [Internet]. 2013;5(1). Available from: http://dx.doi.org/10.4102/phcfm.v5i1.423

61. Schneider H, Schaay N, Dudley L, Goliath C, Qukula T. The challenges of reshaping disease specific and care oriented community-based services towards comprehensive goals: A situation appraisal in the Western Cape Province, South Africa. BMC Health Serv Res [Internet]. 2015;15(1). Available from: https://doi.org/10.1186/s12913-015-1109-4

62. National Department of Health, Republic of South Africa. Policy Framework and Strategy for Ward Based Primary Healthcare Outreach Teams: 2018/19 – 2023/24 [Internet]. 2018 Apr 4 [cited 2018 Oct 1]. Available from: https://rhap.org.za/wp-content/uploads/2018/04/Policy-WBPHCOT-4-April-2018-1.pdf

63. Mash R, Howe A, Olayemi O, Makwero M, Ray S, Zerihun M, et al. Reflections on family medicine and primary healthcare in sub-Saharan Africa. BMJ Glob Health [Internet]. 2018 Feb [cited 2018 Sep 27];3:e000662. Available from: https://gh.bmj.com/content/bmjgh/3/Suppl_3/e000662.full.pdf DOI:10.1136/ bmjgh-2017-000662

64. Marcus TS. COPC – A practical guide. Pretoria: UP DFM; 2018.

65. World Health Organization. Press Release: New global commitment to primary health care for all at Astana conference [Internet]. 2018 Oct 25 [cited 2018 Oct 30]. Available from: http://www.who.int/news-room/detail/25-10-2018-new-global-commitment-to-primary-health-care-for-all-at-astana-conference

66. Denzin NK, Lincoln YS. Introduction: The Discipline and Practice of Qualitative Research. In: Denzin NK, Lincoln YS, editors. Handbook of Qualitative Research. 2nd ed. Los Angeles: Sage Publications, Inc.; 2000. p19-22.

67. Cohen D, Crabtree B. The Interpretivist Paradigm [Internet]. Princeton: RWJF; 2008 [cited 2016 Jan 13]. Available from: http://www.qualres.org/HomeInte-3516.html

68. Lincoln YS, Guba EG. Paradigmatic controversies, contradictions, and emerging confluences. In: Denzin NK, Lincoln YS, editors. Handbook of Qualitative Research. 2nd ed. Los Angeles: Sage Publications, Inc.; 2000. p163-9.

69. Henning E, van Rensburg W, Smit B. Finding your way in qualitative research. Pretoria: Van Schaik Publishers; 2004.

70. Bunniss S, Kelly DR. Research paradigms in medical education research. Med Educ [Internet]. 2010;44:358–66. Available from: http://eres-open.pcmd.ac.uk/staffdev/pres/research%20paradigms%20med%20ed.pdf

71. Babbie E, Mouton J. The practice of social research. South African ed. Cape Town: Oxford University Press Southern Africa, 2005.

72. Cline A. Thought Co. Pragmatic theory of truth [Internet]. [updated 2017 Dec 31]. Available from: https://www.thoughtco.com/pragmatic-theory-of-truth-250550

73. Pansiri J. Pragmatism: A methodological approach to researching strategic alliances in tourism. Tourism and Hospitality Planning & Development [Internet]. 2005 Dec;2(3):191-206. Available from: https://www.researchgate.net/publication/228380894_Pragmatism_A_methodological_approach_to_researching_strategic_alliances_in_tourism DOI: 10.1080/14790530500399333

74. Morgan DL. Pragmatism as a Paradigm for Social Research. Qualitative Inquiry [Internet]. 2014 Feb 3 [cited 2018 Jun 9]. Available from: http://qix.sagepub.com/content/early/2014/01/31/1077800413513733
DOI: 10.1177/1077800413513733

75. Cresewell JW, Poth CN. Qualitative inquiry and research design: choosing among five approaches. 4th ed. California: Sage Publications, Inc; 2018. p26-27.

76. Saldanha J, Omasta M. Qualitative research: Analysing life. California: Sage Publications, Inc; 2018. p89-116.

77. Hofstee E. Constructing a good dissertation. Sandton: EPE; 2011. p107-136.

78. Creswell JW. 2016. 30 Essential skills for the qualitative researcher California: Sage Publications, Inc; 2016. p126-36.

79. Saldanha J, Omasta M. Qualitative research: Analysing life. California: Sage Publications, Inc; 2018. p3-28.

80. Hartwell A. The CIPP Evaluation Model: A Summary [Internet]. [cited Jan 2019]. Available from: https://amberhartwell.wordpress.com/2013/06/10/the-cipp-evaluation-model-a-summary/

81. VicHealth, John McLeod. The partnerships analysis tool: A resource for establishing, developing and maintaining partnerships for health promotion [Internet]. 2016 [cited 2018 Feb 20]. Available

from: https://www.vichealth.vic.gov.au/media-and-resources/publications/the-partnerships-analysis-tool

82. Morieux Y. Smart Rules: Six ways to get people to solve problems without you [Internet]. Harvard Business Review; 2011 Sept [cited Oct 2018]. Available from: https://hbr.org/2011/09/smart-rules-six-ways-to-get-people-to-solve-problems-without-you

83. Cresewell JW, Poth CN. 2018. Qualitative inquiry and research design: choosing among five approaches. 4th ed. California: Sage Publications, Inc; 2018. p181-198.

84. Nowell LS, Norris JM, White DE, Moules NJ. Thematic Analysis: Striving to Meet the Trustworthiness Criteria. Int J Qual Methods [Internet]. 2017 Oct 2 [cited 2018 Jun];16:1-13. Available from: https://journals.sagepub.com/doi/pdf/10.1177/1609406917733847 DOI: 10.1177/1609406917733847

85. Stufflebeam D. The 21St-Century CIPP Model: Origins, Development, and Use. In: Alkin MC, editor. Evaluation Roots [Internet]. Thousand Oaks: SAGE Publications, Inc; 2011. [cited 2019 Feb 2]. p245-266. Available from: http://methods.sagepub.com.uplib.idm.oclc.org/base/download/BookChapter/evaluation-roots/n16.xml

86. Aziz S, Mahmood M, Rehman Z. Implementation of CIPP Model for Quality Evaluation at School Level: A Case Study. Journal of Education and Educational Development [Interent]. 2018 June;5(1):p189-206. Available from: https://files.eric.ed.gov/fulltext/EJ1180614.pdf

87. The United Nations Educational, Scientific and Cultural Organization. Strategy for Technical and Vocational Education and Training (TVET) (2016-2021). Paris: UNESCO; 2016. Available from: http://unesdoc.unesco.org/images/0024/002452/245239e.pdf

88. Smit S. SA unemployment on the rise — Stats SA [Internet]. Johannesburg: Mail & Guardian; 2018 Oct 30. Available from: https://mg.co.za/article/2018-10-30-sa-unemployment-on-the-rise-stats-sa?utm_source=Mail+%26+Guardian&utm_medium=email&utm_campaign=Daily+newsletter&utm_term=https%3A%2F%2Fmg.co.za%2Farticle%2F2018-10-30-sa-unemployment-on-the-rise-stats-sa

89. Department Higher Education and Training, Republic of South Africa. National Skills Development Strategy III [Internet]. Pretoria: DHET; 2015. Available from: https://www.nationalskillsauthority.org.za/wp-content/uploads/2015/11/NSDSIII.pdf

90. Department Higher Education and Training, Republic of South Africa. White paper for post-school education and training: Building an expanded, effective and integrated post-school system [Internet]. Pretoria: DHET; 2013 Nov. Available from: http://www.dhet.gov.za/SiteAssets/Latest%20News/White%20paper%20for%20post-school%20education%20and%20training.pdf

91. The South African Qualifications Authority. Level descriptors for the South African National Qualifications Framework [Internet]. Pretoria: SAQA; 2012 Nov. Available from: http://www.saqa.org.za/docs/misc/2012/level_descriptors.pdf

92. The South African Qualifications Authority. National Qualifications Framework: Sub-frameworks and qualification types [Internet]. Pretoria: SAQA; 2015 [cited 2018 July 14]. Available from: http://www.saqa.org.za/docs/brochures/2015/updated%20nqf%20levevl%20descriptors.pdf

93. Odendaal A. What is a TVET College? [Internet]. Stellenbosch: Oxbridge Academy; 2015 Oct 15 [cited 2018 June 24]. Available from: https://www.oxbridgeacademy.edu.za/blog/what-is-a-tvet-college/

94. Mtwesi A. The need to come up with a better plan for TVET colleges [Internet]. Johannesburg: Helen Suzman Foundation. 2017 Mar 24. Available from: https://hsf.org.za/publications/hsf-briefs/the-need-to-come-up-with-a-better-plan-for-tvet-colleges

95. Harmse J. Understanding the TVET College Crisis [Interent]. Cape Town: Educonnect; 2017 Mar 1. Available from: https://educonnect.co.za/understanding-tvet-college-crisis/

96. Department of Education, Republic of South Africa. The introduction of the NC(V) qualification FAQs [Internet]. 2006. Available from: http://www.dhet.gov.za/Public%20FET%20Colleges/FAQ%E2%80%99s%20-%20Introducing%20the%20new%20National%20Certificate%20(Vocational).pdf

97. Coastal KZN TVET College. National Certificate Vocational (NCV) [Internet]. Amanzimtoti: Coastal KZN TVET College; 2014 [cited 2018 Feb 25]. Available from: http://www.coastalkzn.co.za/programmes_ncv.html

98. Department of Health, Republic of South Africa. Provincial Guideline for the implementation of three streams of PHC. 2011. Available from: http://www.jphcf.co.za/wp-content/uploads/2014/06/GUIDELINES-FOR-THE-IMPLEMENTATION-OF-THE-THREE-STREAMS-OF-PHC-4-Sept-2.pdf

99. Umalusi. Report on the Quality Assurance of Assessment of the DHET November 2016 NC (V) Examinations [Internet]. Pretoria: Umalusi; 2017 [cited 2018 Nov]. Available from: https://www.umalusi.org.za/docs/reports/2016/November%202016%20Report%20on%20the%20Quality%20Assurance%20of%20DHET%20NC(V).pdf

100. Harden RM. AMEE guide no. 21: curriculum mapping: a tool for transparent and authentic teaching and learning. Med Teach [Internet]. 2001 [cited 2018 Nov];23:123–37. Available from: https://www.simmons.edu/~/media/Simmons/About/Provost/Documents/Assessment/CURRIC_MAPPING_TOOL_FOR_TRANSPARENT_AND_AUTHENTIC.ashx?la=en

101. The Glossary of Education Reform. Curriculum mapping [Internet]. Portland, ME: Great Schools Partnership; [updated 2013 Nov; cited 2018 Nov]. Available from: https://www.edglossary.org/curriculum-mapping/

102. Norcini J, Troncon L. Theme 3: Student Assessment, Module 1: Assessment Overview. From: FAIMER Distance Learning Resources for Medical Education. 2012.

103. Wikipedia contributors. Amartya Sen [Internet]. Wikipedia, The Free Encyclopedia. [cited 2018 Jan]. Available from: https://en.wikipedia.org/wiki/Amartya_Sen

104. Chomsky N, Macedo D, editors. Chomsky on Miseducation. Lanham: Rowman & Littlefield Publishers, Inc., 2000.

105. Robeyns I. The Capability Approach. In: Zalta EN, editor. The Stanford Encyclopedia of Philosophy (Winter 2016 Edition) [Internet]. Available from: https://plato.stanford.edu/archives/win2016/entries/capability-approach/

106. Khader S. Cognitive Disability, Capabilities, and Justice. Essays in Philosophy [Internet]. 2008;9(1). Available from: https://commons.pacificu.edu/eip/vol9/iss1/11/

107. Robeyns I. Capabilitarianism, J Human Dev Capabil [Internet]. 2016;17(3):397-414. Available from: https://doi.org/10.1080/19452829.2016.1145631 DOI: 10.1080/19452829.2016.1145631

108. Sandars J, Sarojini Hart C. The Capability Approach for medical education: AMEE Guide No 97. Med Teach [Internet]. 2015;37(6):510-20. Available from: https://www.ncbi.nlm.nih.gov/pubmed/25697112 DOI: 10.3109/0142159X.2015.1013927

109. Walker M, Unterhalter E, editors. Amartya Sen's Capability Approach and Social Justice in Education. New York: Palgrave Macmillan; 2007.

110. Alkire S, Deneulin S. The Human Development and capability approach. In: Deneulin S, Shahani L, editors. An Introduction to the Human Development and Capability Approach: Freedom and Agency [Internet]. Canada: IDRC; 2009. p22-48. Available from: https://www.idrc.ca/en/book/introduction-human-development-and-capability-approach-freedom-and-agency

111. Wilcock AA. Reflections on doing, being, and becoming. Aust Occup Ther J [Internet]. 1999;46:1–11. Available from: https://onlinelibrary.wiley.com/doi/epdf/10.1046/j.1440-1630.1999.00174.x

112. Kielhofner, D. Model of Human Occupation. 3rd edition. Baltimore, MD: Lippincott Williams & Wilkins; 2002.

113. University of Victoria. The 10 Core Competencies Information Sheet. Co-operative Education Program and Career Services. Available from: https://www.uvic.ca/coopandcareer/assets/docs/student-docs/competencies/core-competencies/Description_of_10_Core_Competencies.pdf

114. Unterhalter E. Education. In: Deneulin S, Shahani L, editors. An Introduction to the Human Development and Capability Approach: Freedom and Agency [Internet]. Canada: IDRC; 2009. p207-27. Available from: https://www.idrc.ca/en/book/introduction-human-development-and-capability-approach-freedom-and-agency

115. Walker M. Appendix 1: Teaching the human development and capability approach: some pedagogical implications. In Deneulin S, Shahani L, editors. An Introduction to the Human

Development and Capability Approach: Freedom and Agency [Internet]. Canada: IDRC; 2009. P334-8. Available from: https://www.idrc.ca/en/book/introduction-human-development-and-capability-approach-freedom-and-agency

116. Davis J. Pedagogy of the Oppressed plot summary [Internet]. LitCharts; 2018. Available from: https://www.litcharts.com/lit/pedagogy-of-the-oppressed/summary

117. Burch VC, T. Sikakana CN, Gunston GD, Whittle SR, Murdoch-Eaton D. Pre-University education curriculum reform and the generic learning skills of medical school entrants: Lessons learned from South Africa. Educ Health [Internet]. 2018 [cited 2018 Nov 3];31:25-31. Available from: http://www.educationforhealth.net/text.asp?2018/31/1/25/239043

118. OECD. Successful Partnerships: A Guide [Internet]. Vienna; 2006 [cited 2018 Feb 19]. OECD LEED forum on partnerships and local governance. Available from: https://www.oecd.org/cfe/leed/36279186.pdf

119. BCG. Smart Simplicity. Six simple rules for overcoming complexity [Internet]. Boston; 2018. Available from: https://www.bcg.com/en-za/capabilities/smart-simplicity/six-simple-rules-overcoming-complexity.aspx

120. Perry H, Zulliger R, Scott K, Javadi D, Gergen J, Shelley K, Crigler L et al. Appendix A Case Studies of Large-Scale Community Health Worker Programs: Examples from Afghanistan, Bangladesh, Brazil, Ethiopia, India, Indonesia, Iran, Nepal, Pakistan, Rwanda, Zambia, and Zimbabwe. 2014 June. Available from: https://www.mchip.net/sites/default/files/mchipfiles/17a_AppA-Case%20Studies.pdf

121. Lewin S, Munabi-Babigumira S, Glenton C, Daniels K, Bosch-Capblanch X, van Wyk BE et al. Lay health workers in primary and community health care for maternal and child health and the management of infectious diseases. Cochrane Database of Systematic Reviews [Internet]. 2010;(3). DOI: 10.1002/14651858.CD004015.pub3

120. Sandé E. Read All About It (Pt. III) [Internet]. From album: Our version of events. 2012 Feb 10. Available from: https://genius.com/Emeli-sande-read-all-about-it-part-iii-lyrics https://www.youtube.com/watch?v=vaAVByGaON0

APPENDICES

APPENDIX 1: CURRICULUM STRUCTURE OF THE OCCUPATIONAL CERTIFICATE: HEALTH PROMOTION OFFICER (COMMUNITY HEALTH WORKER)

2.2. Curriculum Structure

This curriculum is made up of the following Knowledge, Practical Skill and Work Experience Modules:

Knowledge Subjects

Number	Title	NQF Level	Credits
325301-001-KS-01	Public and Community health support.	3	22
325301-001-KS-02	Family and Community Services	3	10
325301-001-KS-03	Basics of Community Health	3	8
	TOTAL CREDITS FOR KNOWLEDGE SUBJECTS	**25%**	**40**

Practical Skills Modules

Number	Title	NQF Level	Credits
325301-001-PM-01	Mobilise community to address community health issues	3	4
325301-001-PM-02	Identify the service needs and ease of access to health and social services.	3	4
325301-001-PM-03	Promote healthy life styles and mental well being.	3	6
325301-001-PM-04	Promote HIV prevention including HIV testing, condom use, partner reduction, circumcision, STI	3	4
325301-001-PM-05	Provide information on prevention of accidents and incidents in homes	2	4
325301-001-PM-06	Record and report on information provided to individuals, households and communities	3	4
325301-001-PM-07	Promote and provide support for maternal and women's	2	14
325301-001-PM-08	Promote child health	4	4
325301-001-PM-09	Support community members with psychosocial problems	4	3
325301-001-PM-10	Provide an integrated approach to support treatment	3	4
325301-001-PM-11	Identify and treat a select number of minor ailments	2	8
325301-001-PM-12	Provide basic support to people who are unable to care for themselves.	2	4
	TOTAL CREDITS FOR PRACTICAL SKILLS MODULES	**39%**	**63**

Work Experience Modules

Number	Title	NQF Level	Credits
325301-001-WM-01	Operation and dynamics of communities	4	6
325301-001-WM-02	Household registration and assessment processes.	3	14
325301-001-WM-03	Health promotion processes	3	6
325301-001-WM-04	Formal health provision processes	2	12
325301-001-WM-05	Emotional and social wellness support processes.	3	6
325301-001-WM-06	Household treatment processes of minor ailments.	3	16
	TOTAL CREDITS FOR WORK EXPERIENCE	**37%**	**60**
	TOTAL CREDITS FOR THE QUALIFICATION		**163**

APPENDIX 2: CURRICULUM STRUCTURE OF THE 10-DAY TRAINING FOR CHWS IN WBOTS

Phase 1 and 2 of the 10-day training for CHWs in WBOT teams. (Phase 1 commenced in 2011.)

3.5.1 Phase I Orientation and Training

Focus on the orientation of community health workers to the health services, the PHC re-engineering model and the role and function of the PHC outreach team. The content of the orientation and training programme is outlined in Table 8.

a. Included in phase 1 is the development of the pre-requisite skills for CHWs who will be appointed onto the PHC outreach teams.
   - basic skills such as community entry, how to conduct a household assessment and home visit, referral of community members to services in the community,
   - child and maternal health and HIV and TB.

b. Following Phase 1 the orientation and training the CHWs will be mentored and supervised by the PHC outreach team leader (professional Nurse).

c. Once the CHWs are found to be proficient and competent in the skills and knowledge of the phase 1 training and can apply these to their everyday work they will then progress to Phase 2 training.

3.5.2 Phase 2 Orientation and Training

Focus on management of the full range of Maternal and Child Health, TB and HIV and Chronic diseases and violence and injury.

See Table 8 on the next page for more detail about the Phase 1 training.

Phase 1 10-day training content for CHWs in WBOTs:

Table 8 : Phase 1 Orientation and Training Programme Content
1. An introduction to the health care system including: 1.1 What is PHC 1.2 Services that promote PHC 1.3 Roles of different structures providing PHC 1.4 Referral systems 2. PHC Outreach Team Functioning 1.1 Role of the CHW as a PC outreach team member 1.2 Role of the PHC team 1.3 Teamwork 1.4 Performance, reporting and supervision requirements 1.5 Inter-sectoral collaboration and co-operation 3. Core skills 3.1 Communication and interpersonal skills 3.2 Ethical code (confidentiality, mutual respect, dress code) 3.3 Basic counseling and psycho-social support skills 3.4 Interviewing skills 3.5 Record keeping 3.5.1 Forms, tools, registers, reports 3.6 Problem solving 3.7 Community Entry 3.8 Community Assessment 3.9 Household assessment 3.10 Individual assessment and screening using basic comprehensive screening tools for selected range of health problems including: Developmental assessment (road to health chart), Maternal health (ante natal, postnatal care, PMTCT, breast feeding), NCD hypertension and diabetes 3.11 Health promotion and education 3.12 Basic knowledge and skills to promote Child Health, Maternal Health, and prevent and provide care and support for those households affected HIV and TB
The orientation and training will also cover the use of: 1. National guidelines and protocols for delivery of primary health care outreach services by the CHW 2. Assessment and screening tools for communities, households and individuals (children, women and persons at risk for and or affected by TB and HIV. 3. Health promotion and information material 4. Treatment monitoring and adherence guidelines 5. Basic supportive and psychosocial interventions 6. Referral systems and forms (adapted for local situations)

APPENDIX 3: WBPHCOT POLICY FRAMEWORK AND STRATEGY[62]

5. Policy framework and strategy

This section briefly states the vision, values and desired outcomes of this policy framework and strategy.

5.1 Vision

An equitable distribution of a comprehensive community-based PHC service that will contribute to the improvement of health and well-being of individuals, households and communities being served.

5.2 Values

The WBPHCOT policy framework promotes the following values and principles:

- Community participation and empowerment
  - community members are considered as their own 'agents of change' and not as passive recipients of government services
  - communities gain the understanding and authority required to ensure that appropriate action is taken in addressing the issues that affect their health and well-being
- Inter-sectoral collaboration
  - health service employees plan jointly with all community-based structures and sectors to deliver services in an integrated manner
  - community structures are strengthened to ensure more effective participation in sustainable community development
- Context-specific implementation
  - to ensure effectiveness, equity with a special focus on rural underserved areas and sustainability, context specific factors such as the needs of rural communities should be considered
- Transparency
  - all stakeholders should function in an open and transparent manner

5.3 Key policy principles

5.3.1 Composition of WBPHCOTs

To achieve the aim of reduction of the mortality rates from the quadruple burden of disease through health promotion, prevention, early detection and appropriate referral, population coverage is critical. The WBPHCOT consists of six to ten community health workers (CHWs), one outreach team leader (OTL) who is an enrolled nurse and one data capturer.

An outreach team serves 6000 people. The wards with more than 6000 people will have more than one team and wards with less than 6000 people must be combined to create a team of more than one ward.

Professional nurses are currently a scarce resource in South Africa in all areas of health service provision. This hampers the establishment and functioning of WBPHCOTs in many areas of the country. Provinces started using enrolled nurses as team leaders where it proves difficult to obtain professional nurses for this role. This "and/or" situation is however not good labour practice since it amounts to equating professional nurses with enrolled nurses. For this reason, the National Health Council (NHC) approved that enrolled nurses who have been oriented to community health nursing should be the team leaders for the WBPHCOTs.

This is a more cost effective option since the training of an enrolled nurse is shorter than that of a professional nurse and it will serve as another stream of job creation for South Africans. The quality of the work delivered will be monitored by the PHC clinic manager. The status quo of "and/or" should however remain until sufficient enrolled nurses have been trained.

5.3.2 Distribution of WBPHCOTs

Because health service provision priorities compete for a share from a finite budget, a phased scale-up approach is advised such that CHW numbers are increased as more funding becomes available. Such an approach requires the selection of a population subset or wards where the service should be scaled up. Based on the important PHC principle of equity, poorest communities deserve to be served first. As a start the scale up will be focussed in municipalities with a multi-dimensional poverty index per Statistics South Africa's upper bound poverty line of p ≥ 0.-6. In addition, provinces should identify and service pockets of poor communities that reside in municipalities that fall below this poverty line.

5.3.3 Scope of work

The scope of work of CHWs is in line with South Africa's disease burden priorities and is attached as Annexure A.

5.3.4 Recruitment

A database of current CHWs must be developed and maintained by provincial departments of health. The national Department of Health will consolidate the information into a national repository. The recruitment of members making up the WBPHCOT must only be done after consideration of the community-based health workers who are on the database.

5.3.5 Key skills requirements

Kinds and levels of competencies in WBPHCOTs differ. More generally, CHWs are inadequately prepared for their role because of low levels of basic education and knowledge and skills are limited to competencies relating to legacy vertical programmes. CHWs also fare differently regarding mastering the training content. This is because the entry requirements for CHWs vary vastly.

The minimum requirements for CHWs should be matriculation (Grade 12) subject to training programme.

Where possible, recognition of prior learning principles will be applied to CHWs who are already in the system and who have undergone relevant training.

5.4 Desired policy outcome

The long-term impact of the WBPHCOT policy framework and strategy should be a long and healthy life for all within a supportive and cohesive community. The goal outlined below are aimed at ensuring efficient service delivery at community level.

Policy goal and objectives

Broad Goal: Efficient management and leadership of WBPHCOTs to support the delivery of primary healthcare services in South Africa

Goal 1: Improve the working conditions of WBPHCOTS

Objective 1:

- Standardise the WBPHCOTs management structures at provincial and district level.

Objective 2:

- Standardise roles and responsibilities of the following actors in the provision of community level services:
    - clinic manager
    - environmental health officer
    - facility-based health promoter
    - community health worker team leader
    - community health worker

Objective 3:

- Complete the CHW investment case to obtain the required budget over the MTEF period for a well-resourced and well-functioning institutionalised CHW programme.

Objective 4:

- Complete and maintain the national CHW information database and use the information to confirm existing CHWs in teams required to serve specific communities.

Goal 2: Improve Human Resource Recruitment, Selection, Placement, Development and Management pertaining to the WBPHCOT Programme

Objective 5:

- Define an adequate ratio of WBPHCOTs to population and households allowing for differential geographic distribution, and considering problems with access in rural areas.

Objective 6:

- Ensure that WBPHCOTs are fully staffed and equitably distributed throughout South Africa.

Objective 7:

- Ensure appropriate implementation and management of recruitment, selection, appointment, placement, remuneration, skills development, dispute resolution and occupational health and safety processes for all members of WBPHCOTs.

Objective 8:

- Ensure adequate supervision and support for CHWs as well as for WBPHCOT leaders.

Goal 3: Standardize the WBPHCOT scope of work and ensure standardized application in all nine provinces of South Africa

Objective 9:

- Ensure standardized implementation of the approved scope of work

Objective 10:

- Confirm training content and method for ensuring the WBPHCOTs are capacitated to provide the required services.

Objective 11:

- Ensure, as part of the Ideal Clinic programme, that WBPHCOTs have adequate physical space in clinics to prepare for their day in the field and to meet their data recording and reporting responsibilities.

Goal 4: Improve and maintain the monitoring and evaluation system for the WBPHCOT programme

Objective 12:

- Review and standardise current indicators and data collection tools across all provinces.

Objective 13:

- Establish the required structures at national, provincial, district and PHC facility level for data collection and reporting.

Objective 14:

- Ensure submission of monthly activity data from PHC facilities into the DHIS, quarterly progress reports as well as a five yearly outcome and impact reports from NDoH and provinces.

APPENDIX 4: ROUGH GUIDE FOR QUESTIONS

ROUGH GUIDE FOR INTERVIEW AND FOCUS GROUP QUESTIONS

Interviews and focus groups will take the form of conversations between the researcher and the respondents that are guided by a general plan of inquiry rather than a specific set of questions, so that specific topics raised by respondents can be pursued.[1]

Some ideas for questions have been set up as a rough guide to interviews and focus groups, particularly to obtain information relating to behaviours, opinions, values, feelings, knowledge, and sensory experiences.[2]

Questions will be adapted according to who is being interviewed or who is part of the focus group i.e. students, lecturers, managers, etc.

Notes will be made of all observations made in the various settings for later analysis.

- Standard background information will be obtained e.g. age, education, work history, etc.
- The context in which the interviews and focus groups occur will be discussed, explored and described.

Some questions to ask part-time NC(V) Primary Health students who are also working as CHWs in the CoT:

- Why are you studying the NC(V) Primary Health qualification?
- Describe what kind of student you are?
- What is your attitude to learning?
- How do you feel about the NC(V) Primary Health programme?
- What would you like to do after you have obtained your qualification?
- In what ways has the NC(V) Primary Health qualification prepared you for/helped you in your work?
- Describe the relevance of the NC(V) Primary Health qualification to your community…
- In what ways has the knowledge gained in the NC(V) Primary Health qualification affected your everyday life?
- How have you changed while studying the NC(V) Primary Health qualification?
- How have you been able to apply what you have learnt to real-life scenarios?
- Describe how you feel about your ability to work as a CHW…
- Describe some positive experiences you have had while studying the NC(V) Primary Health qualification….

- Describe some negative experiences you have had while studying the NC(V) Primary Health qualification…
- What do you think is the best part of the NC(V) Primary Health qualification?
- What do you think is the worst part of the NC(V) Primary Health qualification? / What do you like the least about the NC(V) Primary Health qualification?
- What would you like to change about the NC(V) Primary Health qualification?
- What would you not like to change about the NC(V) Primary Health qualification?

Some questions to ask the full-time NC(V) Primary Health lecturers at TVET colleges:

- How do you feel about the NC(V) Primary Health programme?
- Describe what you think the relevance is of the NC(V) Primary Health qualification...
- Describe your students' attitudes to learning…
- Describe some positive experiences you have had while teaching the NC(V) Primary Health qualification….
- Describe some negative experiences you have had while teaching the NC(V) Primary Health qualification…
- What would you like to change about the NC(V) Primary Health qualification?
- What would you not like to change about the NC(V) Primary Health qualification?
- How have you changed while teaching the NC(V) Primary Health qualification?

Some questions to part-time NC(V) Primary Health lecturers at the University of Pretoria:

- What is your role in the NC(V) Primary Health programme?
- What are your qualifications and any experience you have that contributed to your involvement in the NC(V) Primary Health programme?
- In what way are they helpful towards the classes/subject you teach?
- What are the positive aspects of the NC(V) Primary Health programme that you have observed?
- What are the negative aspects that you have observed?
- Are there any obstacles you face in your teaching in the NC(V) Primary Health programme?
- Have you observed any obstacles that the students participating in the programme might face?

- What are your impressions of working in an interdisciplinary team?
- Would you recommend this approach in the training of community health workers and other cadres? If so, why?
- In your opinion, what benefits are there to working in an interdisciplinary way in CHW training?
- Do you have any suggestions regarding the NC(V) Primary Health programme and/or this project?
- Is there anything else that you would like to contribute in this discussion…?

Some questions to key informants:

- How do you feel about WBOTs?
- How do you feel about the role of CHWs?
- What do you think about the training of CHWs?
- How do you feel about the NC(V) Primary Health programme?
- Describe what you feel about the relevance of the NC(V) Primary Health qualification?
- What do you think should be included in CHW training?

References:

1. Babbie E, Mouton J. The practice of social research. South African ed. Cape Town: Oxford University Press Southern Africa, 2005.
2. ResearchMeth. Interview. Tangient LLC; [2016; cited 2016/01/09]. Available from: http://researchmeth.wikispaces.com/Interview

APPENDIX 5: ETHICS APPROVAL

The Research Ethics Committee, Faculty Health Sciences, University of Pretoria complies with ICH-GCP guidelines and has US Federal wide Assurance.
- FWA 00002567, Approved dd 22 May 2002 and Expires 20 Oct 2016.
- IRB 0000 2235 IORG0001762 Approved dd 22/04/2014 and Expires 22/04/2017.

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Faculty of Health Sciences Research Ethics Committee

25/02/2016

Approval Certificate
New Application

Ethics Reference No.: 46/2016

Title: AN EVALUATION OF THE NATIONAL CERTIFICATE (VOCATIONAL) PRIMARY HEALTH QUALIFICATION FOR COMMUNITY HEALTH WORKERS IN SOUTH AFRICA

Dear Michelle Janse van Rensburg

The **New Application** as supported by documents specified in your cover letter dated 01/02/2016 for your research received on the 01/02/2016, was approved by the Faculty of Health Sciences Research Ethics Committee on its quorate meeting of 24/02/2016.

Please note the following about your ethics approval:
- Ethics Approval is valid for 3 years.
- Please remember to use your protocol number (**46/2016**) on any documents or correspondence with the Research Ethics Committee regarding your research.
- Please note that the Research Ethics Committee may ask further questions, seek additional information, require further modification, or monitor the conduct of your research.

Ethics approval is subject to the following:
- The ethics approval is conditional on the receipt of 6 monthly written Progress Reports, and
- The ethics approval is conditional on the research being conducted as stipulated by the details of all documents submitted to the Committee. In the event that a further need arises to change who the investigators are, the methods or any other aspect, such changes must be submitted as an Amendment for approval by the Committee.

We wish you the best with your research.

Yours sincerely

Dr R Sommers; MBChB; MMed (Int); MPharMed. PhD
Deputy Chairperson of the Faculty of Health Sciences Research Ethics Committee, University of Pretoria

The Faculty of Health Sciences Research Ethics Committee complies with the SA National Act 61 of 2003 as it pertains to health research and the United States Code of Federal Regulations Title 45 and 46. This committee abides by the ethical norms and principles for research, established by the Declaration of Helsinki, the South African Medical Research Council Guidelines as well as the Guidelines for Ethical Research: Principles Structures and Processes 2004 (Department of Health).

☎ 012 354 1677 🖷 0866516047 deepeka.behari@up.ac.za http://www.up.ac.za/healthethics
✉ Private Bag X323, Arcadia, 0007 - 31 Bophelo Road, HW Snyman South Building, Level 2, Room 2.33, Gezina, Pretoria

APPENDIX 6: PERMISSION FROM DHET

higher education
& training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

Private Bag X174, PRETORIA, 0001, 123 Francis Baard Street, PRETORIA, 0002, South Africa
Tel: (012) 312 5911, Fax: (012) 321 6770
Private Bag X9192, CAPE TOWN, 8000, 103 Plein Street, CAPE TOWN, 8001, South Africa
Tel: (021) 469 5175, Fax: (021) 461 4761

Enquiries: Renay Pillay ***Email: Pillay.r@dhet.gov.za*** ***Telephone: 012 312 6191***

Mrs Michelle Janse Van Rensburg
Private Bag X323
Arcadia
PRETORIA
0007

By e-mail: michellevren@gmail.com

Dear Mrs van Rensburg

REQUEST FOR PERMISSION TO UNDERTAKE RESEARCH IN FOURTEEN PUBLIC TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING (TVET) COLLEGES: AN EVALUATION OF THE NATIONAL CERTIFICATE (VOCATIONAL) PRIMARY HEALTH QUALIFICATION FOR COMMUNITY HEALTH WORKERS IN SOUTH AFRICA

I acknowledge receipt of your request for permission to conduct research in fourteen (14) public Technical and Vocational Education and Training (TVET) Colleges, on the topic "An evaluation of the National Certificate (Vocational) primary health qualification for community health workers in South Africa".

Your request has been evaluated by the DHET and it is my pleasure to inform you that your request for permission to undertake the above research has been granted. You are advised to obtain further permission from the Principals of the fourteen (14) public TVET Colleges (listed below), before commencing any research activities.

The fourteen TVET Colleges are:

1. Ekurhuleni East TVET College	8. Umfolozi TVET College
2. South West Gauteng TVET College	9. West Coast TVET College
3. Maluti TVET College	10. Boland TVET College
4. Taletso TVET College	11. College of Cape Town TVET College
5. Waterberg TVET College	12. Northlink TVET College
6. Capricorn TVET College	13. Eastcape Midlands TVET College
7. Gert Sibande TVET College	14. Northern Cape Urban TVET College

You are requested to attach the following documents when communicating with the Principals of TVET Colleges:

1) Copy of this letter from the DHET;
2) Copy of the "Ethical Clearance Certificate" issued by the University of Pretoria; and
3) Copy of the "completed application form to undertake research in public TVET Colleges".

You are requested to attach a copy of this letter from the DHET and the completed "application form to undertake research in public colleges" when communicating with Principals.

The topic of your research is of great interest to the Department. It will therefore be appreciated if you could share the findings of your research with the Department upon completion of your research.

I wish you all of the best in your research study.

Yours sincerely

pp **Mr GF Qonde**
Director-General

ACTING DDG: POLICY, PLANNING & STRATEGY

Date: 27/05/2014

APPENDIX 7: PERMISSION FROM CITY OF TSHWANE

Permission to conduct research in Ward-based Outreach Teams

To: The Manager,
Department of Health
City of Tshwane

From: The Investigator,
Department of Family Medicine
University of Pretoria

29 February 2016

Dear Mrs Madiseng,

Re: Permission to conduct research with Ward-based Outreach Team members in Mamelodi

I am a PhD candidate from the Department of Family Medicine at the University of Pretoria. My research supervisor is Prof Tessa Marcus. I would like to request permission to conduct a study in Mamelodi with Ward-based Outreach Teams (WBOTs). This research will involve interviews and focus groups with community health workers (CHWs) and team leaders/managers, as well as access to relevant data.

The title of the study is: "AN EVALUATION OF THE NATIONAL CERTIFICATE (VOCATIONAL) PRIMARY HEALTH QUALIFICATION FOR COMMUNITY HEALTH WORKERS IN SOUTH AFRICA". This study has been approved by the University of Pretoria's PhD Committee.

The request is lodged with you in terms of the requirements of the Promotion of Access to Information Act, No. 2 of 2000. I request access to the Ward-based Outreach Team data base, as well as permission to interview and/or conduct focus groups with a selection of CHWs and team leaders.

I intend to publish the findings of the study in a professional journal and/or at professional meetings such as symposia, congresses, or other meetings of similar nature. I further intend to protect the personal identity of the participants by assigning each participant a random code number. I undertake not to proceed with the study until I have received approval from the Faculty of Health Sciences' Research Ethics Committee, University of Pretoria.

You are welcome to contact me or Prof Marcus if you have any queries regarding the study. My cellphone number is 0834065648 and my email address is michellevren@gmail.com. Prof Marcus can be emailed at tessa.marcus@up.ac.za.

Thank you for your consideration in this regard.

Yours faithfully,

Michelle Janse van Rensburg

Permission to do the research study and to access the information, as requested, is hereby approved.

Manager: MATHIBA MADISENG

Signature of Manager: _____ Date: 7/03/2016

Page 1 of 1

APPENDIX 8: INFORMED CONSENT

INFORMATION ABOUT THE RESEARCH AND INFORMED CONSENT FORM

Research Title:

AN EVALUATION OF THE NATIONAL CERTIFICATE (VOCATIONAL) PRIMARY HEALTH QUALIFICATION FOR COMMUNITY HEALTH WORKERS IN SOUTH AFRICA

Principal investigator: Ms M Janse van Rensburg
Institution: University of Pretoria

DAYTIME AND AFTER-HOURS TELEPHONE NUMBER:

Daytime numbers: 0834065648

DATE AND TIME OF FIRST INFORMED CONSENT DISCUSSION:

				:
dd	mm	yy		Time

Dear Participant,

You are invited to volunteer to participate in a research study about the **NC(V) Primary Health** qualification.

This document provides you with the information needed to help you decide if you want to participate. Before you agree to take part, you should fully understand what is involved. If you have any questions that are not adequately explained in this document, please do not hesitate to ask the researcher. You should not agree to take part unless you are completely happy about all the procedures involved.

1. THE NATURE AND PURPOSE OF THIS STUDY

The aim of this study is to determine **if the NC(V) Primary Health qualification is adequate, appropriate, effective, and relevant training for community health workers**, especially for those who work in primary health care teams in South Africa.

2. RESEARCH PROCEDURES

a) All the Technical Vocational Education and Training (TVET) colleges across the country that present the NC(V) Primary Health qualification will be visited during 2016. Interviews and focus groups will be conducted with lecturers and students to gain information about perceptions, opinions and experiences in terms of the NC(V) programme.

b) Relevant documents will be reviewed, such as curriculum documents, training guides, textbooks, manuals, etc. Student assessments will be analysed where available and relevant, for example, the Level 4 Integrated Summative Assessment Task (ISAT) will provide interesting information based on students' reflections.

c) In-depth interviews will be done with key informants and stakeholders, such as managers of ward-based outreach teams (WBOTs), curriculum experts who have contributed to the NC(V) Primary Health curriculum, role players from the National- and Provincial Departments of Health, the Department of Higher Education and Training (DHET), and the Health and Welfare Sector Education and Training Authority (HWSETA).

d) Where possible, CHWs and community members will be interviewed about their needs and experiences regarding the work of CHWs.

e) Data collection and analysis will occur throughout 2016 and 2017. Results will be written up during 2017 with recommendations being formulated and presented by the beginning of 2018.

3. RISKS AND DISCOMFORTS INVOLVED

There are no risks involved in participating in this study. You will be asked to give voluntarily of your time in order to be interviewed, or participate in focus groups. Appointments will be made well in advance and sufficient time will be given for any communication between participants and the researcher.

4. POSSIBLE BENEFITS OF THIS STUDY

While you might not benefit directly from this research, this study will contribute to understanding how best to equip CHWs in order to strengthen their contribution within Community Oriented Primary Care

(COPC). Results obtained will help to standardise CHW training in South Africa, so that CHWs can optimally fill relevant gaps in the South African health system, while they develop capacity and meet their personal employment and learning aspirations.

5. WHAT ARE YOUR RIGHTS AS A PARTICIPANT?

Your participation in this study is entirely voluntary. You do not have to participate if you do not want to.

If you do choose to participate, you can decide to withdraw from the research at any time, without needing to give any reasons.

Your decision either way will not affect your studies or employment in any manner.

6. HAS THE STUDY RECEIVED ETHICAL APPROVAL?

This research study's proposal has been submitted to the Ethics Committee of the Faculty of Health Sciences at the University of Pretoria (telephone numbers 012 3541677 / 012 3541330) for ethical approval and written approval had been granted by that committee.

Permission to conduct the research will also be requested from the relevant provincial and/or local managers, as well as from all the training institutions included in this study.

Informed consent will be obtained from every individual participant and no-one will be included in the study if they have not given their informed consent.

7. CONFIDENTIALITY

All information that you give us will be treated as strictly confidential. It will not be linked to your name or anything that can identify you personally. Focus groups and interviews will need to be recorded (audio) in order to better analyse the research data, however, no recording may be done unless you have given your permission. No names of individuals will be recorded or made known in the reporting or dissemination of results.

8. CONTACT DETAILS

The contact person for this study is **Michelle Janse van Rensburg**.

Ms Janse van Rensburg is a PhD Candidate at the Department of Family Medicine, Faculty of Health Sciences, University of Pretoria.

You are welcome to contact her with any questions you may have about this study on her cell at **0834065648** or via email at michellevren@gmail.com.

The academic supervisor for this study is Prof T Marcus from the Department of Family Medicine, Faculty of Health Sciences, University of Pretoria. The Department of Family Medicine's research assistant is Ms N Smit, who can be contacted on 012 3541424 or nicoleen.smit@up.ac.za.

9. CONSENT TO PARTICIPATE IN THIS STUDY – participant copy

- I confirm that the person requesting my consent to take part in this study has told me about the nature and process, any risks or discomforts, and the benefits of the study.
- I have also received, read and understood the above written information about the study.
- I have had adequate time to ask questions and I have no objections to participate in this study.
- I am aware that the information obtained in the study, including personal details, will be anonymously processed and presented in the reporting of results.
- I give permission for the interviews and/or focus groups that I participate in to be recorded.
- I understand that I will not be penalised in any way should I wish to discontinue with the study and my withdrawal will not affect my employment or student status.
- I am participating willingly.
- I have received a signed copy of this informed consent agreement.

_____

Name: Participant (Please print)

_____ _____

Signature: Participant Date

_____

Name: Researcher (Please print)

_____ _____

Signature: Researcher Date

_____

Name: Witness (Please print)

_____ _____

Signature: Witness Date

10. CONSENT TO PARTICIPATE IN THIS STUDY – researcher copy

- I confirm that the person requesting my consent to take part in this study has told me about the nature and process, any risks or discomforts, and the benefits of the study.
- I have also received, read and understood the above written information about the study.
- I have had adequate time to ask questions and I have no objections to participate in this study.
- I am aware that the information obtained in the study, including personal details, will be anonymously processed and presented in the reporting of results.
- I give permission for the interviews and/or focus groups that I participate in to be recorded.
- I understand that I will not be penalised in any way should I wish to discontinue with the study and my withdrawal will not affect my employment or student status.
- I am participating willingly.
- I have received a signed copy of this informed consent agreement.

_____

Name: Participant (Please print)

_____ _____

Signature: Participant Date

_____

Name: Researcher (Please print)

_____ _____

Signature: Researcher Date

_____

Name: Witness (Please print)

_____ _____

Signature: Witness Date

APPENDIX 9: INTERNAL CONTINUOUS ASSESSMENT (ICASS) GUIDELINES FOR NC(V) QUALIFICATIONS

TVET Curriculum Instruction: Internal Continuous Assessment (ICASS) guidelines for NC(V) qualifications

See the full document on Google Drive:

https://drive.google.com/open?id=1HK077Jfkrje1vrnV1jlkK4k7tAvlXgyW

APPENDIX 10: LEARNING OUTCOMES OF THE VOCATIONAL SUBJECTS

For more information about the vocational subjects' learning outcomes, please see the following documents on the Google drive:

https://drive.google.com/open?id=1m35esOEQrWIUfeK0nTK8ZdTD-tfVMNrp

APPENDIX 11: L3 AND L4 ICASS GUIDELINES

https://drive.google.com/open?id=1i7AX-IeM9EBNfG4A4Pe4gB4z56lxZzr2

APPENDIX 12: PRIMARY HEALTH RESOURCE LIST

NC(V) Primary Health Resource list

See full document on Google drive

https://drive.google.com/open?id=1OQWt5tESnAFWiW7I-scCXTdMydJoTajX

APPENDIX 13: NATIONAL RESULTS

National results of NC(V) Programmes 2014

Level	Programme Name	Entered	Wrote	Passed	Pass %
NC(V) Level 2	CIVIL ENGINEERING AND BUILDING CONSTR	7 829	6 421	1 308	20,4
	DRAWING OFFICE PRACTICE	81	59	10	16,9
	EDUCATION AND DEVELOPMENT	1 960	1 646	632	38,4
	ELECTRICAL INFRASTRUCTURE CONSTRUCTIO	12 679	10 573	1 940	18,3
	ENGINEERING AND RELATED DESIGN	13 316	11 231	2 264	20,2
	FINANCE, ECONOMICS AND ACCOUNTING	6 910	5 515	1 343	24,4
	HOSPITALITY	5 544	4 680	1 607	34,3
	INFORMATION TECHNOLOGY AND COMPUTER S	6 250	5 064	710	14,0
	MANAGEMENT	4 565	3 617	753	20,8
	MARKETING	4 762	3 916	1 024	26,1
	MECHATRONICS	655	598	168	28,1
	OFFICE ADMINISTRATION	18 855	15 884	5 799	36,5
	PRIMARY AGRICULTURE	3 257	2 663	666	25,0
	PRIMARY HEALTH	1 698	1 376	693	50,4
	PROCESS PLANT OPERATIONS	413	331	107	32,3
	SAFETY IN SOCIETY	3 267	2 724	1 090	40,0
	TOURISM	5 956	4 747	1 681	35,4
	TRANSPORT AND LOGISTICS	1 075	898	323	36,0
NC(V) Level 3	CIVIL ENGINEERING AND BUILDING CONSTR	3 820	3 579	641	17,9
	EDUCATION AND DEVELOPMENT	878	804	370	46,0
	ELECTRICAL INFRASTRUCTURE CONSTRUCTIO	5 854	5 557	1 017	18,3
	ENGINEERING AND RELATED DESIGN	6 822	6 307	965	15,3
	FINANCE, ECONOMICS AND ACCOUNTING	3 660	3 396	787	23,2
	HOSPITALITY	3 042	2 801	883	31,5
	INFORMATION TECHNOLOGY AND COMPUTER S	3 053	2 835	392	13,8
	MANAGEMENT	2 670	2 436	594	24,4
	MARKETING	2 721	2 506	778	31,0
	MECHATRONICS	424	398	95	23,9
	OFFICE ADMINISTRATION	14 020	13 064	3 590	27,5
	PRIMARY AGRICULTURE	1 406	1 339	362	27,0
	PRIMARY HEALTH	779	717	456	63,6
	PROCESS PLANT OPERATIONS	210	204	61	29,9
	SAFETY IN SOCIETY	2 165	1 999	692	34,6
	TOURISM	3 262	2 968	916	30,9
	TRANSPORT AND LOGISTICS	513	479	203	42,4
NC(V) Level 4	CIVIL ENGINEERING AND BUILDING CONSTR	1 954	1 864	329	17,7
	EDUCATION AND DEVELOPMENT	556	533	299	56,1
	ELECTRICAL INFRASTRUCTURE CONSTRUCTIO	3 126	3 017	595	19,7
	ENGINEERING AND RELATED DESIGN	3 229	3 114	520	16,7
	FINANCE, ECONOMICS AND ACCOUNTING	2 321	2 204	418	19,0
	HOSPITALITY	1 682	1 609	532	33,1
	INFORMATION TECHNOLOGY AND COMPUTER S	1 543	1 488	130	8,7
	MANAGEMENT	1 395	1 328	466	35,1
	MARKETING	1 482	1 410	391	27,7
	MECHATRONICS	210	204	49	24,0
	OFFICE ADMINISTRATION	7 579	7 232	2 670	36,9
	PRIMARY AGRICULTURE	856	832	219	26,3
	PROCESS PLANT OPERATIONS	40	39	5	12,8
	SAFETY IN SOCIETY	1 303	1 237	423	34,2
	TOURISM	1 648	1 573	758	48,2
	TRANSPORT AND LOGISTICS	209	204	49	24,0
Total		183 504	161 220	42 773	26,5

Open Rubric

National results of NC(V) Programmes 2015

Level	Programme Name	Entered	Wrote	Passed	Pass %
NC(V) Level 2	CIVIL ENGINEERING AND BUILDING CONSTR	6 985	4 934	1 414	28,7
	DRAWING OFFICE PRACTICE	117	51	13	25,5
	EDUCATION AND DEVELOPMENT	1 754	1 358	748	55,1
	ELECTRICAL INFRASTRUCTURE CONSTRUCTIO	12 177	8 879	2 162	24,3
	ENGINEERING AND RELATED DESIGN	12 342	8 905	2 784	31,3
	FINANCE, ECONOMICS AND ACCOUNTING	5 525	3 872	1 376	35,5
	HOSPITALITY	5 316	3 887	1 725	44,4
	INFORMATION TECHNOLOGY AND COMPUTER S	5 513	3 817	1 144	30,0
	MANAGEMENT	4 307	2 859	1 116	39,0
	MARKETING	4 329	2 929	1 042	35,6
	MECHATRONICS	624	510	222	43,5
	OFFICE ADMINISTRATION	17 109	12 875	6 005	46,6
	PRIMARY AGRICULTURE	2 874	2 031	713	35,1
	PRIMARY HEALTH	2 167	1 475	830	56,3
	PROCESS PLANT OPERATIONS	355	290	109	37,6
	SAFETY IN SOCIETY	3 377	2 249	1 156	51,4
	TOURISM	5 768	3 787	1 716	45,3
	TRANSPORT AND LOGISTICS	1 321	966	463	47,9
NC(V) Level 3	CIVIL ENGINEERING AND BUILDING CONSTR	3 356	2 871	926	32,3
	DRAWING OFFICE PRACTICE	16	12	6	50,0
	EDUCATION AND DEVELOPMENT	972	855	486	56,8
	ELECTRICAL INFRASTRUCTURE CONSTRUCTIO	5 047	4 501	1 491	33,1
	ENGINEERING AND RELATED DESIGN	5 903	4 942	1 469	29,7
	FINANCE, ECONOMICS AND ACCOUNTING	3 289	2 887	995	34,5
	HOSPITALITY	2 802	2 431	1 055	43,4
	INFORMATION TECHNOLOGY AND COMPUTER S	2 602	2 248	760	33,8
	MANAGEMENT	2 101	1 818	638	35,1
	MARKETING	2 236	1 881	896	47,6
	MECHATRONICS	395	360	130	36,1
	OFFICE ADMINISTRATION	12 016	10 471	4 142	39,6
	PRIMARY AGRICULTURE	1 313	1 142	456	39,9
	PRIMARY HEALTH	965	829	500	60,3
	PROCESS PLANT OPERATIONS	236	226	94	41,6
	SAFETY IN SOCIETY	1 947	1 533	643	41,9
	TOURISM	3 101	2 530	1 032	40,8
	TRANSPORT AND LOGISTICS	633	581	282	48,5
NC(V) Level 4	CIVIL ENGINEERING AND BUILDING CONSTR	1 695	1 493	378	25,3
	EDUCATION AND DEVELOPMENT	564	531	295	55,6
	ELECTRICAL INFRASTRUCTURE CONSTRUCTIO	2 826	2 631	809	30,7
	ENGINEERING AND RELATED DESIGN	2 681	2 428	691	28,5
	FINANCE, ECONOMICS AND ACCOUNTING	2 169	1 961	644	32,8
	HOSPITALITY	1 682	1 526	603	39,5
	INFORMATION TECHNOLOGY AND COMPUTER S	1 448	1 312	224	17,1
	MANAGEMENT	1 355	1 230	643	52,3
	MARKETING	1 529	1 359	475	35,0
	MECHATRONICS	215	209	57	27,3
	OFFICE ADMINISTRATION	7 985	7 273	3 494	48,0
	PRIMARY AGRICULTURE	775	705	261	37,0
	PRIMARY HEALTH	548	516	291	56,4
	PROCESS PLANT OPERATIONS	84	69	8	11,6
	SAFETY IN SOCIETY	1 337	1 178	532	45,2
	TOURISM	1 641	1 438	928	64,5
	TRANSPORT AND LOGISTICS	361	343	146	42,6
Total		169 785	133 994	51 218	38,2

National results of NC(V) Programmes 2016

Level	Programme Name	Entered	Wrote	Passed	Pass %
NC(V) Level 2	OFFICE ADMINISTRATION	17 650	13 570	7 336	54,1
	HOSPITALITY	5 356	4 011	2 110	52,6
	MANAGEMENT	4 335	2 976	1 344	45,2
	EDUCATION AND DEVELOPMENT	1 756	1 375	875	63,6
	ENGINEERING AND RELATED DESIGN	12 687	9 394	3 621	38,5
	ELECTRICAL INFRASTRUCTURE CONSTRUCTIO	12 380	9 233	3 174	34,4
	TOURISM	5 868	3 942	2 037	51,7
	PRIMARY HEALTH	2 255	1 573	994	63,2
	SAFETY IN SOCIETY	3 575	2 442	1 344	55,0
	MARKETING	4 345	3 008	1 360	45,2
	TRANSPORT AND LOGISTICS	1 322	985	528	53,6
	CIVIL ENGINEERING AND BUILDING CONSTR	7 129	5 189	1 925	37,1
	INFORMATION TECHNOLOGY AND COMPUTER S	5 598	3 966	1 560	39,3
	PRIMARY AGRICULTURE	2 875	2 080	940	45,2
	FINANCE, ECONOMICS AND ACCOUNTING	5 634	4 063	1 719	42,3
	MECHATRONICS	627	517	258	49,9
	DRAWING OFFICE PRACTICE	117	58	20	34,5
	PROCESS PLANT OPERATIONS	355	301	138	45,8
NC(V) Level 3	OFFICE ADMINISTRATION	12 968	11 582	5 518	47,6
	HOSPITALITY	2 971	2 615	1 398	53,5
	MANAGEMENT	2 293	2 026	858	42,3
	EDUCATION AND DEVELOPMENT	1 027	932	642	68,9
	ENGINEERING AND RELATED DESIGN	6 528	5 564	2 208	39,7
	ELECTRICAL INFRASTRUCTURE CONSTRUCTIO	5 488	4 959	2 032	41,0
	TOURISM	3 298	2 797	1 356	48,5
	PRIMARY HEALTH	1 085	934	637	68,2
	SAFETY IN SOCIETY	2 098	1 771	895	50,5
	MARKETING	2 418	2 088	1 140	54,6
	TRANSPORT AND LOGISTICS	655	606	345	56,9
	CIVIL ENGINEERING AND BUILDING CONSTR	3 681	3 193	1 315	41,2
	INFORMATION TECHNOLOGY AND COMPUTER S	2 824	2 492	1 089	43,7
	PRIMARY AGRICULTURE	1 442	1 262	645	51,1
	FINANCE, ECONOMICS AND ACCOUNTING	3 543	3 163	1 393	44,0
	MECHATRONICS	425	391	155	39,6
	DRAWING OFFICE PRACTICE	21	19	8	42,1
	PROCESS PLANT OPERATIONS	260	249	113	45,4
NC(V) Level 4	OFFICE ADMINISTRATION	8 732	8 026	3 849	48,0
	HOSPITALITY	1 783	1 622	654	40,3
	MANAGEMENT	1 487	1 359	734	54,0
	EDUCATION AND DEVELOPMENT	598	557	306	54,9
	ENGINEERING AND RELATED DESIGN	3 012	2 722	811	29,8
	ELECTRICAL INFRASTRUCTURE CONSTRUCTIO	3 072	2 859	967	33,8
	TOURISM	1 730	1 538	989	64,3
	PRIMARY HEALTH	581	544	305	56,1
	SAFETY IN SOCIETY	1 432	1 256	585	46,6
	MARKETING	1 636	1 491	561	37,6
	TRANSPORT AND LOGISTICS	379	359	158	44,0
	CIVIL ENGINEERING AND BUILDING CONSTR	1 914	1 704	466	27,3
	INFORMATION TECHNOLOGY AND COMPUTER S	1 603	1 471	316	21,5
	PRIMARY AGRICULTURE	835	768	319	41,5
	FINANCE, ECONOMICS AND ACCOUNTING	2 325	2 127	810	38,1
	MECHATRONICS	246	232	77	33,2
	PROCESS PLANT OPERATIONS	122	107	12	11,2
Total		178 376	144 068	64 949	45,1

National results of NC(V) Programmes 2017

Level	Programme Name	Entered	Wrote	Passed	Pass %
L2	OFFICE ADMINISTRATION	16 154	9 010	5 964	66,2
	HOSPITALITY	5 325	2 847	1 861	65,4
	MANAGEMENT	4 210	1 990	1 255	63,1
	EDUCATION AND DEVELOPMENT	1 830	1 038	756	72,8
	ENGINEERING AND RELATED DESIGN	10 507	5 252	2 971	56,6
	ELECTRICAL INFRASTRUCTURE CONSTRUCTION	10 921	5 560	2 901	52,2
	TOURISM	5 409	2 656	1 697	63,9
	PRIMARY HEALTH	700	422	279	66,1
	SAFETY IN SOCIETY	3 173	1 635	1 020	62,4
	TRANSPORT AND LOGISTICS	2 067	1 198	755	63,0
	CIVIL ENGINEERING AND BUILDING CONSTRUCTION	6 117	2 994	1 721	57,5
	INFORMATION TECHNOLOGY AND COMPUTER SCIENCE	4 963	2 247	1 236	55,0
	PRIMARY AGRICULTURE	2 687	1 442	927	64,3
	MARKETING	4 177	1 975	1 166	59,0
	FINANCE, ECONOMICS AND ACCOUNTING	5 503	2 618	1 560	59,6
	MECHATRONICS	574	283	156	55,1
	DRAWING OFFICE PRACTICE	117	36	18	50,0
	PROCESS PLANT OPERATIONS	368	241	106	44,0
L3	OFFICE ADMINISTRATION	8 670	7 052	4 645	65,9
	HOSPITALITY	2 256	1 811	1 101	60,8
	MANAGEMENT	1 784	1 294	668	51,6
	EDUCATION AND DEVELOPMENT	716	611	499	81,7
	ENGINEERING AND RELATED DESIGN	4 174	3 047	1 608	52,8
	ELECTRICAL INFRASTRUCTURE CONSTRUCTION	3 784	3 167	1 438	45,4
	TOURISM	1 977	1 595	1 070	67,1
	PRIMARY HEALTH	731	612	477	77,9
	SAFETY IN SOCIETY	1 434	1 120	774	69,1
	TRANSPORT AND LOGISTICS	789	628	437	69,6
	CIVIL ENGINEERING AND BUILDING CONSTRUCTION	1 999	1 571	875	55,7
	INFORMATION TECHNOLOGY AND COMPUTER SCIENCE	1 841	1 379	640	46,4
	PRIMARY AGRICULTURE	1 074	836	545	65,2
	MARKETING	1 510	1 189	866	72,8
	FINANCE, ECONOMICS AND ACCOUNTING	1 945	1 635	980	59,9
	MECHATRONICS	282	244	84	34,4
	DRAWING OFFICE PRACTICE	53	40	21	52,5
	PROCESS PLANT OPERATIONS	156	135	62	45,9
L4	OFFICE ADMINISTRATION	7 179	6 448	3 295	51,1
	HOSPITALITY	1 869	1 688	718	42,5
	MANAGEMENT	1 277	1 122	597	53,2
	EDUCATION AND DEVELOPMENT	850	773	417	53,9
	ENGINEERING AND RELATED DESIGN	3 572	3 180	1 105	34,7
	ELECTRICAL INFRASTRUCTURE CONSTRUCTION	3 074	2 829	777	27,5
	TOURISM	1 638	1 452	939	64,7
	PRIMARY HEALTH	769	669	408	61,0
	SAFETY IN SOCIETY	1 157	1 034	436	42,2
	TRANSPORT AND LOGISTICS	550	503	252	50,1
	CIVIL ENGINEERING AND BUILDING CONSTRUCTION	1 867	1 653	608	36,8
	INFORMATION TECHNOLOGY AND COMPUTER SCIENCE	1 483	1 307	337	25,8
	PRIMARY AGRICULTURE	938	815	374	45,9
	MARKETING	1 450	1 273	422	33,2
	FINANCE, ECONOMICS AND ACCOUNTING	2 087	1 880	696	37,0
	MECHATRONICS	234	214	102	47,7
	DRAWING OFFICE PRACTICE	10	8	0	0,0
	PROCESS PLANT OPERATIONS	156	153	53	34,6
Total		**150 137**	**98 411**	**54 675**	**55,6**

APPENDIX 14: THE PARTNERSHIPS ANALYSIS TOOL

VicHealth. The partnerships analysis tool: A resource for establishing, developing and maintaining partnerships for health promotion

See the document on Google Drive:

https://drive.google.com/open?id=1TA_qXgP45oDcu0PENGJPrraSoDpOE_M9

Partnership checklist – full-time offering

vichealth.vic.gov.au

The checklist

Rate your level of agreement with each of the statements below, with 1 indicating strong disagreement and 5 indicating strong agreement. The scores will be totalled automatically. To save your checklist, select 'File'/'Save As'/'PDF'. You can then name your checklist and email it to your partner organisations as an attachment.

	1 Strongly disagree	2 Disagree	3 Not sure	4 Agree	5 Strongly agree	
1. Determining the need for the partnership						
There is a perceived need for the partnership in terms of areas of common interest and complementary capacity.	○	○	○	◉	○	
There is a clear goal for the partnership.	○	○	○	◉	○	
There is a shared understanding of, and commitment to, this goal among all potential partners.	○	◉	○	○	○	
The partners are willing to share some of their ideas, resources, influence and power to fulfil the goal.	○	◉	○	○	○	
The perceived benefits of the partnership outweigh the perceived costs.	○	○	◉	○	○	SUBTOTAL
SUBTOTAL						15
2. Choosing partners						
The partners share common ideologies, interests and approaches.	○	○	◉	○	○	
The partners see their core business as partially interdependent.	○	○	◉	○	○	
There is a history of good relations between the partners.	○	○	◉	○	○	
The partnership brings added prestige to the partners individually as well as collectively.	○	○	◉	○	○	
There is enough variety among members to have a comprehensive understanding of the issues being addressed.	○	◉	○	○	○	SUBTOTAL
SUBTOTAL						14
3. Making sure partnerships work						
The managers in each organisation (or division) support the partnership.	○	○	◉	○	○	
Partners have the necessary skills for collaborative action.	○	○	◉	○	○	
There are strategies to enhance the skills of the partnership through increasing the membership or workforce development.	○	◉	○	○	○	
The roles, responsibilities and expectations of partners are clearly defined and understood by all other partners.	○	○	◉	○	○	
The administrative, communication and decision-making structure of the partnership is as simple as possible.	○	◉	○	○	○	SUBTOTAL
SUBTOTAL						13
4. Planning collaborative action						
All partners are involved in planning and setting priorities for collaborative action.	○	◉	○	○	○	
Partners have the task of communicating and promoting the partnership in their own organisations.	○	◉	○	○	○	
Some staff have roles that cross the traditional boundaries that exist between agencies or divisions in the partnership.	○	○	◉	○	○	
The lines of communication, roles and expectations of partners are clear.	○	◉	○	○	○	
There is a participatory decision-making system that is accountable, responsive and inclusive.	◉	○	○	○	○	SUBTOTAL
SUBTOTAL						10

	1 Strongly disagree	2 Disagree	3 Not sure	4 Agree	5 Strongly agree	
5. Implementing collaborative action						
Processes that are common across agencies have been standardised (e.g. referral protocols, service standards, data collection and reporting mechanisms).	○	○	○	◉	○	
There is an investment in the partnership of time, personnel, materials or facilities.	○	○	○	◉	○	
Collaborative action by staff and reciprocity between agencies is rewarded by management.	○	○	◉	○	○	
The action is adding value (rather than duplicating services) for the community, clients or agencies involved in the partnership.	○	○	◉	○	○	
There are regular opportunities for informal and voluntary contact between staff from the different agencies and other members of the partnership.	○	○	◉	○	○	**SUBTOTAL**
SUBTOTAL						17
6. Minimising the barriers to partnerships						
Differences in organisational priorities, goals and tasks have been addressed.	○	◉	○	○	○	
There is a core group of skilled and committed (in terms of the partnership) staff that has continued over the life of the partnership.	○	○	○	◉	○	
There are formal structures for sharing information and resolving demarcation disputes.	○	○	◉	○	○	
There are informal ways of achieving this.	○	◉	○	○	○	
There are strategies to ensure alternative views are expressed within the partnership.	○	◉	○	○	○	**SUBTOTAL**
SUBTOTAL						13
7. Reflecting on and continuing the partnership						
There are processes for recognising and celebrating collective achievements and/or individual contributions.	○	○	◉	○	○	
The partnership can demonstrate or document the outcomes of its collective work.	○	○	○	◉	○	
There is a clear need for and commitment to continuing the collaboration in the medium term.	◉	○	○	○	○	
There are resources available from either internal or external sources to continue the partnership.	◉	○	○	○	○	
There is a way of reviewing the range of partners and bringing in new members or removing some.	○	◉	○	○	○	**SUBTOTAL**
SUBTOTAL						11

Aggregate score	**TOTAL**
1. Determining the need for the partnership	15
2. Choosing partners	14
3. Making sure partnerships work	13
4. Planning collaborative action	10
5. Implementing collaborative action	17
6. Minimising the barriers to partnerships	13
7. Reflecting on and continuing the partnership	11
TOTAL	93

Checklist score

35–84	The whole idea of a partnership should be rigorously questioned.
85–126	The partnership is moving in the right direction but it will need more attention if it is going to be really successful.
127–175	A partnership based on genuine collaboration has been established. The challenge is to maintain its impetus and build on the current success.

Partnership checklist – part-time offering

vichealth.vic.gov.au

The checklist

Rate your level of agreement with each of the statements below, with 1 indicating strong disagreement and 5 indicating strong agreement. The scores will be totalled automatically. To save your checklist, select 'File'/'Save As'/'PDF'. You can then name your checklist and email it to your partner organisations as an attachment.

	1 Strongly disagree	2 Disagree	3 Not sure	4 Agree	5 Strongly agree	
1. Determining the need for the partnership						
There is a perceived need for the partnership in terms of areas of common interest and complementary capacity.	○	○	○	◉	○	
There is a clear goal for the partnership.	○	○	○	◉	○	
There is a shared understanding of, and commitment to, this goal among all potential partners.	○	○	○	◉	○	
The partners are willing to share some of their ideas, resources, influence and power to fulfil the goal.	○	○	○	○	◉	
The perceived benefits of the partnership outweigh the perceived costs.	○	○	○	○	◉	SUBTOTAL
SUBTOTAL						22
2. Choosing partners						
The partners share common ideologies, interests and approaches.	○	○	○	◉	○	
The partners see their core business as partially interdependent.	○	○	○	◉	○	
There is a history of good relations between the partners.	○	○	◉	○	○	
The partnership brings added prestige to the partners individually as well as collectively.	○	○	○	◉	○	
There is enough variety among members to have a comprehensive understanding of the issues being addressed.	○	○	○	◉	○	SUBTOTAL
SUBTOTAL						19
3. Making sure partnerships work						
The managers in each organisation (or division) support the partnership.	○	○	○	◉	○	
Partners have the necessary skills for collaborative action.	○	○	○	◉	○	
There are strategies to enhance the skills of the partnership through increasing the membership or workforce development.	○	○	○	◉	○	
The roles, responsibilities and expectations of partners are clearly defined and understood by all other partners.	○	○	○	◉	○	
The administrative, communication and decision-making structure of the partnership is as simple as possible.	○	○	○	◉	○	SUBTOTAL
SUBTOTAL						20
4. Planning collaborative action						
All partners are involved in planning and setting priorities for collaborative action.	○	○	○	◉	○	
Partners have the task of communicating and promoting the partnership in their own organisations.	○	○	○	◉	○	
Some staff have roles that cross the traditional boundaries that exist between agencies or divisions in the partnership.	○	○	○	◉	○	
The lines of communication, roles and expectations of partners are clear.	○	○	○	◉	○	
There is a participatory decision-making system that is accountable, responsive and inclusive.	○	○	◉	○	○	SUBTOTAL
SUBTOTAL						19

	1 Strongly disagree	2 Disagree	3 Not sure	4 Agree	5 Strongly agree	
5. Implementing collaborative action						
Processes that are common across agencies have been standardised (e.g. referral protocols, service standards, data collection and reporting mechanisms).	○	○	○	◉	○	
There is an investment in the partnership of time, personnel, materials or facilities.	○	○	○	○	◉	
Collaborative action by staff and reciprocity between agencies is rewarded by management.	○	○	○	◉	○	
The action is adding value (rather than duplicating services) for the community, clients or agencies involved in the partnership.	○	○	○	◉	○	
There are regular opportunities for informal and voluntary contact between staff from the different agencies and other members of the partnership.	○	○	○	◉	○	**SUBTOTAL**
SUBTOTAL						21
6. Minimising the barriers to partnerships						
Differences in organisational priorities, goals and tasks have been addressed.	○	○	◉	○	○	
There is a core group of skilled and committed (in terms of the partnership) staff that has continued over the life of the partnership.	○	○	○	○	◉	
There are formal structures for sharing information and resolving demarcation disputes.	○	○	○	◉	○	
There are informal ways of achieving this.	○	○	○	◉	○	
There are strategies to ensure alternative views are expressed within the partnership.	○	○	○	◉	○	**SUBTOTAL**
SUBTOTAL						20
7. Reflecting on and continuing the partnership						
There are processes for recognising and celebrating collective achievements and/or individual contributions.	○	○	○	◉	○	
The partnership can demonstrate or document the outcomes of its collective work.	○	○	○	◉	○	
There is a clear need for and commitment to continuing the collaboration in the medium term.	○	○	◉	○	○	
There are resources available from either internal or external sources to continue the partnership.	○	○	◉	○	○	
There is a way of reviewing the range of partners and bringing in new members or removing some.	○	○	○	◉	○	**SUBTOTAL**
SUBTOTAL						18

Aggregate score	**TOTAL**
1. Determining the need for the partnership	22
2. Choosing partners	19
3. Making sure partnerships work	20
4. Planning collaborative action	19
5. Implementing collaborative action	21
6. Minimising the barriers to partnerships	20
7. Reflecting on and continuing the partnership	18
TOTAL	139

Checklist score

35–84	The whole idea of a partnership should be rigorously questioned.
85–126	The partnership is moving in the right direction but it will need more attention if it is going to be really successful.
127–175	A partnership based on genuine collaboration has been established. The challenge is to maintain its impetus and build on the current success.