

**KISIM HELP BILONG OLGETA MANMERI
LONG PNG LONG SIKAIDS – A MIXED
METHODS STUDY**

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**A Thesis Submitted By Publication in Fulfilment of the
Requirements for the Degree of Doctor of Philosophy**

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Faculty of Medicine, Nursing and Health Sciences
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DEDICATION

This PhD thesis is dedicated to the **Nurses of Papua New Guinea**
for their continued commitment and dedication to improving the health outcomes
of
olgeta man, meri and pikinini

ABSTRACT

In May 2005, the Papua New Guinea (PNG) National Department of Health (NDoH) determined that the Integrated Management of Adult and Adolescent Illness (IMAI) Chronic Human Immunodeficiency Virus (HIV) Care training program, modified for the PNG context, would serve as the basis for the development of teams for the Rapid Scale-Up of HIV/AIDS Care and Treatment. The IMAI Chronic HIV Care training program was developed as a joint effort carried out in a working partnership involving WHO, Geneva, the WHO Regional Office for Africa (AFRO), as well as many international collaborating institutions. Trials and implementation of the program have occurred predominantly on the African continent and to date there has been no research undertaken to examine the effectiveness of the IMAI program as a learning modality for preparing registered nurses to provide comprehensive HIV care.

The purpose of this hermeneutic informed interpretive research study is to explore and describe how registered nurses in Papua New Guinea make sense of their learning and implementation of the IMAI training program in providing Comprehensive Care and treatment to people living with HIV/AIDS. The study is a mixed methods study, combining a quantitative survey, qualitative analysis of semi-structured interviews and a focus group. The rationale for this approach was to better understand the research problem by converging both broad numerical trends from quantitative research and the detail of qualitative research with the intent of producing a richer and more complete picture of the investigated phenomenon. Data collection included a quantitative survey, semi-structured interviews and a focus group. This data informed the development of descriptive accounts that allowed for the subsequent identification of common and divergent themes, reflective of factors that influenced nurses learning and implementation of IMAI training.

The findings from the quantitative survey revealed that all respondents had a positive impression of the IMAI program and expressed the view that the IMAI program had a positive effect on various aspects of patient care and their learning and experience. Overall, the survey identified that registered nurses who participated in the IMAI Chronic HIV Care training program perceived the program to be beneficial for improving the way HIV care is provided.

Three major themes were identified from the qualitative analysis, and under these major themes data was arranged as sub-themes. The three major themes identified were Overcoming Personal Anxiety, Actioning Learning and Identifying Challenges.

The qualitative analysis revealed that overwhelmingly, the fear of anxiety of HIV was significant for all participants of the semi-structured interviews. Nurses in the focus group felt that the overt expression of fear given by the interview participants, more accurately reflected the reality for the majority of nurses in Papua New Guinea. Most nurses also identified that their participation in the IMAI program contributed to their personal change process and helped them to identify and understand their fear of HIV. Expert patient trainers (EPTs) were a highly valued component of the flexible IMAI training methodology and were seen by nurses as being important both for learning and for assisting them to overcome their personal anxiety created by the fear of HIV.

The findings also identified that the key challenge faced by nurses in attempting to implement their learning, was that of system issues including a lack of medical supplies, including antiretroviral drugs (ART), lack of staff and an absence of continuing professional education. These issues require enhanced commitment from the NDoH if nurses are to be effective in implementing their learning to provide HIV care and treatment. It is also important that NDoH give support to enable the establishment and implementation of continuing education for nurses

providing HIV care and treatment and that the development of processes to ensure the ongoing maintenance of quality in HIV care and treatment training, be implemented as a matter of priority.

Finally, this study has provided an in-depth understanding of the experiences of how registered nurses in Papua New Guinea make sense of their learning and implementation of the IMAI training program in providing comprehensive HIV care and treatment to people living with HIV/AIDS. The current multitude of factors fueling the HIV/AIDS epidemic in Papua New Guinea are explored as the current status of HIV/AIDS in New Guinea, and the multitude of cultural patterns, social, and political factors influencing the spread of HIV within the country. This exploration also undertakes a comprehensive discussion of cultural issues related to gender inequality including a rich description of changing cultural patterns and values in Papua New Guinea.

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LIST OF ABBREVIATIONS

ABC	Abstain, Be Faithful, Use Condoms
AFRO	WHO Regional Office for Africa
AIDS	Acquired Immunodeficiency Syndrome
ARV	Antiretroviral
ART	Antiretroviral Therapy
ASHM	Australasian Society for HIV Medicine
AusAID	Australian Agency for International Development
CCM	Chronic Care Model
CMH	Commission on Macroeconomics and Health
CPD	Continuing Professional Development
CTC	Close-to-client
DALY	Disability Adjusted Life Years
EPT	Expert Patient Trainer
FBO	Faith Based Organisation
FDC	Fixed Dosed Combination
HAMP	HIV/AIDS Management and Protection Act
HEO	Health Extension Officer
HRW	Human Rights Watch
HIV	Human Immunodeficiency Virus
ICCC	Innovative Care for Chronic Conditions
IMAI	Integrated Management of Adult and Adolescent Illness Chronic HIV Care
IMCI	Integrated Management of Childhood Illness
IMR	Papua New Guinea Institute of Medical Research
NACS	National AIDS Council
NDoH	National Department of Health
NEFC	National Economic and Fiscal Commission
NGO	Non Government Organisation
NHASP	National HIV/AIDS Support Project
NSO	National Statistics Office
PAC	Provincial AIDS Committee
PEP	Post Exposure Prophylaxis
PHC	Primary Health Care
PLWHA	People living with HIV/AIDS
PMV	Public Motor Vehicle
PNG	Papua New Guinea
PNGIMR	Papua New Guinea Institute of Medical Research
PPTCT	Prevention of Parent to Child Transmission
SPSS	Statistical Package for the Social Sciences
STI	Sexually Transmitted Infection

UNAIDS	United Nations Joint Program on HIV/AIDS
UNDP	United Nations Development Program
WHO	World Health Organisation

DECLARATION

MONASH UNIVERSITY

**FACULTY OF MEDICINE, NURSING AND HEALTH
SCIENCES**

SCHOOL OF NURSING AND MIDWIFERY


Statement of Authorship

In accordance with Monash University Doctorate Regulation 17 / Doctor of Philosophy and Master of Philosophy (MPhil) regulations the following declarations are made:

I hereby declare that this thesis contains no material which has been accepted for the award of any other degree or diploma at any university or equivalent institution and that, to the best of my knowledge and belief, this thesis contains no material previously published or written by another person, except where due reference is made in the text of the thesis.

This thesis includes three original papers published in peer reviewed journals. The ideas, development and writing up of all the papers in the thesis were the principal responsibility of myself, the candidate, working within the School of Nursing and Midwifery under the supervision of Associate Professor Ysanne Chapman and Professor Karen Francis.

(Signed):



(Date):

27/11/09

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Most importantly I wish to acknowledge the nurses who participated in this study. I cannot name you individually but this study would not have been possible without your support, kindness, encouragement and willingness to share your experiences. I applaud your commitment to your work and to the health of the citizens of Papua New Guinea.

Lastly, I would like to express my gratitude to the National Department of Health, specifically Dr Esorom Daoni and Ms Ettie Selep for your unending support and encouragement throughout this journey.

CHAPTER 1

Introduction

CHAPTER 1

Introduction

It is an essential, life sharing – sharing act of each generation of a people to nurture that which has given them life and to preserve for future generations the guiding stories of their collective journey to find life. (Cajete, 1994, p. 187).

Introduction

PNG is one of the most diverse countries in the world - geographically, biologically, linguistically, as well as culturally. It has more than 800 languages, over 1000 dialects and many tribes, sub-tribes, clans and sub-clans spread across its 20 provinces. This nation has abundant natural resources, although this has not led to economic prosperity for the majority of its people. In fact, the level of poverty has increased faster in PNG in recent years than in neighbouring countries, and it now ranks 145 out of 177 countries on the UNDP Human Development Index (UNDP, 2009).

The population is estimated to have grown to almost nine million by 2020. Eighty seven percent of the population in PNG today lives in rural areas, in widely scattered communities that are often not accessible by road. Health indicators are very poor, with average life expectancy at 53 years (WHO, 2007), infant mortality rate of 49 per 1000 live births, and maternal mortality rate at an astounding 733 per 100,000 live births (NSO, 2008). This figure is regarded by some experts to be underestimated.

In PNG, the major health problems have remained largely unchanged in the past 10 to 15 years. The leading health problems continue to be communicable diseases, with malaria, tuberculosis, diarrheal diseases, and acute respiratory

disease, as major causes of morbidity and mortality. PNG has a generalized HIV epidemic, driven predominantly by heterosexual intercourse. The epidemiological profile of PNG with a heavy burden of communicable diseases indicates that huge gains in health outcomes could be achieved with simple and effective interventions focused on primary healthcare and health promotion.

This situation is equally true with regards to HIV care and treatment. Advances in treatment and outcome data from the introduction of HIV Care and Treatment (including ART) programs in other resource limited settings (Badri, Maartens, Mandalia, Bekker, Penrod & Platt, 2006; Laniece, Ciss, Desclaux, Diop, Mbodj & Ndiaye, 2003; Levy, Miksad & Fein, 2005; Stringer, Sinkala, Stringer, Mzyece, Makuka & Goldenberg, 2003; Wools-Kaloustian, Kimaiyo, Diero, Siika, Sidle, Yiannoutsos, Musick, Einterz, Fife & Tierney, 2006) have demonstrated that HIV Care and Treatment (including ART) (hereinafter referred to as “Comprehensive Care”) can be successful implemented in resource limited settings.

In May 2005, the Papua New Guinea (PNG) National Department of Health (NDoH) determined that the Integrated Management of Adult and Adolescent Illness (IMAI) Chronic HIV Care training program, modified for the PNG context, would serve as the basis for the development of teams for the rapid scale-up of HIV/AIDS Care and Treatment. The IMAI Chronic HIV Care training program was developed as a joint effort carried out in a working partnership involving WHO, Geneva, the WHO Regional Office for Africa (AFRO), as well as many international collaborating institutions. Trials and implementation of the program have occurred predominantly on the African continent and to date there has been no research undertaken to examine the effectiveness of the IMAI program as a learning modality for preparing registered nurses to provide Comprehensive Care. This research will examine the IMAI program, from the nurse participants’ perspective, in terms of their

interpretation of their learning and implementation of the program to provide Comprehensive Care.

Background to the Research

In resource limited settings with already poorly functioning health systems, care for HIV-infected patients has not been considered a priority. As a result, minimal effort has been made in the training of staff to cope with demands of providing HIV care and Non-Governmental Organisations (NGOs) and Faith Based Organisations (FBOs) have been left to provide stop gap measures (Creese, Floyd, Alban, & Guinness, 2002). Coupled with this lack of prioritization, many communities where Comprehensive Care is needed, already suffer from a lack of health care workers to provide basic health care services (Buve, Kalibala, & McIntyre, 2003).

Access to Comprehensive Care in resource limited countries, has seen significant improvements in prognosis for those people living with HIV/AIDS. Despite these advances and the successes of scaling up Comprehensive Care in resource limited countries (Badri et al., 2006; Levy et al., 2005; Moatti, Spire & Kazatchkine, 2004; Wools-Kaloustian et al., 2006), few of the people living with HIV/AIDS in resource limited settings receive such care (Mukherjee, Farmer, Niyizonkiza, McCorkle, Vanderwarker, Teixeira & Kim, 2003).

Key factors that have been identified as being integral to the successful scale-up of Comprehensive Care in resource limited settings include:

- Successful Comprehensive Care programs are based on a team approach. People living with HIV/AIDS are key members of the team. Patients reap the benefits of “more eyes and ears ... and the insights of different bodies of knowledge, and a wider range of

skills.” (Wagner, Austin, Davis, Hindmarsh, Schaefer & Bonomi, 2001; WHO, (2004a).

- Task shifting or skills substitution as a practical, feasible and effective means to meeting human resource skill shortages (Hongoro & McPake, 2004; Kitahata, Tegger, Wagner, & Holmes, 2002; WHO, (2004b).
- Simplification of treatment regimes and the use of fixed dose combination (FDCs) antiretroviral (ARV) drugs make prescribing easier and facilitate increased compliance and adherence (WHO, 2004b).
- Integration and coordination of services, including prevention, testing and treatment and psychosocial support within the current health system and at the community level (Lampthey & Wilson, 2005; WHO, 2004a, 2004b).

While there is considerable research in relation to the effectiveness of ARV therapy in resource limited settings, there is a dearth of evidence on the models of training used to prepare health care workers to provide Comprehensive Care. The lack of adequately trained health care workers forms a key barrier to achieving increased access to Comprehensive Care in resource limited settings and therefore further research in this area must be seen as a key priority in the response to the Papua New Guinea HIV epidemic.

Purpose of the Research

The purpose of this hermeneutic informed interpretive research study is to explore and describe how registered nurses in Papua New Guinea make sense of

their learning and implementation of the IMAI training program in providing comprehensive care and treatment to people living with HIV/AIDS. In doing so, an interpretive approach following Chatterji (2004), Halcomb & Andrews (2005), and Tashakkori & Teddie (2003), and utilizing a complementarity mixed methods approach was chosen.

Two key aspects of the IMAI approach is the integration of prevention and care activities and task shifting. Integration within the approach is seen as key to ensuring the optimal use of resources, an increased usage of HIV services , and the improvement of the lives of those infected and affected by HIV (Kitahata et al., 2002; Wilson, Landon, Hirschhorn, McInnes, Ding, Marsden & Cleary, 2005). Equally task shifting is seen as essential for resource limited countries if Comprehensive Care is to be achieved. In the main, this will mean shifting tasks traditionally performed by physicians to other health care workers such as nurses. As such the study asks the following sub-questions:

1. How do Papua New Guinean registered nurses make sense of the learning and implementation of the Integrated Management of Adult and Adolescent Illness Chronic HIV Care approach to caring for people living with HIV/AIDS?
2. What are the positive and negative aspects of the Integrated Management of Adult and Adolescent Illness Chronic HIV Care approach to learning to provide Comprehensive Care for people living with HIV/AIDS?
3. Do Papua New Guinean registered nurses find the Integrated Management of Adult and Adolescent Illness Chronic HIV care approach useful in providing care to people living with HIV/AIDS?

The findings of this study will provide important information on the impact of the IMAI training program in preparing Papua New Guinean registered nurses to

provide Comprehensive Care to people living with HIV/AIDS and identify potential opportunities to improve its impact.

Significance of the Research

Registered nurses are and will be the main health care provider group to provide HIV care and treatment in PNG. It is therefore necessary firstly, to evaluate the effectiveness of the IMAI Chronic HIV Care training program in preparing Papua New Guinean registered nurses to provide comprehensive care prior to committing further resources to scale-up HIV care and treatment (Anderson, 1996) and secondly, to understand how PNG nurses who have been trained in the IMAI program, make sense of that training and implement comprehensive care.

One of the key obstacles to scaling-up levels of client care to comprehensive care in resource limited settings is the lack of appropriately trained health care workers (Hanson, Ranson, Oliveira-Cruz, & Mills, 2003; Hirschhorn, Oguda, Fullem, Dreesch, & Wilson, 2006). Despite human resources being variously described as ‘the heart of the health system’ and ‘the most important aspect of the health care system’, human resource development has received little, if any attention, in the development of health care systems in resource limited countries (Hongoro & McPake, 2004). Scaling up current services to the provision of comprehensive care will require a cadre of appropriately trained health care workers, and in the case of resource limited countries, this implicitly implies nurses (Ranson, Hanson, Oliveira-Cruz, & Mills, 2003). Nowhere is this need more significant than in Papua New Guinea where the physician to nurse ratio is one of the lowest in the world - 0.09 (WHO, 2007).

The reasons for this lack of human resources is multi-factorial and includes outward migration of health care workers from majority countries to minority countries; attrition of health care workers due to HIV; higher absenteeism and

burnout of health care workers due to the burden of HIV care and professional frustration and poor human resource planning (Marchal, DeBrouwere, & Kegels, 2005).

Given the aforementioned, the study was seen as significant in terms of identifying the appropriateness of the IMAI training program to prepare registered nurses to provide Comprehensive Care. Secondly, it will provide the necessary insights into how these nurses make sense of the program so that a critical lens can be used to change or modify the program to achieve the required outcomes of providing comprehensive care.

Methodological Focus

This study addressed the research question: *What are Papua New Guinean registered nurses' interpretations of learning and implementing the Integrated Management of Adult and Adolescent Illness (IMAI) Chronic HIV Care training?* The study is a mixed methods study, informed by a hermeneutic approach, and sought to establish the meaning and understanding individuals give to learning and implementing the phenomenon under study, specifically the IMAI Chronic HIV training program (Lopez & Willis, 2004). This approach was seen as being most appropriate as “[t]he focus of hermeneutic inquiry is on what humans experience” (Lopez & Willis, 2004, p. 728).

Given the aim of the research, an approach that allowed for a deep and rich understanding of the meaning individuals give to the learning and implementing of the phenomenon under study, was required. To facilitate this, a mixed methods design was chosen as it offered methodological and practical advantages and provided a holistic and flexible approach to address the research problem (Andrew & Halcomb, 2006). Methodologically, mixed methods research combines quantitative and qualitative methods, approaches, and concepts that

have complementary strengths. Mixed methods also allows for a wider, or more complete picture to emerge than that presented by a single method alone and increases the depth and breadth of understanding of a phenomenon by exploring it with different methods (Cresswell, 2003).

When examining educational programs, Chatterji (2004) also suggests the use of a mixed method design to take account of the complex organisational and community environments in which educational programs evolve and usually operate. The use of both quantitative and qualitative data in a study can enrich the results in ways that one form of data does not provide. Using both qualitative and quantitative forms of data also provides for a richness of detail and allows researchers to gain a deeper understanding of the phenomenon of interest (Halcomb & Andrew, 2005; Tashakkori & Teddlie, 2003).

Researcher Background

The researcher is an Australian educated registered nurse. He has been a registered nurse for more than 20 years and has worked in a variety of roles including clinician, educator, administrator, regulator and currently a public health practitioner. The researcher has undertaken post basic clinical education in midwifery and tertiary preparation in nursing, law, health administration and public health.

The researcher's current employment is in public health in Papua New Guinea. In this role the researcher was involved as a learning facilitator in the IMAI training program. As a result, the researcher was entwined both within and with the learning and inquiry process - as a facilitator in terms of the learning experience and as a researcher in terms of participants' learning and implementing experiences. The researcher therefore acknowledges that he entered the study with preconceived ideas and beliefs. The researcher believes

that in resource limited countries and specifically Papua New Guinea, registered nurses will be the main health care providers in terms of comprehensive care and that the training given to registered nurses to undertake this role needs to be contextually appropriate. The researcher also acknowledges that the attitudes and behaviours of a nurse's practice, including himself, are based on the knowledge and understanding acquired by the nurse.

The researcher accepts his closeness to the research site that formed part of the study, and to the participants in the study. Furthermore, the methodology that was used in this study required the researcher to share the lived experience of the study participants.

Definition of Selected Terms

AIDS: (Acquired Immunodeficiency Syndrome): Is not simply an infectious disease. It is a disease syndrome because it is a group of illnesses that collectively indicate or characterize a specific disease syndrome (Chin, 2007).

Comprehensive HIV Care: includes:

- Voluntary and confidential counseling and testing for HIV infection.
- Prevention of HIV transmission, including sexual, parenteral, and mother to child transmission.
- Prophylaxis against opportunistic infections.
- Diagnosis and treatment of HIV related conditions including opportunistic infections and neoplasms.
- Antiretroviral treatment.
- Palliative Care.

(Kitahata et al., 2002)

EPT: Expert Patient Trainer – people who understand that the quality of their lives is primarily up to them; believe they can exert significant control over their own lives; are determined to live a healthy life despite their chronic condition; are realistic about the impact of their disease; and have worked out what services exist and how they can be accessed (Jones, 2003).

HIV: Human Immunodeficiency Virus (Chin, 2007).

IMAI: Integrated Management of Adult and Adolescent Illness Chronic HIV Care training program (WHO, 2006).

Primary Health Care: is “Essential health care based on practical, scientifically sound and socially acceptable methods and technology, made universally accessible to individuals and families in the community through their full participation at a cost that the community and the country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination. It is the first level of contact with individuals, the family and community with the national health systems bringing health care as close as possible to where people live and work, and constitutes the first elements of a continuing care process” (WHO, 1978).

Overview of the Thesis

The thesis is divided into 12 chapters including this introductory chapter. **Chapter 2** provides contextual information about the environment in which the study was undertaken. The chapter provides a detailed examination of the socio-cultural, epidemiological and political environment in which HIV infection and Comprehensive Care exists within Papua New Guinea.

Chapter 3 presented as a published peer reviewed journal article; provides an introduction to HIV/AIDS and the devastating impact of this global epidemic.

As the study has its focus on human resources in health, the chapter examines the literature surrounding the crisis in health systems, and particularly, the impact of this on HIV/AIDS care and health care quality. It also introduces the notion of HIV/AIDS as a chronic condition and explores the current literature surrounding this view. This section is important in terms of linking the human resources in health issue and the approach taken in the Integrated Management of Adult and Adolescent Illness (IMAI) training program. The chapter also draws together the factors that have been identified as being integral to the successful provision of comprehensive care and treatment (including ART) in resource limited settings. It concludes by identifying that a lack of capacity in health care workers forms one of the key barriers to achieving increased access to Comprehensive Care in resource limited countries like Papua New Guinea and hence the significance of the research study.

Chapter 4 provides a theoretical and methodological basis and rationale for the conceptual framework that guides the study. The chosen design is discussed in depth providing insight into why a mixed method was the approach of choice and details how and why a critical hermeneutic lens was employed to analyse the qualitative data.

Chapter 5 describes the research process. This includes the selection of the study site and research approach, the data collection process including the strategies of inquiry, the recruitment procedures, methods of data gathering and the processes of data analysis. The chapter concludes with an examination of the ethical issues arising in the research and how they were addressed.

Chapter 6 describes the quantitative survey undertaken as part of the mixed methods study. The chapter, presented as a published peer reviewed journal article, focuses on the analysis of the quantitative survey conducted as part of the research study and examines the impact the IMAI training program had on

various aspects of how care is provided, the learning needs of participants and other program outcomes.

Chapter 7 provides a de-identified introduction to the nurses who participated in the semi-structured interviews. The purpose of this chapter was to facilitate the reader in contextualizing the reported experience of each participant and to build on the socio-cultural, epidemiological and political environment detailed in Chapter 2.

Chapter 8 commences the qualitative analysis and focuses on the personal anxieties of participants and how these were resolved as a result of the IMAI training program. The chapter identifies and discusses the important factors that both created and helped participants overcome personal anxiety with regards to providing comprehensive care.

Chapter 9 continues the qualitative analysis and identifies and discusses the important factors that both assisted and hampered participants in actioning their learning in the IMAI training program. Within the context of this chapter, actioning learning refers to the interpretations of participants of their learning journey and how this influenced their ability to implement their learning.

Chapter 10 concludes the qualitative analysis and discusses the challenges identified by participants in relation to learning and implementing the IMAI training program. The issues described in this chapter focus on the system challenges inhibiting current and ongoing implementation and the challenge of maintain quality in the IMAI training program.

Chapter 11 is the discussion chapter and reflects on the experiences of participants through the integration of the findings of the study, including the

results of the quantitative survey, the qualitative analysis of the semi-structured interviews and the outcome of the focus group.

The final chapter, **Chapter 12**, concludes the study and provides further insight into the issues of providing HIV care in Papua New Guinea. The chapter also outlines recommendations for practice, training and further research in this area.

Summary

The challenge of providing care for HIV infected patients in resource limited settings with already poorly functioning health systems has not been considered a priority. As a result, minimal effort has been made in the training of staff to cope with demands of providing HIV care. This research will examine the influence of the IMAI program as a learning modality for preparing registered nurses in Papua New Guinea to provide Comprehensive Care.

CHAPTER 2

Situating the Study

CHAPTER 2

Situating the Study

Introduction

The purpose of this chapter is to provide contextual information about the environment in which the study was undertaken. The chapter provides a detailed examination of the socio-cultural, epidemiological and political environment in which HIV infection and Comprehensive care exists within Papua New Guinea. This was seen as important as truth can be seen as existing only within the socially constructed reality of individuals as they learn and act on their new learning.

The chapter presented here as a draft journal article was successfully submitted to the *Journal of Transcultural Nursing* under the title “Understanding the Context – Providing HIV prevention and treatment in Papua New Guinea”.

**UNDERSTANDING THE CONTEXT – PROVIDING
HIV PREVENTION AND TREATMENT IN PAPUA
NEW GUINEA**

**Mr Geoffrey Clark
Associate Ysanne Chapman
Professor Karen Francis**

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Dear Mr. Clark:

Congratulations! Your manuscript, titled Understanding the Context – Providing HIV prevention and treatment in Papua New Guinea (JTN-09-043) has been ACCEPTED for publication in the Journal of Transcultural Nursing CONTINGENT UPON the COMPLETION of MINOR REVISIONS.

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Journal of Transcultural Nursing
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Reviewer(s)' Comments to Author:

Reviewer: 1

Comments to the Author

This well-written manuscript successfully addresses the multitude of factors fueling the HIV/AIDS epidemic in Papua New Guinea. The manuscript is well thought out and very informative. The reader is left with a greatly increased awareness of the current status of HIV/AIDS in New Guinea, as well as the multitude of cultural patterns, social, and political factors influencing the alarming spread of HIV disease within this country. This important manuscript represents a significant contribution to the literature in that it presents an initial discussion of the state of HIV/AIDS in New Guinea, as well as a thought-provoking and comprehensive discussion of cultural issues related to gender inequality. The manuscript also contains a very rich description of changing cultural patterns and values in New Guinea. The comprehensive discussion in this manuscript has not been previously addressed in nursing or multidisciplinary professional journals and would provide health care workers with essential background information for future planning and continued research.

Date Sent: 29-Jul-2009

Monash University

Declaration for Research Article

In the case of paper entitled: UNDERSTANDING THE CONTEXT – PROVIDING HIV PREVENTION AND TREATMENT IN PAPUA NEW GUINEA

Name	% contribution	Nature of contribution
Geoffrey Clark	90%	Concept development, key ideas, development and writing up
Ysanne Chapman	5%	Contribution to drafts and revision
Karen Francis	5%	Contribution to drafts and revision

Declaration by co-authors

The undersigned hereby certify that:

- (1) they meet the criteria for authorship in that they have participated in the conception, execution, or interpretation, of at least that part of the publication in their field of expertise;
- (2) they take public responsibility for their part of the publication, except for the responsible author who accepts overall responsibility for the publication;
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Surveying health professionals satisfaction with the Integrated Management of Adult and Adolescent Illness Chronic HIV training program: The Papua New Guinea experience

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Abstract

This study reports findings from a survey of Papua New Guinean registered nurse who completed the Integrated Management of Adult and Adolescent Illness (IMAI) Chronic HIV Care training conducted between November 2005 and December 2006. The survey conducted is one component of a mixed method evaluation of the IMAI program in Papua New Guinea. Data from the questionnaires were entered into version 16 of the Statistical Package for the Social Sciences (SPSS) software program. The responses on the effect of the IMAI training program had on various aspects of how care is provided, learning needs and other program outcomes were analysed with

a chi-square test being applied to detect any difference in the response given by the different demographic subgroups in terms of gender, age, care status, current employer and past educational attainment. The survey revealed that all thirty-five respondents have a positive impression of the IMAI program and expressed the view that the IMAI program had a positive effect on various aspects of patient care and their learning and experience. Overall, the survey identified that registered nurses who participated in the IMAI Chronic HIV Care training program perceive the program to be beneficial for improving the way HIV care is provided.

Introduction

Papua New Guinea confronts a generalized heterosexually driven HIV epidemic that may replicate the damage to economic and social development seen in southern Africa (Morris & Stewart, 2005). Recent estimates of the incidence of HIV indicate that the approximate number of those currently infected is 46,275 people in the age group 15 – 49 and is increasing rapidly (NACS, 2007). After Cambodia and Myanmar, Papua New Guinea is estimated to have the highest per capita rate of recorded infection in the Asian-Pacific region, in marked contrast to its neighbours elsewhere in Melanesia.

PNG has been described as ‘the most masculine country on the face of the earth’ (Denoon, 1989). The rise of the Church and Western influence has seen the dissolution of traditional customs, which maintained a distance between men and women due to beliefs in gender pollution and codes of heterosexual avoidance (Hughes, 2002; Wardlow, 2002). With these customs dissolved, the gendered social realities of daily life in PNG have evolved into a dual, but unequal, economic relationship where cash is a predominantly male preserve and women have become items of exchange.

An analysis of Papua New Guinea’s risk environment provides the context for an understanding of the HIV epidemic in the country.

- Papua New Guinea's sexual cultures favour early commencement of sexual activity, multiple partnering is common, and sex is increasingly viewed as a commodity (Caldwell & Isaac-Toua, 2002; Elliot, 2005; NHASP, 2005; NSRRT & Jenkins, 1994).
- Gender inequality is normative and attitudes in some regions of Papua New Guinea are antagonistic and contribute to high levels of gender violence. The low status of women means they are subjected to sexual violence and rape and are often blamed for spreading the HIV virus (Bradley, 2000; Caldwell & Isaac-Toua, 2002; Cullen, 2006; NHASP, 2005).
- Economic decline, together with high and increasing population density, has led to a rapid increase in poverty, which in turn has led to an increase in commercial sex (Caldwell & Isaac-Toua, 2002; Jenkins, 2004; Levantis, 2000; NHASP, 2005).
- Large socio-cultural and economic changes coupled with urbanization, mobility and increased access to communication and global flows of information and images have altered the sexual landscape (Hughes, 2002).
- Economic deterioration and poor governance has led to deterioration in public service delivery and morale, including those in health services, and has hindered both political leadership and government capacity to respond to the HIV epidemic (Caldwell & Isaac-Toua, 2002; NHASP, 2005).
- The near-breakdown of health services has severely restricted capacity to treat widespread sexually transmitted infections that facilitate HIV transmission (Caldwell & Isaac-Toua, 2002; NHASP, 2005).
- The exceptional diversity of PNG cultures and languages means that giving cogent cultural meaning to centrally generated messages on social issues is limited (Malau, 1999; NHASP, 2005).

Epidemiology

The first HIV case was detected in Papua New Guinea in 1987 and since then the epidemic has grown substantially. By the end of 2006, a cumulative total of 18,484 cases have been detected. For 2006 alone, there were 4017 people who tested positive; a 30% increase over 2005 which continues a trend that has occurred every year since 1997 (AusAID, 2005; NACS, 2007). Heterosexual transmission remains the main mode of HIV transmission accounting for 99% of cases where transmission is known. In nearly 65% of all reported cases, the mode of transmission remains unknown (NACS, 2007).

The current best estimate of HIV infected people that has been adopted by the National AIDS Council and the National Department of Health in their report of 2007 is 46,275 (NACS, 2007). Despite limited sero-surveillance it is clear that the virus is well established in the general population. Prevalence rates among the population 15 – 49 years of age are estimated to be 1.28% nationally with urban areas estimated to have a prevalence of 1.32% and urban areas a prevalence of 1.27% (NACS, 2007). The prevalence trend in rural areas shows a late but significant climb with the prevalence expected to eclipse the urban prevalence in 2007. Since approximately 85% of the population lives in rural areas, this trend will have a large impact on the national prevalence.

Papua New Guinea also has a high prevalence of sexually transmitted infections (STI) in rural and urban areas and in both high and low risk groups (UNAIDS, 2004). UNAIDS, in their PNG Epidemiology Fact Sheet – 2004 Update reported the following rates of STIs:-

- Syphilis – 4% in highland populations, 32% in sex workers and 7.1% in antenatal screening

- Chlamydia – up to 26% in highland populations and 31% in sex workers
- Gonorrhoea – 15% in highland populations and 36% in sex workers
- Trichomoniasis – 28.75% in sex workers

These prevalence rates were also quoted in the 2000 Consensus report (WHO et al., 2000), although trichomoniasis was reported to be 45 – 50% in both the low and high risk populations.

The Papua New Guinea National Department of Health (NDoH) has limited resources devoted to STI monitoring and surveillance and hence limited data on STI prevalence. Most data on STI prevalence is gathered by the Papua New Guinea Institute of Medical Research (IMR) or through donor funded projects such as the AusAID National HIV/AIDS Support Project (NHASP). Despite the limited data, a clear picture emerges of STIs being a major health problem.

The Papua New Guinea Institute of Medical Research (IMR) conducted a study of 436 people in the Porgera Valley, Enga Province. The overall STI prevalence was 23% in males and 40% in females (PNGIMR, 2004). Trichomoniasis and chlamydia were the two most common STIs identified with females having prevalence rates of 37% and 10 % and males 16 % and 10% respectively (PNGIMR, 2004). In a study of 367 people in Lae, trichomoniasis rates were found to be 26.9% in women and 22.1% in males and chlamydia rates of 23.3% in women and 12.1% in males (Hammer, 2004). Passey et al (1998) found similarly high rates of trichomoniasis (46.5%) and chlamydia (26.4%) in their study of 201 women from the Asaro Valley. Recent unpublished data of a community based study with 3,288 participants, identifies the overall prevalence of STIs to be 56% with trichomonas (19.7%) and chlamydia (13.2%) having the highest rates. In each study, women had higher rates of infection.

Social, Economic and Cultural Setting

Social and human development indicators, while improving in some areas, have declined since the 1980s and PNG is now ranked as having the lowest social indicators in the Pacific (Morris & Stewart, 2005). The economic deterioration since the nineties, coupled with the deterioration in public services, has severely impacted on living standards and increased levels of hardship particularly in rural areas. High crime rates, particularly against women, and major issues related to governance are also impacting on the country's economic performance (Izard & Dugue, 2003; Morris & Stewart, 2005).

The rise of a cash economy, urbanization and mobility have contributed to a breakdown in traditions of social control in Papua New Guinea, resulting in some significant changes in sexual behaviour in both urban and rural areas. A high level of sexual activity with low levels of condom use is common among teenage boys and girls in both urban and rural areas, with multiple concurrent partnering among adults being also extremely prevalent (Caldwell, 2000; Caldwell & Isaac-Toua, 2002; Jenkins & Alpers, 1996). As identified during the National Study of Sexual and Reproductive Knowledge and Behaviour (NSRRT) in Papua New Guinea:

With the decline of secret male cults and warfare, the individual male and female has fewer proscriptive rules, far greater freedom to travel, and less fear of casual interpersonal relations, particularly in urban settings. Rules governing sexual behaviour in these newer settings are unclear (NSRRT & Jenkins, 1994, p. 76).

Specific cultural behaviour, such as '*kalapim leg*' (literally translated means 'to jump a leg') in the Highlands Region and the Mila Mala festival in the Trobriand Islands (where young men can hold a girl's breasts and/or insert fingers into a girl's vagina during a slow rhythmic walk called the '*Kalibom*' – a part of the Mila Mala festival) also add to specific risk behaviours (Elliot, 2005; NHASP, 2005). Elliott (2005) in his study, Sexually Transmitted Infections (STI) in the Trobriand Islands, found that

children as young as 9 years of age have already had sex, 56% of youth aged under 20 viewed the *Kalibom* as a means of finding a sexual partner, and that STIs increased significantly in the period immediately post the Mila Mala festival. In a study among rural women in the Eastern Highlands, high rates of sexually transmitted diseases were also found with nearly 60% of all women surveyed having at least one sexually transmitted disease (Mgone, Lupiwa et al., 2001). Similar findings have been made in family planning participants in Port Moresby (Theunissen et al., 1995) and in female sex workers in Port Moresby and Lae (Mgone, Passey et al., 2001).

Other traditional cultural beliefs around sexuality and reproduction also support the continued spread of HIV. It is a commonly held belief among Papua New Guineans that multiple acts of intercourse are required for conception and hence many men consider it necessary to change sex partners so as to avoid getting a woman pregnant. The NSSRT study (NSRRT & Jenkins, 1994, p. 40) suggested that “it is not possible to assess...to what degree this belief encourages frequent sex partner change...it may be a hidden factor in this aspect of sexual behaviour, contributing to increased risks for acquiring HIV infection”.

This view is not restricted to men only. A young woman of 17 interviewed by Jenkins (1997) stated that:

Some mothers have told me that if I have sex with only one man I will get pregnant, but if I have sexual intercourse with plenty different kinds of men [sic], I will not get pregnant. That’s why I go out with lots of men. I’ve heard this from married women. (1997, p. 22)

Caldwell (2002, p. 108) notes that “[i]n PNG there has always been a transactional component in most non-marital sexual relations. Strictly commercial sex has increased only with paid wages and migration to towns, plantations, and mines, but sex for favours exists on a very large scale.” Jenkins (2004) supports this view and

adds that many factors influence the level of these activities; key among them the degree of poverty among women and their families.

Although rarely discussed, sex between men is also not uncommon, but this has no implications for sexual identity with most of those involved likely to be married (NSRRT & Jenkins, 1994). Male initiation rites in PNG were traditionally associated with anal sexual relations but these puberty rituals have declined in recent years (Caldwell, 2000; Caldwell & Isaac-Toua, 2002).

Gender inequality is pronounced on every index available. Female attendance in schools is low, and there is a near absence of women in Parliament and in senior positions in the public and private sector. Major health problems include high maternal mortality rates, malnutrition and poor access to reproductive services. This vulnerability and dependence increases women's risk of contracting HIV by constraining their ability to negotiate sexual interactions or the use of a condom, discuss fidelity with their partners, or leave high risk relationships. Gender relations are traditionally antagonistic in many areas of Papua New Guinea, and gender violence is widespread, with rapes increasingly frequent (Garap, 1999; Jenkins, 2004; Koczberski, 2000; Malau & Crockett, 2000). Jenkins (2004) states that 'line-ups' or gang rapes are common in both rural and urban areas and concludes that "[w]hatever the justification given, whatever the legal outcomes, rape is so common in PNG that it is likely to be an important factor in the spread of HIV." (1997, p. 19)

The prevalence of STI is high in both genders and given the 'epidemiological synergy' between STIs and HIV, this bodes badly for the future of the HIV epidemic (Mgone, Lupiwa et al., 2001; Mgone, Passey et al., 2001; NACS, 2006). Despite these high rates, treatment is limited due to access issues and weak health seeking behaviour. STI clinics are not widespread and have generally been seen as unfriendly and lacking in confidentiality. The closure of many rural health services and problems with training of health care workers and drug distribution severely hamper access to

treatment (AusAID, 2005; Izard & Dugue, 2003; Koczberski, 2000; Mgone, Lupiwa et al., 2001; Mgone, Passey et al., 2001; Morris & Stewart, 2005).

Current estimates of Papua New Guinea's population are approximately 6 million with an annual estimated growth rate of 2.7 per cent. The rapidly growing population is adding significant pressure on health, education and other social services (Morris & Stewart, 2005). Despite its many resources for economic growth, Papua New Guinea continues to confront difficult circumstances with the Gross Domestic Product (GDP) growth forecast of 3 to 3.5% for the period 2006 – 2009 being insufficient to bring significant improvements in per capita income over the medium term due to population growth (Izard & Dugue, 2003; Morris & Stewart, 2005).

There has also been a serious deterioration in the integrity of budget institutions and accountability. This, together with a worsening fiscal situation, has led to reduced public expenditure, deteriorating infrastructure and a very marked deterioration in public service delivery and morale. The country's ability to improve this situation over the next five years is expected to decline, not strengthen (Morris & Stewart, 2005).

Health

A major challenge to improving health in PNG is related to perceptions of illness and health in the population. There is a widespread lack of awareness of risk-related and health promoting behaviour and even where there is an awareness, circumstances can dictate against mobilizing this knowledge (Eves, 2003; Jenkins, 2004).

Other more pressing needs might seem to logically take precedent over a problem that will only appear some time in the future: 'If your housing is poor, with inadequate water supply and no electricity, and your clothes are old, having a supply of condoms would seem a strange sophistication (UNDP 1996 as cited in Moodie & Fry, 2000, p. 20).

Health services are predominantly provided by government and church providers, both of whom are financed primarily from public sector funds. Within the public sector, management responsibility for hospitals and for rural health services within a province is divided. The NDoH has the lead responsibility for ensuring the improved health of the population in PNG. Within a pluralistic and decentralized health system, it has many partners in health system development, including other government departments, district and provincial health authorities, the church and industry. External donor agencies also provide significant amounts of funds and technical assistance (Bolger et al., 2005; Izard & Dugue, 2003; Morris & Stewart, 2005).

Nurses and community health workers (often referred to as *Marasin Meris* or Medicine Women) provide in excess of 90% of the health care in PNG and form the backbone of health care services in the rural areas. Both groups are considered to be in short supply although accurate information is not available. Current estimates put the nurse to population ratio as 61.5/100,000 (WHO, 2005). The estimated doctor to population ratio is also extremely low at 5/100,000 (WHO, 2005) with many districts having no doctors. These shortages constitute a serious constraint to implementing the National Health Plan 2001 – 2010, and resolution of the problem in the short term does not seem likely given the funds and time required (Izard & Dugue, 2003; Morris & Stewart, 2005).

The major source of funds for health expenditure is central and provincial taxes and external aid. User fees have long existed in both government and church facilities, but they raise only small amounts of revenue and appear to be poorly managed, and the uptake of private insurance is limited. Public funds for rural health services are transferred from treasury to provinces in block grants. Funds for health services are not quarantined and in practice most provinces allocated less to health than suggested by treasury. There is also considerable variation between provinces on the amount spent on health with most of the provincial allocation (~80%) being spent on salaries (Izard & Dugue, 2003; Morris & Stewart, 2005). PNG, in comparison with its Pacific

country neighbours, spends the lowest proportion of GDP on health and also has the lowest level of health expenditure per capita (Izard & Dugue, 2003).

The national health system is designed around a system of primary health care with aid posts and health centres providing health care to the majority of the population. These centres are generally staffed by nurses, midwives and community health workers. An estimated 50% of these centres are reported to be closed due to lack of staff, drugs and supplies (Izard & Dugue, 2003; WHO, 2005). The referral path for most of these centres is to the 18 provincial hospitals and the national referral hospital, Port Moresby General Hospital (PMGH). Only Central Province does not have a provincial hospital, instead it utilizes the PMGH.

In 1995 the *Organic Law on Provincial Government and Local Level Government* (hereinafter referred to as the new Organic Law) was passed with the aim of improving decentralization. While not a health sector specific law, it has had significant health sector effects as responsibility for rural health services were transferred to local governments. The law gave greater autonomy to districts and local level governments in service planning and management, and significantly affected budgeting processes and human resource management. While provincial hospitals had been initially transferred to the provincial governments with the 1977 Organic Law, the new Organic Law transferred responsibility of these hospitals back to the NDoH. As a result, they now operate largely independent of rural health services within the same province (Bolger et al., 2005; Izard & Dugue, 2003; Morris & Stewart, 2005). Morris and Stewart (2005, p. 21) conclude that the implementation of the new Organic Law has resulted in “large inequities between provinces because of differing revenue bases, buck-passing between tiers of government...avoidance of responsibility for performance; and a further deterioration in some regions a complete collapse – in service delivery.”

Approximately 30% of provincial government staff are health workers. Changes in the new Organic Law exacerbated existing problems with health staff supervision. Provincial health advisors lost most of their authority to supervise and discipline district health staff with these functions being transferred to provincial or district administrators. There is widespread discontentment with this move and Bolger et al. (2005) cite indications in support of this. There is a strong entrenched organizational culture within the public health sector that believes ‘it is near impossible to discipline, let alone dismiss staff’. Izard and Dugue (2003, p. 42) noted “the inability or unwillingness of management to take appropriate action in the event of suspected breach of statutory requirements or ethical business practice.” This led them to conclude that “[p]erhaps one of the greatest constraints to progress in the [health sector] reform process is the inability or unwillingness of senior management to exercise personnel management options in relation to” such breaches (2003, p. 43).

The health care system continues to be plagued by supply and logistics issues. Efforts to improve drug availability, including a National Drug Policy, privatization of distribution, kits for aid posts and more warehouse staff training, have probably made some improvements but significant shortages remain. The devaluation of the Kina has reduced purchasing power. Public spending on drugs is ~US\$5.00 per capita. Distribution is inequitable, with the Highlands region getting much less drugs than the national average. Few hospitals have qualified pharmacists and prescribing practices are also a cause of concern (Izard & Dugue, 2003).

Information for decision making and public health planning and management is incomplete. Diagnostic facilities and public health laboratories are limited and disease surveillance is largely limited to clinical diagnosis. There is no effective overall disease surveillance system although individual programmes such as those for malaria, TB and HIV are attempting to improve their surveillance systems (Izard & Dugue, 2003; WHO, 2005).

Current and Past Responses to HIV/AIDS

After identification of the first AIDS case in Papua New Guinea in 1987, the National Department of Health (NDoH) and the World Health Organization (WHO), began to develop a system of surveillance, prevention, education and counseling on HIV (Malau, 1999). In addition, awareness programs were organized for political leaders, journalists and government departments through a series of national conferences (Malau & Crockett, 2000). From 1994 this set of responses stalled when a new government, despite repeated requests from Ministers of Health, refused to give HIV programs priority in its requests for international funding and rejected proposals for a National AIDS Council (Malau & Crockett, 2000).

In 1995 the Australian Agency for International Development (AusAID) established a Sexual Health and HIV/AIDS Prevention and Care project (Foundation Project) to improve STI services, distribute condoms and develop a targeted intervention for sex workers and their clients in the transport industry (AusAID, 2005; Malau, 1999; Malau & Crockett, 2000). In 1997, with the active support of a new Prime Minister and an energetic Secretary for Health, legislation to establish a National AIDS Council (NAC) was enacted and a directive was issued calling on all sectors to collaborate in the formulation of a National Strategy on HIV/AIDS (Malau & Crockett, 2000).

The National Strategy took the form of a Medium Term Plan (1998 – 2002) and had wide consultative formulation involving all sectors. Responsibility for the implementation of the plan was given to the newly formed National AIDS Council and its Secretariat, assisted by the AusAID National HIV/AIDS Support Project (NHASP) between the years of 2000 and 2006 (the original project was scheduled to complete by 2005 but this was extended to 2006). By June 1998, when the plan was launched, the Council and its Secretariat were in place (Malau & Crockett, 2000).

The Medium Term Plan was a comprehensive multi-sectoral strategy within which priorities were to have been set by the NAC. Instead of a small council of planners as initially proposed in the early 1990s, the National AIDS Council was established with a committee of senior civil servants from many departments, chaired (up until mid 2005) by the Secretary of the National Department of Health, with only token representation from the voluntary, academic and private sectors (AusAID, 2005). The National AIDS Council was inadequately resourced (financial and human) to undertake its role and as a consequence has not performed well. The Medium Term Plan was never costed or prioritized, and as NAC was affected in its role by the Public Service Reforms, much of the implementation fell to NHASP. Recently however, NAC has been moved under the Department of the Prime Minister and a review is underway into its structure. A parliamentary committee on HIV/AIDS has also been formed.

Initial priority was given by NAC to the establishment of Provincial AIDS Committees (PAC) as subcommittees of NAC. The Medium Term Plan review and the Evaluation of the PNG National HIV/AIDS Support Project both found that few PACs are functional. In stances where they were effective, there was better evidence of multi and cross sectoral approaches at a provincial level (AusAID, 2005). The reasons many PACS lacked effectiveness are varied and include the lack of provincial government support and leadership, skills and organizational capacity, financial management skills and basic infrastructure.

Several initiatives to fortify provincial activities have been taken by NDoH. Social mapping exercises, intended to equip PACs with the capacity to address specific risk settings in their provinces, were undertaken in 19 of 20 provinces. The integration of HIV/AIDS into provincial and district strategic planning has also commenced but the impact of these plans at the grass roots level appears to be minimal. The extent to which

provinces and their districts have incorporated HIV in their planning is variable and is affected by a variety of factors such as capacity, motivation and the availability of the necessary skills (AusAID, 2005).

In addition to the data gathered through social mapping, NHASP also undertook large scale social marketing surveys in all four regions of the country. However, the NHASP review found that the design and subsequent analysis of the surveys were compromised through the process of documentation of results and the style of reporting and therefore the utility of this data was severely diminished. Despite this, the survey results do not show sustained or dramatic changes in key behavioural patterns such as use of condoms and the number of sexual partners per individual (AusAID, 2005).

The National Department of Health, while originally having responsibility for HIV/AIDS initiatives, had an ambiguous role under the MTP. While it maintained its theoretical role of clinical service provision, this was not linked to activities occurring in other sectors. Surveillance, while traditionally being the responsibility of the NDoH, was nominally allocated to NAC in the MTP. Surveillance has remained weak mainly due to the generalized weakness of the system that underpins surveillance. Collaboration between NDoH and NAC has often been limited but there are signs that this is improving (AusAID, 2005).

In contrast, the Papua New Guinea Institute of Medical Research has been actively involved in HIV research since the mid-1990s and has conducted research in many areas including molecular epidemiology and surveillance, clinical studies of STIs in PNG communities and on behavioural research with sex workers. The importance of this research can not be overstated as it has contributed significantly to the illumination of the HIV problem in PNG (AusAID, 2005).

The Government of Papua New Guinea's (GoPNG) successful bid in the fourth round of the Global Fund has bought a renewed interest in the HIV issue and has committed the Government to providing care and treatment. Nonetheless, several major issues confound this new commitment; the least of which being that of ensuring compliance with treatment regimes in the face of overwhelming failure with the DOTS strategy for Tuberculosis (TB). Capacity for implementation is also limited due to a freeze in employment in the health sector resulting in a lack of health care workers particularly in the rural areas, and more particularly, due to the lack of health care workers who have been trained to provide comprehensive HIV care.

Initial support for antiretroviral therapy (ARV) training was given by NHASP in conjunction with the Australasian Society for HIV Medicine (ASHM). This 3 day course was only for medical officers and dealt primarily with antiretroviral therapy. The course was theory based with no clinical support given and did not deal with the more comprehensive care needs of HIV positive people. Evaluations of this course suggest that there were severe limitations to being able to implement what was taught in the PNG context (AusAID, 2005).

The PNG Defence Force responded to the HIV problem over a decade ago. Its approach, especially in its retention of infected personnel and the return of sick personnel to their villages to die, has been recognized internationally as good practice. The PNG Constabulary has a history of involvement in high risk sexual activities and has at various times developed prevention education initiatives. These are in great need of reinforcement and support as evidenced by the recent Human Rights Watch Report.

While concerted educational campaigns are conducted on the ABC (Abstain, Be faithful, Use condoms) message, the very possession of condoms can trigger police harassment and charges of prostitution. In a raid on a Guesthouse in March 2004, police listed as evidence in support of charges of prostitution "used condoms sighted

in the rooms and the premises where the defendants were sighted” (HRW, 2005, p. 73).

More than twenty girls and women arrested in the raid reported that police ordered them to chew, and in many cases, swallow, between one and four condoms. “Blow this condom for it goes in you, you do not feel ashamed of it,” one of the women reported later that day that a policeman ordered her [sic] (HRW, 2005, p. 74).

Reports also indicate that police harassment over condoms is not limited to women. Students have also been harassed for carrying condoms and have allegedly been made to chew and swallow condoms (HRW, 2005).

In 2001, NHASP produced a comprehensive “Review of Policy and Legislative Reform relating to HIV/AIDS in Papua New Guinea”. This review served as a basis for the development of the *HIV/AIDS Management and Protection Act* (commonly referred to as the HAMP Act) which is aimed at addressing issues of stigma, discrimination and confidentiality. The Act, which has become a model in the Pacific region, was passed by the National Parliament in July 2003 and was gazetted in October, 2004. A ‘plain English’ handbook providing guidance on the application of the Act has been prepared and the Public Service General Orders have been revised in line with the provisions of the Act (AusAID, 2005).

The NHASP review noted that “[t]he HAMP Act has considerable educational potential for overcoming stigma, but promotion of the details of the act to magistrates, health workers and to the public appear to have been limited”. As an example, some personnel from key Non-Governmental Organizations (NGOs) are incorrectly “under the impression that the act provided little protection for people whose partners have HIV but are not taking precautions” (AusAID, 2005, p. 24). The review also noted that outdated colonial laws regarding homosexuality and prostitution are still in

existence and continue to aid to the issue of stigma and interfere with prevention (AusAID, 2005).

Two significant areas that were inadequately addressed by NHASP, was that of gender and the inclusion of consumer input, specifically that of people living with HIV/AIDS. The key gender issue is the subordinate status of women in PNG society (Bradley, 2000). Data on women's involvement in PNG society are lacking as is data addressing male behaviour and attitudes. This in particular is significant since male attitudes have been cited as a major impediment to the progress of women in many areas of life and at every level of society (Bradley, 2000). It is of interest to note that there is no specific reference to gender issues in the new National Strategic Plan on HIV/AIDS.

The importance of these biological, socio-cultural and political influences on the HIV epidemic and on prevention and treatment strategies in Papua New Guinea is best summed up in the following words by Dr Clement Malua of the Papua New Guinea National AIDS Council:

We in Papua New Guinea have the most difficult place to work in HIV/AIDS in the world. We've got a diverse society. We have 800 different languages, and people have maybe the similar number of thoughts and ways of thinking about general issues in life, and sex is one of those issues...if we don't do things innovatively and proactively...we will definitely have maybe much more problem than what's faced in Africa, I believe [sic] (ABC, 2000).

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CHAPTER 3

Literature Review

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Literature Review

*Those who cannot remember the past are condemned to repeat it.
(Santayana 1905)*

Introduction

The work in this chapter was seen as having three main aims. The first aim was to build a substantive theoretical foundation for the study reported in this thesis. The second aim was to demonstrate the connection between the research problem identified in Chapter 1, and a more comprehensive body of knowledge. The third aim was to identify pertinent literature; to explore the literature to identify what contribution it made to the research topic, and to identify what it left still to be focused on as a research study.

The chapter presented here as a published refereed journal article was successfully submitted to the Divine Word University Research Journal under the title “HIV/AIDS Education Management: Meeting the challenge of universal access in Papua New Guinea”. The contents of this article matched the stated aims above and provided a firm context for the study and information for the reader to situate themselves within the ambiance of working with nurses in PNG.

**HIV/AIDS EDUCATION MANAGEMENT: MEETING
THE CHALLENGE OF UNIVERSAL ACCESS IN
PAPUA NEW GUINEA**

**Mr Geoffrey Clark
Associate Ysanne Chapman
Ms Jane Mills**

Submitted to: Divine Word University Research Journal

Monash University

Declaration for Research Article

In the case of paper entitled: HIV/AIDS EDUCATION MANAGEMENT: MEETING THE CHALLENGE OF UNIVERSAL ACCESS IN PAPUA NEW GUINEA


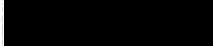
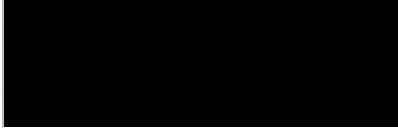
Name	% contribution	Nature of contribution
Geoffrey Clark	80%	Concept development, key ideas, development and writing up
Ysanne Chapman	10%	Contribution to drafts and revision
Jane Mills	10%	Contribution to drafts and revision

Declaration by co-authors

The undersigned hereby certify that:

- (1) they meet the criteria for authorship in that they have participated in the conception, execution, or interpretation, of at least that part of the publication in their field of expertise;
- (2) they take public responsibility for their part of the publication, except for the responsible author who accepts overall responsibility for the publication;
- (3) there are no other authors of the publication according to these criteria;
- (4) potential conflicts of interest have been disclosed to (a) granting bodies, (b) the editor or publisher of journals or other publications, and (c) the head of the responsible academic unit; and
- (5) the original data are stored at the following location(s) and will be held for at least five years from the date indicated below:

Location(s)

	Date
Signature 1 	10/11/09
Signature 2 	10/11/09
Signature 3 	10/11/09
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HIV/AIDS Education Management – Meeting the Challenge of Universal Access in Papua New Guinea

**Geoffrey Clark,
Ysanne Chapman
Jane Mills**

Abstract

In June 2006 at the United Nations General Assembly high-level meeting on Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome (HIV/AIDS), United Nations member states agreed to work towards the goal of universal access to comprehensive prevention, care, treatment and support by 2010. One of the key obstacles to scaling-up comprehensive HIV care and treatment in resource limited settings is the lack of appropriately trained health care workers. Experiences with comprehensive HIV care suggest that key factors such as using a team approach, task shifting between health care workers, simplified drug regimes and integrated services have been shown to be integral to the successful provision of comprehensive care. Using Papua New Guinea as a key example, this paper argues that the lack of capacity in health care workers is a key barrier to achieving increased access to comprehensive care in resource limited countries and therefore further research in this area must be seen as a key priority in the response to the HIV epidemic.

Keywords: Papua New Guinea, HIV, resource limited settings, comprehensive care, chronic care

Introduction

The prevalence of Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome (HIV/AIDS) worldwide is growing rapidly and at the end of 2004, was globally the leading cause of adult mortality (UNAIDS/WHO, 2006). In June 2006 at the United Nations General Assembly high-level meeting on HIV/AIDS, United Nations member states agreed to work towards the goal of universal access to comprehensive prevention, care, treatment and support by 2010. Advances in treatment and outcome data from the introduction of HIV care and treatment (including antiretroviral therapy - ART) programmes in resource limited settings (Badri, et al., 2006; Laniece, et al., 2003; Levy, et al., 2005; Stringer, et al., 2003; Wools-Kaloustian, et al., 2006) have demonstrated that the goal of providing comprehensive HIV prevention, treatment and care (including ART) (hereinafter referred to as 'Comprehensive Care') can be successfully implemented in resource limited settings.

Along with this realization has also come the debate about who should provide this care (Glazier et al., 2002; Kober & Damme, 2004; Wendo, 2005; Wilson et al., 2005). Glazier et al. (2002, p.1) concludes that 'regardless of this debate, it is generally accepted that health care providers must have detailed knowledge about HIV and AIDS if they are to provide the best care for their patients'. Despite the obviousness of this statement and the fact that that overwhelmingly the burden of HIV is on resource limited countries, there is a dearth of published research on what training is appropriate for registered nurses in these settings to enable them to effectively provide Comprehensive Care.

One of the key obstacles to scaling-up levels of client care to Comprehensive Care in resource limited settings is the lack of appropriately trained health care workers (Hanson et al., 2003; Hirschhorn et al., 2006). Despite human resources being variously described as 'the heart of the health system' and 'the most important aspect of the health care system', human resource development has received little, if any attention, in the development of health care systems in resource limited countries (Hongoro & McPake, 2004). Scaling up to the provision of Comprehensive Care will require a cadre of appropriately trained health care workers, and in the case of resource limited countries, this implicitly implies nurses (Ranson et al., 2003). Nowhere is this truer than in Papua New Guinea where the physician to nurse ratio is one of the lowest in the developing world - 0.09 (WHO, 2007).

Perspectives on health systems and HIV/AIDS

After a century of the most spectacular health advances in human history, we are confronting unprecedented and interlocking health crises. We face rising death rates and plummeting life expectancy in some of the world's poorest countries and new global pandemics that threaten us all...Today's crisis reflects both new and resurgent diseases as well as neglect of human resources in the health sector, so critical for effective response [sic]. (Joint Learning Initiative, 2004, p.1)

The shortage of human resources has been described as one of the most important bottlenecks to the scaling up comprehensive HIV care and treatment (Ranson et al., 2003; Wyss et al., 2003). The Commission on Macroeconomics and Health argued that scaling up interventions for key health conditions that are responsible for the lion's burden of avoidable mortality in developing countries are among the greatest challenges facing health systems in these countries. One of the key challenges is the shortage of appropriately trained health care workers (Ranson et al., 2003).

Malfunctioning health care systems and the HIV epidemic itself combine to create one of the greatest obstacles to resource limited countries scaling up comprehensive HIV care and treatment. HIV poses a new and unique threat to the ability of health care systems to deal effectively with health crises as it increases the workload and the required skill of health care workers; adds

considerably to the psychosocial stress that health care workers have to endure due to the increasing number of sick and dying patients, and as the prevalence of HIV increases in a community, it has the potential to reduce the number of available health workers and therefore further weaken the health care system (Michaud, 2003). In order to more effectively manage the challenges of HIV/AIDS, countries need to focus on strengthening their health systems, and in particular their human resources (Ranson et al., 2003; Wyss et al., 2003).

Ensuring the appropriate preparation of health care workers is integral to the strengthening of health care systems. In order to be effective at doing this, health training infrastructure needs to have a clear understanding of the issues, challenges and opportunities that face contemporary health care workers and to develop appropriate strategies to address these (Kachur & Krajić, 2005).

Hanson (2000) argues that a key prerequisite to health system strengthening and to scaling up priority health care services is the need to decentralise decision making and service delivery. Hanson (2000) further argues that decentralisation can provide for greater opportunities for innovation and community participation and 'moves services to the people rather than people to the services'. Khaleghian (2003), supporting Hanson, states that both of these attributes are believed to be associated with greater success in implementation (Khaleghian, 2003).

Models of health care

Effective care for chronic conditions cannot be delivered however unless there are adequately trained health care workers. While the world experiences a transition from acute to chronic health problems, the educational preparation of health care workers continues largely utilizing an acute, biomedical care model focus (Pruitt & Jordan, 2005). There is growing recognition of the limitations of this educational model in terms of preparing a 21st century health care workforce (WHO, 2002b).

Experiences with Comprehensive HIV Care suggest that a multifaceted approach is the most likely to be beneficial. Actively involving patients in their health care decisions, provision of appropriate supports and educational programmes to teach skills to the patient to enhance the benefits of Comprehensive Care, and tailoring Comprehensive care to meet each patient's individual needs has been demonstrated to be effective (Chesney, 2000; Chesney et al., 2000).

One attempt to address this deficiency in educational preparation is the World Health Organization's (WHO) competencies for delivering effective health care for patients with chronic conditions (WHO, 2005). These competencies are:

1. Patient centred care,
2. Partnering
3. Quality improvement

4. Information and communication technology, and
5. Public health perspective

It is suggested that these five core competencies should underpin the educational preparation of all health care workers who provide care for patients with chronic conditions. These competencies have been endorsed by several influential professional bodies, including the International Council of Nurses and the International Alliance of Patients' Organizations but are yet to be translated into reality (Pruitt & Jordan, 2005).

Chronic care model

Chronic diseases currently account for more than half of the global disease burden and are one of the primary challenges facing a 21st century health care system (WHO, 2004c). This prioritisation is vastly different from the health care systems of the 20th century where acute problems, such as infectious diseases were paramount.

Health care for chronic conditions inherently is different from health care for acute problems, and in this regard, current health care systems worldwide fall remarkably short. Health care systems have not kept pace with the decline in acute health problems and the increase in chronic conditions. (Pruitt, S. et al., 2002, p. 32)

Chronic diseases can be defined as 'Diseases which have one or more of the following characteristics: they are permanent, leave residual disability, are caused by non-reversible pathological alteration, require special training of the patient for rehabilitation, or may be expected to require a long period of supervision, observation or care' (WHO, 2003, p. 4).

Increasingly, there is a view among public health experts that HIV/AIDS is a chronic condition which requires comprehensive care in no different a manner to many non-communicable diseases such as Ischaemic Heart Disease and Diabetes (Pruitt et al., 2002; WHO, 2003). In sub-Saharan Africa, a recent examination of the burden of disease revealed that 86% of disability adjusted life years (DALYs) were because of non-communicable diseases of which HIV/AIDS contributed significantly (Setel et al., 2004).

Resource limited countries suffer the greatest impact from major chronic conditions. Of the total number of deaths attributable to non-communicable diseases worldwide, 77% are estimated to occur in developing countries (WHO, 2004c), while approximately half of all health services required in resource limited countries are for chronic conditions (Kitahata et al., 2002). Despite these statistics most health care systems remain oriented to the management of acute illness. The patient's role in their own care is not emphasized or supported; follow up of treatment is sporadic, and prevention is usually neglected (Pruitt et al., 2002). As a result many people are failing to receive appropriate care despite the evidence that including patients in decision

making and treatment planning makes the delivery of care for chronic conditions more effective and more efficient (Holman & Lorig, 2000; Schonlau et al., 2005; Tsai et al., 2005; Vladeck, 2001).

Setel et al. (2004) argue that for both public health and services planning reasons, it is imperative that we move away from a model of health care delivery that has a narrow focus on acute episodic care to one that more closely reflects the burden of chronic disease, regardless of the etiology. Vladeck (2001) in supporting this view argues that the three major constraints to improving care for chronically ill people are health care provider behaviour, organizational barriers and public policy.

As chronic conditions by definition are enduring, it is essential that care strategies are developed with patients, health care workers and health care organizations as partners. The Innovative Care for Chronic Conditions (ICCC) framework is one such model. This framework, based upon the Chronic Care Model (CCM), 'expands community and policy aspects of improving health care for chronic conditions and includes components at the micro (patient and family), meso (healthcare organization and community), and macro (policy) levels.' (Epping-Jordan et al., 2004, p. 299)

The Chronic Care Model was developed from clinical experience and documented evidence regarding mechanisms that facilitated improved care in patients with chronic conditions (Wagner et al., 2001). The CCM encompasses a holistic approach to the patient, aims to involve patients and their families in improving outcomes, focuses on improving outcomes rather than procedures, and promotes and encourages task shifting within members of the health care team (Cretin et al., 2004). Provider roles and standards of care and treatment are explicit and based on a synthesis of evidence from clinical trials and studies. A systematic review of these studies by the Cochrane Effective Practice and Organization of Care group suggests a synergistic effect when individual interventions are combined, and a recent review of the literature confirms this and highlights the consistency between the most successful chronic care improvement strategies and the concepts and components that underpin the CCM (Bodenheimer et al., 2002; Renders et al., 2001; Schonlau et al., 2005).

In a meta-analysis undertaken by Tsai et. al. (2005, p. 487), the introduction of just one component of the CCM such as the care delivery system or self-management support resulted in an improvement in clinical outcomes but, consistent with the findings of Grol and Grimshaw (1999), interventions with multiple components had a much greater effect which they interpreted as arising from a 'synergistic effect in which the whole is bigger than the sum of the parts'. They concluded that chronic care that included at least one element of the CCM improved clinical outcomes and processes of care and to a lesser extent, the quality of life for patients with chronic conditions (Tsai et al., 2005). While these studies investigated chronic care in resource rich countries, Swartz and Dick (2005) argue that the need for the implementation of the CCM

components in countries where needs are great and resources scarce is even more imperative.

While conceptually linked to the CCM, the ICCC framework extends the CCM dyad of informed activated patients and prepared proactive teams to a triad through the inclusion of community partners. This inclusion emphasizes the critical role that the communities play in health systems in many resource limited settings and recognizes that the best chronic care is delivered when all members of the 'team' communicate and collaborate with each other. A further change in the ICCC framework is the movement away from 'informed and activated' to 'informed, motivated and prepared'. This change reflects the reality that in many resource limited settings it is insufficient to be motivated if you have inadequate knowledge (either through not being informed or not being trained) and/or resources (Epping-Jordan et al., 2004).

Integrated management of adult and adolescent illness (IMAI)

While the translation of the WHO five core competencies into pre-service health care worker education is yet to be realized, in-service training of health workers utilizing the ICCC framework as a base has begun and has shown some promising results. One of these programmes is the Integrated Management of Adult and Adolescent Illness Chronic HIV Care (IMAI). IMAI is a strategy to improve the quality of health care for under-served populations in resource limited settings (WHO, 2006).

IMAI builds on and complements previous experience with other integrated approaches such as the Integrated Management of Childhood Illness (IMCI). It extends the integrated management of common clinical conditions to the relatively neglected adolescent and adult groups, including the elderly. Within this life span approach, IMAI responds to the need for more and better health care in these age groups resulting from the increasing burden of disease due to chronic conditions and the high prevalence of HIV/AIDS in many resource limited countries. IMAI is designed to better meet the health care needs of adolescents and adults, through improved case management, disease prevention and health promotion (WHO, 2006).

Two key aspects of the IMAI approach is the integration of prevention and care activities and task shifting. Integration within the approach is seen as key to ensuring the optimal use of resources, an increased usage of HIV services, and the improvement of the lives of those infected and affected by HIV (Kitahata et al., 2002; Wilson et al., 2005). Equally task shifting is seen as essential for resource limited countries if Comprehensive Care is to be achieved. In the main this outcome will mean shifting tasks traditionally performed by physicians to nurses. Despite the resistance and reluctance to such an approach by many established health care workers (Berwick, D. M., 2004), initiatives to date have demonstrated the safety and success of such an approach (Venning et al., 2000; Wendo, 2005; Wilson et al., 2005).

One small study conducted in a Philadelphia HIV Ambulatory Care Center to evaluate patient satisfaction with a range of aspects of care specific to HIV found that while HIV patients rated the overall care of the centre as good, nurse practitioners fared more favourably than physicians in areas related to clinic waiting times, provider knowledge about the disease, continuity of care and patient education even though nurse practitioners consistently cared for a larger number of HIV-positive patients compared with the physicians (Lagner & Hutelmyer, 1995).

This study's findings are consistent with the findings of a systematic review of nurse practitioners undertaken by Horrocks et al. (2002). As a result of inconsistency in the use of the title nurse practitioner, the review used a criteria for inclusion of 'studies where nurses provided the first point of contact, made an initial assessment, and managed patients autonomously, whether or not they were described as nurse practitioners.' (Horrocks et al., 2002, p. 819) Their study found overall that increasing the availability of nurse practitioners in primary care is likely to lead to high levels of patient satisfaction and high quality care. While none of the 11 trials or 23 observational studies specifically examined HIV care, it is arguable that the results could equally be extrapolated to the care an appropriately educated nurse could deliver to HIV patients.

Kitahata et al. (2002) believe task shifting provides a solution to successful scale up of Comprehensive Care in resource limited settings.

Training primary care providers to deliver some aspects of HIV care, and developing effective communications and referral systems to closely link primary providers to more specialized services could begin to address the need for HIV expertise in resource poor settings. (Kitahata et al., 2002, p. 956)

Evaluation studies of the effectiveness of task shifting are how ever limited. One study in the US reported findings from six training projects designed to keep health care providers up to date on developments in HIV/AIDS care found that a health care providers background '...does not necessarily provide diagnostic evidence as to who might most benefit (in terms of improved confidence in caring for clients and training topics) from HIV/AIDS educational training' (Panther et al., 2000, p. 613).

The development of IMAI resulted from a working partnership involving WHO, Geneva, the WHO Regional Office for Africa (AFRO), and various international collaborating institutions including the Centre for Disease Control, Columbia University, Harvard Medical School, London School of Hygiene and Tropical Medicine and the MacFarlane Burnett Institute for Medical Research and Public Health. IMAI utilizes a 'horizontal' approach, already well developed with programmes such as IMCI, with the integration of specialized 'vertical' programmes input in the development of simplified tools to help improve health care in resource limited settings.

While no evaluation has yet been undertaken of the IMAI program, research has been undertaken into the cost effectiveness and efficacy of the Integrated Management of Childhood Illness (IMCI) program. IMCI has shown an improved quality of care outcome for children in resource limited settings (Gouws et al., 2004; Oluwole et al., 2000) although concerns have been expressed about the costs of implementing the program (Khan et al., 2000).

In contrast to these concerns, a Tanzanian study conducted in 1999 demonstrated that health care costs per child in IMCI districts were 44% lower than in non IMCI districts. This difference was attributed to a reduction in hospitalization of children cared for in IMCI districts and reduced administrative costs. The lower administrative costs resulted from a reduction in transportation costs for medicines and general supervision (Taghreed et al., 2005). While not related to the study objective, one of the key outcomes noted was the strengthening of the health care system that had occurred with the implementation of IMCI. The authors of the study note that while the results should only be interpreted as estimating the costs of IMCI due to several variables affecting the study, the study did not find any evidence that IMCI resulted in higher health care costs than routine care.

Regarding quality of care, studies in Brazil and Uganda demonstrated that children treated by a health care worker who had received IMCI training were more likely to be prescribed the correct antimicrobial care, to have been administered the first dose at the health facility, and to have their caregivers instructed in the child's continuing care needs (Gouws et al., 2004). Given the results of the Tanzanian study and the evidence of the impact and outcomes of IMCI training for clients, Taghreed et al. (2005) encouraged the continue implementation of IMCI in Tanzania.

While no formal evaluation studies have been undertaken of the effectiveness of IMAI, anecdotal evidence from Uganda attributes the country's success in facilitating large scale increase in the level of Comprehensive Care given to people living with HIV/AIDS to the IMAI strategy (Wendo, 2005). The development of teams of health care workers, task shifting and the use of people living with HIV/AIDS to train and evaluate health care workers was seen as some of the key benefits of using this model (Wendo, 2005).

Horizontal versus vertical approach

One of the key issues in the expansion of access to priority health services, such as Comprehensive Care, in resource limited settings is how best to implement efforts to scale up services. The Commission on Macroeconomics and Health (CMH) in 2002 argue that the best way to deliver priority health interventions was through the use of 'the-close-to-client' (CTC) health system (WHO, 2002a). This health system consists predominantly of district hospitals and health centres staffed mostly by nurses, midwives and other community health workers. The report also identified that these existing low-level health facilities would need significant strengthening to meet this task.

These CTC systems provide care predominantly through vertical or categorical programmes. These programmes are designed to address a particular disease or condition and are largely not integrated within the regular infrastructure of the health care system. An example of these programmes is malaria, with the most notable successful vertical program being the global smallpox eradication program (Hanson K et al., 2003; Oliveira-Cruz et al., 2003b).

In contrast, horizontal approaches (also referred to as integrated health services or programmes) to health care delivery utilize the regular infrastructure of the health care system. A key example of a horizontal approach is the primary health care model that emphasizes the importance of service integration (Oliveira-Cruz et al., 2003b). It is argued that this more holistic approach to health which centred on the needs of individual communities, promotes appropriate inter-sectoral, political and community participation and is therefore more successful (Mills, 1983). Critics of the horizontal approach however argue that issues such as low morale of staff, lack of skills, and an overwhelming burden of responsibilities experienced by staff can lead to the ineffectiveness of integrated health services (Oliveira-Cruz et al., 2003b).

One of the greatest criticisms of the vertical approach to service delivery is that due to its narrow approach, focusing on one disease, it does not contribute to the strengthening of the overall health care system and may indeed weaken these systems through the diversion of health care workers time and attention away from other priorities (Conn et al., 1996). Concerns have also been expressed about the potential for vertical programmes to weaken community self reliance and their failure to take into account diversity among countries and hence often adopting a 'one model fits all' approach (Banerji, 1999).

In a review of the integration of health services, WHO identified that despite numerous vertical programmes such as the control programmes for HIV, diarrheal diseases, malaria, leprosy and tuberculosis, there had been little improvement in the health status of the population in Ghana (1996). Reports from Tanzania and Zaire also observed that measles vaccination programmes failed to reduce under 5 mortality, due to malaria and other causes of mortality which were not targeted by the programme (WHO, 1996).

Conversely, proponents of the vertical approach highlight the benefits that health care systems derive from vertical programmes such as the ability to focus on disadvantaged populations while promoting a 'culture of prevention'. Successful initiatives that have used a vertical approach are the Polio Eradication Initiative and the promotion of donor coordination through the programmes such as the Expanded Program for Immunization (Gounder, 1998; Oliveira-Cruz et al., 2003b).

Oliveira-Cruz et al. (2003b) note that the paucity of evidence in this area is such that either approach could not be recommended as a panacea. They suggest that individual circumstances of each resource limited country should be considered and an approach tailored to fit the particular needs of that country. In conclusion they propose that 'expanding access to priority health

services requires the concerted use of both vertical and horizontal approaches, in accordance with the capacity of health systems as [they] change over time.' (Oliveira-Cruz et al., 2003b, p. 83)

Briggs et al. (2001) in their review of the effect of integrating primary health services in middle and low-income countries arrived at the same conclusion. They found that there was no consistent pattern of benefit in integration, and in two of the studies integration resulted in negative outputs in comparison with vertical programmes. They however noted that their review was limited in that only four studies of good quality were included in the review. They concluded by suggesting that policy makers could introduce strategies to allow further evaluation of integration projections so as to increase the evidence base on the effectiveness or otherwise of integration.

One of the key risks in integration in resource limited settings is that resources may be spread so thinly that health activities fail to meet even the minimum standard required to achieve any impact on health. Hanson (2000) identified these and notes that below a certain resource level, the outputs of an integrated health system is likely to be lower than a vertically based health programme.

Given the chronic nature of the disease, people living with HIV/AIDS will need a greater range of services over a longer period of time. Therefore the argument for integration of health services, and specifically for comprehensive HIV care and treatment to be integrated within the current health care system, is suggested to be strong particularly given that a lack of integration has been implicated as the cause of problems such as 'lost to follow-up', failure of service delivery and less than optimal outcomes (Brodsky et al., 2003).

Implementing a model of Comprehensive Care

In addition to humanitarian considerations, there is a growing body of evidence and consensus that identifies the treatment of HIV-infected persons as having a positive effect on HIV prevention which in turn assists with minimizing the negative socio-economic effects of the HIV epidemic in that prevention and care are inextricably linked (Lamptey & Wilson, 2005). Concentrating on prevention alone is inadequate and cannot penetrate the inertia and sense of hopelessness that accompanies constant death and dying (Berkman, 2001).

In resource limited settings with already poorly functioning public health systems, care for HIV-infected patients has not been considered a priority. As a result, minimal effort has been made in improving the capacity of staff to cope with demands of providing HIV care and often non-government organisations (NGO) and faith based organisations (FBO) have been left to provide stop gap measures (Creese et al., 2002). Coupled with this lack of prioritization, many communities where Comprehensive Care is needed already suffer from a lack of health care workers to provide basic health care services (Buve et al., 2003).

Access to Comprehensive Care in resource limited countries has seen significant improvements in prognosis for those people living with HIV/AIDS.

Despite these advances and the successes associated with providing Comprehensive Care in resource limited countries (Badri M et al., 2006; Levy et al., 2005; Moatti et al., 2004; Wools-Kaloustian et al., 2006), few of the people living with HIV/AIDS in resource limited settings receive such care (Mukherjee et al., 2003). Buve et al. (2003) succinctly enunciate the paramount rationale for scaling-up Comprehensive Care.

HIV/AIDS programmes of prevention and care, if well integrated in public health services, can contribute to the strengthening of health systems. Especially programmes to improve care of HIV-infected patients can restore the confidence of communities in the health services and boost the morale of health staff which may have beneficial effects on other activities as well...With training and the provision of supplies necessary to manage HIV-related morbidity health staff might again be motivated, as their sense of achieving something may improve. (Buve et al., 2003, p. S48 & S49)

Key factors that have been identified as being integral to the successful provision of Comprehensive Care in resource limited settings include using a team approach, task shifting between health care workers, simplified drug regimes and integrated services – evidence for these four priorities is included in table 1:

Table 1: Four key factors in the provision of comprehensive care in resource limited settings

1. Successful Comprehensive Care programmes are based on a team approach.	People living with HIV/AIDS are key members of the team. Patients reap benefits of 'more eyes and ears...and the insights of different bodies of knowledge, and a wider range of skills.' (Wagner et al., 2001; WHO, 2004a)
2. Task shifting or skills substitution between health care workers.	This strategy is viewed as practical, feasible and effective means to meeting human resource skill shortages. (Hongoro & McPake, 2004; Kitahata et al., 2002; WHO, 2004b)
3. Simplification of treatment regimes and the use of fixed dose combinations (FDCs).	Managing ARV drug regimes in this way makes prescribing easier and facilitates increased compliance and adherence. (WHO, 2004b)
4. Integration and coordination of services.	All health care services including prevention, testing and treatment and psychosocial support need to be integrated within the current health system at community level. (Lampthey & Wilson, 2005; WHO, 2004a, 2004b)

Conclusion

Both pre-service and in-service education and training remain valuable tools for facilitating the scaling up of Comprehensive Care, but not all knowledge, practices and procedures are transferable from one setting to another. To facilitate good and sustainable patient outcomes, training needs to be underpinned by a program that ensures in-depth knowledge and skills and which takes account of the local context.

While there is considerable research in relation to the effectiveness of anti-retroviral therapy in resource limited settings, there is a paucity of evidence as to the effectiveness of the various models of training used to prepare health care workers to provide Comprehensive Care. As the lack of capacity in health care workers is a key barrier to achieving increased access to Comprehensive Care in Papua New Guinea, research aimed at identifying the effectiveness of the IMAI Chronic HIV Care training program in preparing Papua New Guinean registered nurses to provide Comprehensive HIV care is currently being conducted. The outcomes of this research are seen as critical in facilitating the sustained scale-up of HIV Care and Treatment in PNG.

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CHAPTER 4

Conceptual Framework

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Introduction

The purpose of this chapter is to provide a theoretical and methodological basis and rationale for the conceptual framework in the study. The chapter also contains details of the understandings, information and techniques that will guide the study and the reporting stage of the thesis.

Quantitative or Qualitative

[T]he importance of a discovery lies in the impact and reforming power of ideas expressed and theories altered, not in ‘modernity’ of methodology employed. Thoughtless adherence to a fashion can blind us to the permanent value of things unnoticed or abandoned as out-dated. Just think of such luminous and enduring figures as Bach and Brahms, dismissed in their maturity as hopelessly antediluvian by a gaggle of forgotten devotees to the “latest” trends. Judge by quality and engagement with the central ideas of science, not by the employment of the maximally fashionable machinery or jargon...I have often pointed out...how theories strongly constrain (often unconsciously) our interpretation of data. For this reason we must be particularly vigilant and probing as we explicitly consider the consequences of our theoretical perspectives. (Gould, 1995, p. 7).

Knowledge has traditionally been measured by how objective it is deemed to be, in the belief that if the reliability, objectivity and validity ‘rules’ are followed ‘the truth’ will be discovered. If research does not follow these ‘rules’ then it can be subject to criticism and dismissal as being methodologically flawed and hence ‘untrue’.

The view that quantitative research is always “objective” and on the other side of the coin, that qualitative methods always lead to more meaningful analyses, is open to question when one examines the reality of social research practice in the field. The steady growth in recent years of methodological texts on the production of statistics reveal “what really happened” in particular research projects should be sufficient to convince anyone that subjectivism of many kinds intervenes at all stages from the formulation of a problem to final publication of result. (Laurie & Sullivan, 1991, p. 116).

Qualitative and quantitative methods of research are generally practiced by scholars from radically different disciplines and hence, it is assumed that a claim of compatibility, let alone one of synthesis, cannot be argued (Smith & Heshusius, 1986). Other writers, who hold that the ontological foundations of positivist and interpretivist paradigms that underlie these methods are fundamentally irreconcilable, support this view (Lincoln, 1990). The basis for both these arguments is similar in that there is a divergence as to the ‘reality’ of research findings.

While *prima facie* there is a dichotomy between the views of positivism and constructivism in terms of the role of the observer and the nature of ‘researcher findings’, this dichotomy may not be as real as purported if considered in the context of Heisenberg’s principle of uncertainty (Heisenberg, 1927). Heisenberg’s principle holds that phenomena are transformed in the act of measurement, and therefore, the positivist observer is never really independent of the phenomenon under investigation. Further, the principle holds that events in the world are open-ended and, hence, as one cannot account for all the variance in a given episode, physical or social, it is clear that no researcher can be independent of a world that cannot be fully predicted. Heisenberg’s views are eloquently captured in the statement that “the more precisely the position is determined, the less precisely the momentum is known” (Heisenberg, 1927) and are congruent with those of Heidegger’s who articulates the view that we are all

of this world so everything we see (or in the case of the researcher, investigate) we see through our world view ... thus, there are no 'facts' only interpretations (McConnell-Henry, Chapman, & Francis, 2009).

The debate about methodologies has a long history and strong supporters who argue the incompatibility of the different epistemological positions underlying the different research approaches (Smith, 1983). Despite this, there are many cases where both quantitative and qualitative methods have been used together successfully in the investigation of social phenomena. One rationale for this complementarity is the methodological triangulation between quantitative and qualitative methodologies. Morse (1991) argues that with methodological triangulation, the trustworthiness or validity of findings in qualitative studies can be enhanced through convergence with the results obtained using quantitative methods. Morse concludes that provided deference is not automatically given to quantitative 'precision', triangulation of methods is a defensible research praxis (1991).

"Qualitative research is inherently multi-method in focus" (Flick, 1998, p. 229) and is grounded in the assumption that features of the social environment are constructed as interpretations by individuals and that these interpretations tend to be transitory and situational. Researchers develop knowledge by collecting primarily verbal data through the intensive study of specific instances of a phenomenon, the cases, and subjecting this data to analytic induction (Letourneau & Allen, 1999). According to Denzin and Lincoln (2003, p. 4), "[q]ualitative research is a situated activity that ... consists of a set of interpretive, material practices that make the world visible". Qualitative researchers study things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them. Merriam characterizes qualitative research as an umbrella concept covering several forms of inquiry that facilitates explanation of social phenomena (Merriam, 1998).

The methodology shows a direct concern with experience as it is lived or felt or undergone, while minimizing disruption of the natural setting and focusing the study on interpretation and meaning (Sherman & Webb, 1988). Patton believes that qualitative inquiry cultivates the most useful of all human capacities – the capacity to learn from others (Patton, 1994).

Quantitative methodology emphasizes empirical research designs, the use of sampling techniques and data gathering procedures, the measurement of outcomes and the development of causal models with predictive powers (Miller, 1991). This orientation is manifested in quasi-experimental research designs, multiple regression analysis, mathematical simulation models, and systems analysis. The methodology holds that the only reliable approach to knowledge accumulation is empirical falsification through objective hypothesis testing of rigorously formulated causal generalizations (Crossan, 2001; Sabatier & Jenkins-Smith, 1994). The goal of this epistemology is to generate a body of empirical generalizations capable of explaining behavior across social and historical contexts, whether communities, societies, or cultures, independently of specific times, places, or circumstances. Underlying this goal is a fundamental positivist principle mandating a rigorous separation of facts and values, with researchers expected to assume a ‘value neutral’ orientation and to limit their research investigations to empirical or ‘factual’ phenomena (Proctor, 1991). As previously discussed however, the notion of researchers and their findings being independent from one another is arguably impossible to achieve.

Inductive researchers, in contrast to quantitative or deductive researchers, build towards findings from observations and intuitive understandings gained in the field. Typical findings are in the form of themes, categories, typologies, concepts, tentative hypotheses or theory (Pope, Ziebland, & Mays, 2000). Central to qualitative research is gaining the emic, or insiders’ perspective, that is, the perspective of the participants in the research study. This emphasis on

understanding the emic perspective however is not incompatible with inclusion of the etic, or outsider, perspective. The perspective of the researcher helps him or her to make conceptual and theoretical sense of the phenomenon in terms of the researcher's professional experience. Data is mediated primarily through the human instrument (researcher) as distinct from an inanimate instrument or computer analysis. The human researcher is characterized by responsiveness to context and sensitivity to non-verbals, and by the ability to consider the total context, adapt techniques to the circumstances, process data immediately, clarify and summarize as the study evolves, and explore anomalous responses (Guba & Lincoln, 1989). Undertaking qualitative research is not however a passive endeavour.

[D]ata analysis is a process that requires astute questioning, a relentless search for answers, active observation, and accurate recall. It is a process of piecing together data, of making the invisible obvious, of recognizing the significant from the insignificant, of linking seemingly unrelated facts logically, of fitting categories one with another, and of attributing consequences to antecedents. It is a process of conjecture and verification, of correction and modification, of suggesting and defense. It is a creative process of organizing data so that the analytic scheme will appear obvious. (May, 1994, p. 10).

Maxwell enumerates five research purposes for which qualitative studies are particularly useful: understanding the meaning, for participants in the study, of the events, situations, and actions they are involved with, and of the accounts they give of their lives and experiences; understanding the particular context within which the participants act, and the influence this context has on their actions; identifying unanticipated phenomena and influences, or generating new, grounded theories about the them; understanding the processes by which events and actions take place; and developing causal explanations (Maxwell, 1998).

When approaching questions of methodology there is tremendous value in understanding the plural dimensions of both quantitative and qualitative methodological approaches (Crossan, 2001). Wolcott (1990) and Guba and Lincoln (1989) advocate the necessity of becoming familiar with all methods in order to appropriately select the method that best fits the area of research and design. Denzin and Lincoln (1994) assert that there are three intertwined activities which clarify the research process: the researcher's worldview in relation to the research domain, the choice of methods of data collection and analysis and the theoretical perspective and strategies of enquiry. The research design provides the bridge to link these three different activities (Simmons, 1995). Ultimately though, the research question will define the appropriate methodological foundations and will provide the guide for the study. This point is eloquently stated by Morse:

Research strategies are merely tools; it is the researcher's responsibility to understand the variety available and the different purpose of each strategy, to appreciate in advance the ramifications of selecting one method over another, and to become astute in the selection of one method over another. (1994, p. 207).

Methodologically, mixed methods research combines quantitative and qualitative methods, approaches, and concepts that have complementary strengths. Mixed methods allows for a wider, or more complete picture to emerge than that presented by a single method alone and increases the depth and breadth of understanding of the phenomenon by exploring it with different methods (Cresswell, 2003).

The use of both quantitative and qualitative data in a study therefore can enrich the results in ways that one form of data does not provide. Using both qualitative and quantitative forms of data also provides for a richness of detail and allows

the researcher to gain a deeper understanding of the phenomenon of interest (Halcomb & Andrew, 2005; Tashakkori & Teddlie, 2003).

Constructivism

Constructivism is often articulated in stark contrast to the objectivist epistemology. Basically defined, the constructivist paradigm assumes that there are multiple realities. Saunders, who acknowledges the colloquial reference to our past experiences as our ‘world view’, explains that:

Constructivism can be defined as that philosophical position which holds that any so called reality is, in the most immediate and concrete sense, the mental construction of those who believe they have discovered and investigated it. In other words, what is supposedly found is an invention whose inventor is unaware of his act of invention and who considers it as something that exists independently of him; the invention then becomes the basis of his world view and action. (Saunders, 1992, p. 136)

The constructivist paradigm therefore holds that it is impossible for a researcher to remain detached from participants in studying their experiences (Guba & Lincoln, 1989). It acknowledges that experiences reside in individuals and that knowledge cannot be transferred intact from the head of one individual to another. The receiving individual must try to make sense of knowledge they receive by trying to fit it with their previous experience, and consequently, constructivism does not see that ‘minds are empty vessels’ nor that words are containers whose meaning is only in the word itself (Chappell, Gonzi, & Hager, 1995). Therefore, to examine the lived experience of participants, it is important to take account of the subjective meanings that participants attribute to their experience and to give consideration to the social context in which events occurred (Cherry, 1999; Silverman, 2001). “Qualitative researchers stress the socially constructed nature of reality, the intimate relationship between the

research and what is studied...and emphasise the value-laden nature of inquiry (Denzin & Lincoln, 2003, p. 13).”

Constructivist views of knowledge range from extreme idealism, in which reality is seen as existing only in the mind of the knower through to moderate views which acknowledge the individual nature of all understanding, but within a context of ontological realism; that is, a world in which reality, including human interactions, exist independently of our understanding, or knowledge of them (Saunders, 1992). In this study, the more moderate form of constructivism is seen as being appropriate to guide and form the research process.

Experiences involve the interaction of an individual with events, objects or phenomena in the universe; an interaction of the senses with things, a personal construction which fits some of the external reality but does not provide a match. The senses are not conduits to the external world through which truths are conducted into the body nor is objectivity possible for thinking beings. Accordingly, knowledge is an adaptive activity concerned with reaching functional understandings about the various aspects of living (Lopez & Willis, 2004).

From a constructivist perspective therefore, science is not the search for truth, but is a process that assists us to make sense of our world (Dey, 1993). Human beings construct models of their environment, and new experiences and information is interpreted and understood in relation to existing models or schemes (Lopez & Willis, 2004). Although constructivist theory has reached popularity in recent years, the idea of constructivism is not new. Aspects of constructivism theory can be found among the works of Socrates, Plato, and Aristotle (ranging from 470-320 B.C.) all of which speak of the formation of knowledge. Saint Augustine (mid 4th century A.D.) taught that in the search for

truth, people must depend upon sensory experience. This view of course left him out of balance with the Church of the time (Brooks & Brooks, 1993).

More recent philosophers such as John Locke, assert that no man's knowledge can go beyond his experience. Giambattista Vico, perhaps one of the first constructivist philosophers, commented in a treatise in 1710 that one only knows something if one can explain it (Yager, 1991). Immanuel Kant further elaborated this idea by asserting that human beings are not passive recipients of information, and that a priori knowledge sets the initial framework for understanding the sense data of empirical experience. For Kant, the beginning of understanding is contained within the concepts of mind and intuition, abstractions within a person's consciousness by which they inherently give meaning to their world through an interpretive process which is both subjective and irrational. He explained that the logical analysis of actions and objects lead to the growth of knowledge and the view that one's individual experiences generate new knowledge (Kant, 1781).

Kant's views are reflected in the work of Freud (Lechte, 1994), and Marx and Weber (Dey, 1993; Silverman, 2001). These three theorists argued that scientific inquiry was not value free and, therefore, human beings were not just subject to the general laws of nature. They also interpreted human behavior as problematic and complex, and hence rejected positivistic examinations of human behavior. On this basis they dismissed the view that individuals could be studied using the same methods as those applying to the natural sciences, and argued for methods that took account of intentionality of human behavior (Johnson, Daneker, & Ashworth, 1984). The interaction of the researcher's and participant's values, the researcher's perception of reality, and his or her values are accepted as important influences in the inquiry process (Bilton, Bonnett, & Jones, 1982; Guba & Lincoln, 1989). Accordingly, the approach embraced in this study

accepts that the nature of inquiry is value driven, rather than value free (Johnson et al., 1984).

Popper however, has suggested that the theories of Marx and Freud were closed systems that dogmatically rejected threatening evidence. Popper viewed that science advances instead by deductive *falsification* through a process of ‘conjectures and refutations’ (Crossan, 2001). “Scientific theories are not inductively inferred from experience, nor is scientific experimentation carried out with a view to verifying or finally establishing the truth of theories; rather *all knowledge is provisional, conjectural [and] hypothetical*” (Stanford, 2006, p. 8). It is imagination and creativity, not induction that generates real scientific theories, with experimentation and observation testing theories, not producing them. For Popper, falsification was a key criterion within the scientific paradigm, and science, was that body of knowledge, of which evidence and conclusions had so far resisted contradiction or falsification (Stake, 1978; Stanford, 2006).

Kuhn however, argued that science was not a steady, cumulative acquisition of knowledge. Instead, he proposed that science was a series of peaceful interludes punctuated by intellectually violent revolutions, which he described as ‘the tradition shattering complements to the tradition bound activity of normal science’. After such revolutions he argued, one conceptual world view was replaced by another (Kuhn, 1962).

According to Kuhn, paradigms, which he described as essentially a collection of beliefs shared by scientists, are essential to scientific inquiry. His belief was founded on the view that no natural history could be interpreted in the absence of at least some implicit body of intertwined theoretical and methodological belief that permitted selection, evaluation, and criticism. Indeed, Kuhn saw that a paradigm guided the research efforts of scientific communities, and it was this

criterion that most clearly identified a field as a science. A fundamental theme of Kuhn's argument was that the typical developmental pattern of a mature science is the successive transition from one paradigm to another through a process of revolution. When a paradigm shift takes place, a scientist's world is qualitatively transformed and quantitatively enriched by fundamental novelties of either fact or evolutions and discontinuous periods. As a result, science can be seen as a socially constructed reality interpreted through the reality of its participants (Kuhn, 1962; Lincoln, 1990).

The attempt to explain gravity, though fruitfully abandoned by most eighteenth-century scientists, was not directed to an intrinsically illegitimate problem; the objections to innate forces were neither inherently unscientific nor metaphysical in some pejorative sense...What occurred was neither a decline nor a raising of standards, but simply a change demanded by the adoption of a new paradigm. (Kuhn, 1962, p. 9).

Those socially constructed realities are formed by cultural upbringing, expectations and experience and are constructed in many different ways and from many discordant intentions (Bruner, 1986). Truth may therefore be seen as existing only within the socially constructed reality of individuals as they learn and act on their new learning. Furthermore, within a socially constructed framework, truth is not value free (Bilton et al., 1982).

Feyerabend, while initially subscribing to Popper's view, later held that scientific inquiry could not be separated with any certainty from any other form of inquiry such as voodoo, magic or witchcraft (Feyerabend, 1975). Science, Feyerabend argued, could not be justified as being the best way of acquiring knowledge as there was no 'scientific method'. He further argued that the dogma of a single scientific method was analogous to the dogma of the one true religion in the European medieval era, and that the results of science did not prove its excellence as these results had often depended on the presence of non-scientific

elements. Science prevails only because “...the show has been rigged in its favour” and other traditions, despite their achievements, had never been given a chance (Feyerabend, 1978, p. 102).

The truth, he suggested, was that:

Science is much closer to myth than a scientific philosophy...It is one of the many forms of thought that have been developed by man, and not necessarily the best. It is conspicuous, noisy, and impudent, but it is inherently superior only for those who have already decided in favour of a certain ideology, or who have accepted it without ever having examined its advantages and its limits. (Feyerabend, 1975, p. 295).

While Feyerabend’s view that science was much closer to a myth than a scientific philosophy may be seen as extreme, the underlying premise of his argument that scientific research, like all belief, is meaningless outside its cultural context provides support for the constructivist approach taken in this study.

Interpretivism

The foregoing epistemological position (constructivism) was seen as indicating a need for an interpretivist approach to research. Although some would argue that constructivism and interpretivism are independent of each other (see Lincoln & Guba, 1985 for instance) interpretivism, may be seen as having a number of different features and emphases variously adopted by different schools of interpretivist research (Lincoln & Guba, 1985). Interpretivism includes research that focuses specifically on the interpretations that individuals formulate of their experiences (Martin & Booth, 1997). It seeks to understand subjective, individual experiences comprehensively, with a view to multiple and complimentary perspectives. ‘Reality’, so-called, is negotiable and recognition is given to the fact that human beings are far too complex to be subject to precise prediction and control.

Interpretivism seeks to establish meaning and understanding and focuses specifically on the interpretations individuals give to their lived experiences (Lopez & Willis, 2004; Williamson, Schauder, Wright, & Stockfeldt, 2002). This approach was seen as being most appropriate here for understanding how participants experienced their world in terms of their interaction with the learning and implementation of IMAI. Understanding their experience required an understanding of the world in which they lived.

An interpretivist approach builds upon a hermeneutic conception of how individuals understand and interpret their experience and give it meaning. A hermeneutic conception is “a process and method for bringing out and making manifest what is normally hidden in human experience” (Lopez & Willis, 2004, p. 728). This conception “stresses the indissoluble unity between the person and the world” and arises from the ontological position of ‘What does it mean to be a person’ (Koch, 1995, p. 831).

The philosophical basis of interpretive research is hermeneutics. Interpretive studies generally attempt to understand phenomena through the meanings that people assign to them and start out with the assumption that access to reality (given or socially constructed) is only through social constructions such as language, consciousness and shared meanings (Jasper, 1994; Williamson et al., 2002). Interpretive research does not predefine dependent and independent variables, but focuses on the full complexity of human sense making as the situation emerges (Kaplan & Maxwell, 1994; Limerick & Cunnington, 1993).

Within the aforementioned hermeneutic perspective, the research was thus seen as properly based on an interpretive paradigm, using what Guba and Lincoln have termed response-constructivism: ‘responsive’ because interaction and negotiation are used to establish the way the research will be undertaken; ‘constructivist’ for the reasons discussed above (Guba & Lincoln, 1989).

Interpretivists argue that positivism is a sort of stimulus response model of human behavior. They assert that individuals do not simply respond to external stimuli but actively interpret the world and act on the basis of their subjective understanding of the implications of phenomena of which they are consciously aware. Data has to be interpreted, it does not speak for itself (Peck & Secker, 1999).

It is because human behavior is taken to be meaningful that interpretivists argue that human actions cannot be understood in the same way as natural phenomena and that consequently the methods of the natural sciences are inappropriate to the study of human behavior (Jasper, 1994). Human behavior cannot, it is argued, be explained simply in terms of external stimuli. The forces that move humans, as individuals rather than simply as physical bodies, are not gravitational forces or the forces of elementary particles. They include such things as internal ideas, feelings, and motives. Accordingly there is no way of objectively measuring social reality (Bagnall, 1999; Schratz & Walker, 1995). Research is therefore not seen as value free, nor is it seen as involving the 'objective' assessment of information (Letourneau & Allen, 1999).

Truth, according to Heidegger, is essentially the 'clarity' of an experience. For Heidegger, 'subjectivity' was seen as the only possible gateway to achieve 'objective' (truthful or meaningful) knowledge, and that the forms, contexts and structures of the 'experiences' of subjectivity are what in everyday language we call 'reality' (Koch, 1995). These experiences are referred to by Heidegger as 'Lifeworld' and are the empirical world of things as they appear to us – the constitutive source for all cultural developed notions, like scientific descriptions – and express the notion that all realities are inevitably influenced by the world we live in (Lopez & Willis, 2004; Numan, 1995).

Heidegger (1962) claims that we cannot have a world, and cannot have a life at a cultural level except through acts of interpretation. Understanding occurs because we are born into the world. We are what we take ourselves to be and how we interpret ourselves in our practices, in other words we are self-interpreting beings. (Koch, 1995, p. 831).

The interpretivist paradigm denies there is an objective reality independent of the frame of reference of the observer; reality is mind dependent and influenced by the process of observation. Interpretivism does not therefore concern itself with the search for broadly applicable laws and rules, but rather seeks to produce descriptive analyses that emphasize deep, interpretive understandings of social phenomena (Cherry, 1999).

The interpretivist paradigm thus lead to the use of qualitative research methods that enable the researcher to gain a descriptive understanding of the values, actions and concerns of the subjects under study. These outcomes represent another construction in the context of knowledge advancement where the findings are a literal creation of the inquiry process. The findings are not accorded special status nor is legitimation of the findings espoused, as opposed to positivistic notions of the findings being an accurate interpretation of the inquiry process. This approach encapsulates a framework of self development and self understanding for all individuals involved in the research process (Cherry, 1999; Denzin, 1989).

Summary

As the overall aim of the study was to evaluate participants' experiences of the learning and implementation of the Integrated Management of Adult/Adolescent Illness (IMAI) for Chronic HIV care in Papua New Guinea, a hermeneutic approach to interpretation was seen as being the most appropriate to achieve this. This approach was seen as a valuable method for clarifying participants'

experiences. In this sense, the notion of ‘interpretation’ refers to the explanation and understanding of the experience of participants as seen through their eyes (Denzin, 1989).

Such an epistemology unambiguously indicated an interpretive approach to research in which the socially constructed nature of understanding is recognized and incorporated into the research process, as is the individual’s interpretation of their experience. Accordingly, the approach embraced in this study accepts that the nature of inquiry is value driven, rather than value free (Johnson et al., 1984) and required an understanding of not only the participants experience but also an understanding of the world in which they lived (McConnell-Henry et al., 2009).

CHAPTER 5

Research Approach

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Research Approach

Introduction

The purpose of this chapter is to describe the research process. This is achieved, firstly, by explaining the selection of the study site and research approach. The second section describes the data collection process including the strategies of inquiry, the recruitment procedures and methods of data gathering. The third section describes the processes of data analysis with the fourth and final section examining the ethical issues arising in the research and how they were addressed.

Selection of the Study Site and Research Approach

The study site selected has been described in depth, in Chapter 2. In May 2005, the National Department of Health (NDoH) determined that the the IMAI model, modified for the PNG context, would serve as the training program for health workers to provide HIV/AIDS care and treatment. The researcher had a role in this training program as a learning facilitator and while undertaking that role, the researcher was involved in discussions with participants in both formal and informal ways. During these discussions, the researcher became curious about the impact of the learning on individuals and their approach to caring for people living with HIV/AIDS. After more than two decades as a health care practitioner and nearly a decade involved in public health, the last five years of which has been spent in Papua New Guinea, the researcher has developed a strong interest in the role of nurses in delivering primary health care, and in particular, HIV care and treatment.

Globally, a lack of training of health care providers at all levels of health systems has been identified as a critical bottleneck in efforts to scale up HIV care and treatment. This situation is mirrored in Papua New Guinea (PNG). Registered nurses are and will be the main health care provider group to provide HIV care and treatment in PNG. It is therefore necessary firstly, to evaluate the effectiveness of the IMAI chronic HIV care training program in preparing Papua New Guinean registered nurses to provide Comprehensive Care prior to committing further resources to scale-up HIV care and treatment (Anderson, 1996) and secondly, to understand how PNG nurses who have been trained in the IMAI program make sense of that training and implement comprehensive care.

The researcher therefore discussed his interest with the principal adviser for sexually transmitted infections/HIV (STI/HIV) in the NDoH and raised the possibility of investigating these issues with nurses undertaking the IMAI program. The principal adviser was enthusiastic about the proposed research as it offered an opportunity for the NDoH to examine the IMAI training program from the perspective of how nurses approach the provision of care to people living with HIV/AIDS and to identify any areas in which the IMAI program could be changed to improve its effectiveness.

Refining the Research Question and Gaining Ethics Approval

The researcher commenced his study by undertaking an extensive review of the literature. This examination led to a clearer identification of the research questions and ultimately the research proposal. The research proposal was refined and ultimately submitted for confirmation of candidature.

As the study site was in Papua New Guinea, ethics application was made to, and gained from, both the Papua New Guinea Medical Research Advisory Committee and Monash University Human Research Ethics Committee.

Data Collection

This section will focus on what data was to be collected the strategies of inquiry, recruitment procedures and the methods of data gathering. By way of general introduction, it was determined that the research methodology needed to make provision for the use of a variety of techniques for obtaining data in addition to the primary data collection technique of a semi-structured interview.

The Research

The research was informed by a hermeneutic approach, and sought to establish the meaning and understanding individuals gave to learning and implementing the IMAI Chronic HIV training program. This approach was seen as being most appropriate as “[t]he focus of hermeneutic inquiry is on what humans experience” (Lopez & Willis, 2004, p. 728).

Given the aim of the research, an approach that allowed for a deep and rich understanding of the meaning individuals give to the learning and implementing of the phenomenon under study was required. To facilitate this, a mixed methods design was chosen as it offered methodological and practical advantages and provided a holistic and flexible approach to the research problem (Andrew & Halcomb, 2006). Methodologically, mixed methods research combines quantitative and qualitative methods, approaches, and concepts that have complementary strengths. Mixed methods allowed for a wider, or more complete picture to emerge than that presented by a single method alone and increased the depth and breadth of understanding of the phenomenon by exploring it with different methods (Cresswell, 2003).

A mixed method design utilizing a complementarity approach was selected for the research. The rationale for this approach was to better understand the research problem by converging both broad numerical trends from quantitative research and the detail of qualitative research with the intent of producing a richer and more complete picture of the investigated phenomenon.

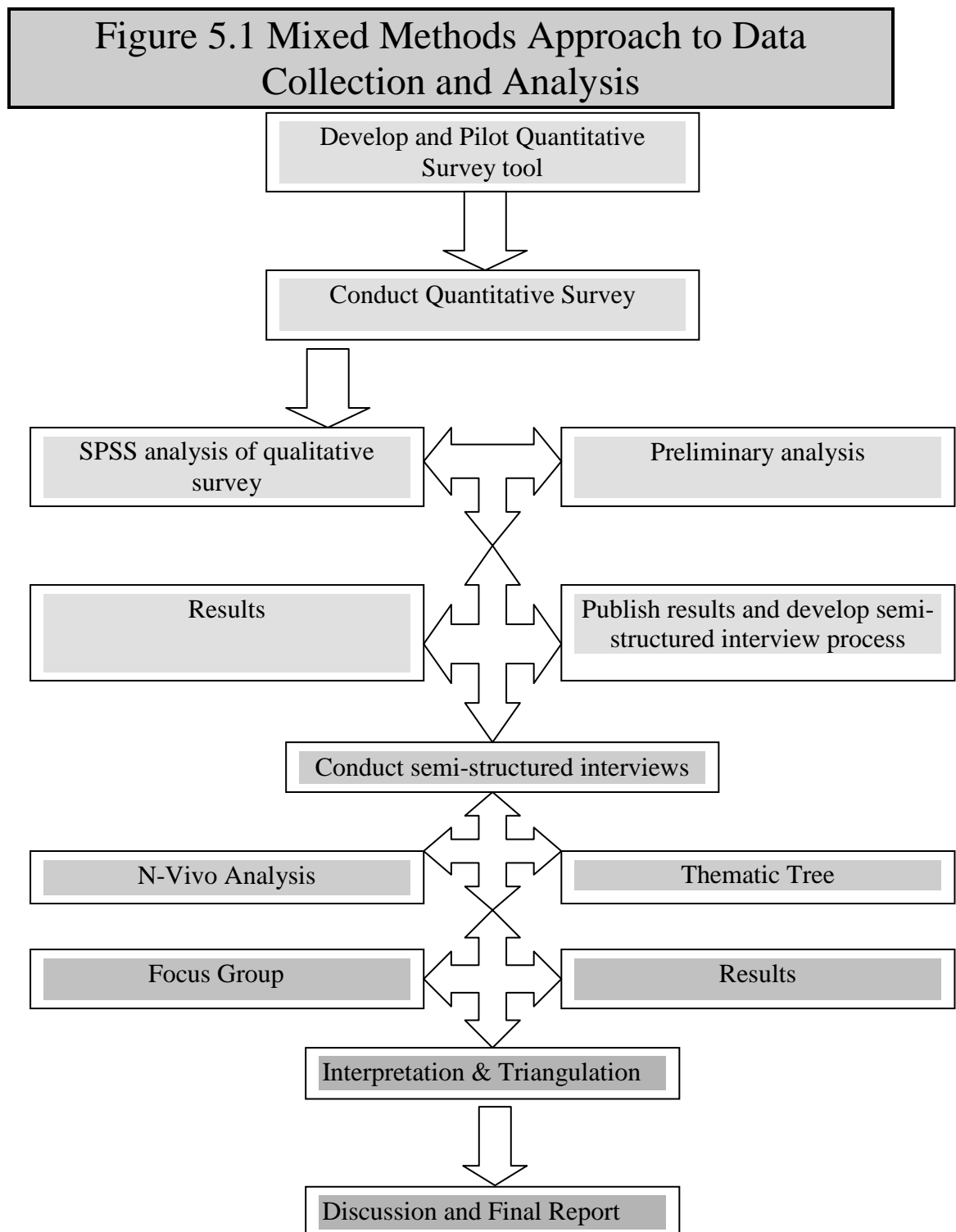
Strategies of Inquiry

In this study the aim was to understand how registered nurses in Papua New Guinea experience the learning and implementation of the Integrated Management of Adult and Adolescent Illness (IMAI) Chronic HIV Care training program. In doing so an interpretive approach following Chatterji (2004), Halcomb & Andrews (2005), and Tashakkori & Teddie (2003), and utilizing a complementarity mixed methods approach was chosen.

There are six (6) commonly described purposes for the use of mixed method research designs. These are confirmation, complementarity, initiation, development, expansion and enhancement of significant findings (Greene, Caracelli, & Graham, 1989; Onwuegbuzie & Leech, 2004). As the research was informed by hermeneutics, and sought to establish the meaning and understanding individuals gave to their experiences, specifically PNG nurses experiences of learning and implementing the IMAI Chronic HIV training program, a complementarity approach to the mixed method design was seen as appropriate.

Complementarity is a design that uses both quantitative and qualitative data to enhance the understanding of findings and to assist in clarifying the results of one method with the findings of complementary methods. In a complementarity design, the strengths and weaknesses of both qualitative and quantitative approaches are used to complement each other and to provide the study with

more breadth and scope (Halcomb & Andrew, 2005). As a complementarity design was used, the quantitative survey and qualitative semi-structured interviews within the study occurred sequentially, with the quantitative survey informing the qualitative data collection and data integration occurring at the interpretation phase of the study. The focus group occurred prior to the integration of data at the interpretation phase (See Figure 5.1 for details of the mixed methods approach described in this chapter).



Recruitment Procedures

A quantitative survey of registered nurse participants from IMAI training programs conducted between November 2005 and December 2006 was conducted sequentially with semi-structured interviews. The total of 95 registered nurses that completed the IMAI training program during the above period were invited to complete the survey. The results of the survey were used to inform the qualitative data collection.

A number of selection methods were considered to be available when choosing participants for the semi-structured interviews and focus group. Methods included random selection and systematic selection (Babbie, 2004). In qualitative research, participants are not 'average' or 'typical'. They are selected because they are uniquely positioned to help the researcher understand what happens or what things mean. Thus, qualitative sampling is often described as 'purposive'; that is, chosen to serve an analytic purpose. Purposive sampling is a sampling method that enables the selection of participants based on a researcher's knowledge of the population with participants being selected on the basis that they will offer the most extensive understanding of the research topic. This intuitive knowledge of the researcher is gained from observation and reflection of the potential participant population (Babbie, 2004). The main strength of purposive sampling lies in selecting information rich cases for in-depth analysis of the central issues being studied. Thus purposive sampling was seen as enabling the researcher to choose a diverse selection of participants from the IMAI training program. In terms of diversity, it was also seen that a diverse sample may be more likely to provide contradictory information and to enhance the trustworthiness of the data (Lincoln, 1990).

While there is a possibility of selecting a biased sample when using a purposive method, this possibility will be limited by, as far as is practicable, ensuring

diversity in participants through a criteria of diversity. The criteria used were: a mix of gender, age, and employer. A total of ten (10) registered nurse participants from IMAI training programs conducted between November 2005 and December 2006 were invited to participate. The invitation to potential participants was made in person and participants were advised of the study aims and objectives. They were also advised that participation was voluntary, they were free to withdraw at any time prior to data integration, and that no-identifying data would be made public.

Each participant was also advised that the research process would be further explained to them at the interview, and at any time they required clarification. The researcher prepared an informed consent statement, and advised them that they would be asked to read the statement at the interview. If they concurred with the statement, they would be asked to sign a consent form. All the participants contacted agreed to participate in the study, and signed the written consent voluntarily and without any amendment.

Methods of Data Gathering

Survey Technique

The proposed methodology dictated the methods of data collection. A quantitative survey of registered nurse participants from IMAI training programs conducted between November 2005 and December 2006 was conducted sequentially with semi-structured interviews with the results informing the semi-structured interviews. The survey tool used was based on the tool used by Panther, Huba, Melchior, Anderson, Driscoll, Rowheder, Henderson, Henderson & Zalumas, (2000) in the “Healthcare provider characteristics and perceived confidence from HIV AIDS Education” evaluation survey as reported in *AIDS Patient care and STDs Journal*. The quantitative questions used in Panther et al's survey tool were contextualized to the Papua New Guinea context (e.g. name

of the training program, aim and objectives of the study). The Likert scale responses to the questions did not require contextualization as they were not context specific (i.e. large negative effect, large positive effect). The adapted tool was piloted with four (4) Papua New Guinean registered nurses prior to use in the study to ensure that the questions were clear and easily understandable. The quantitative survey data provided broad information regarding the experience of PNG nurses' learning and implementing the Integrated Management of Adult and Adolescent Illness (IMAI) Chronic HIV Care training.

The survey was undertaken using a self administered questionnaire. Ninety five registered nurses (84 females and 11 males) that completed the IMAI training program between November 2005 and December 2006 were invited to complete the survey. The survey instrument was distributed by the National Department of Health to the last known place of employment of each of the ninety five (95) participants with a letter explaining the purpose of the survey and inviting them to participate. A letter was also sent to the Director of Nursing/Nurse in Charge asking for their support. The original invitation was followed up by three subsequent letters and two phone calls.

Interviewing Procedures

Participants were all interviewed once. Each interview lasted approximately 45 minutes to one hour. All participants were interviewed in a venue of their selection. With permission from each participant, responses were audio-recorded and transcribed to help ensure preservation of their self stories in relation to their experience, and to aid the analysis of their experience.

“Unlike questionnaires, the purpose of an interview, generally speaking, is to gain in-depth insight into someone’s perspective...it is a conversation with a purpose” (Crandall 1998, p. 155). As such each interview was commenced by

thanking the participant for agreeing to participate in the study and reiterating the aims of the study. The researcher then invited them to read and sign the prepared informed consent statement. When the participant had signed the consent, the researcher outlined the process that he wished to follow in the interview. It was mentioned that there was no right or wrong answers and that the researcher was seeking their interpretation of their learning. It also mentioned that they could ask questions of the researcher, or seek clarification of what the researcher was asking them, at any time they liked. Before beginning the interview process, participants were asked if they had any questions to ask.

Before proceeding to ask the first question, the researcher asked each participant to talk briefly about themselves. The researcher reaffirmed that no personal identifying details would be made public and that the information would assist in situating their interpretations. Following this the interview commenced with an open question along the lines of “*How would you describe your experience of learning in the IMAI Chronic HIV Care training program?*” During the interview, active listening skills were used, such as clarifying, paraphrasing and reflecting the content and feeling of what was said, to ensure that the researcher clearly understood what the participant was saying. To do so the researcher not only listened for the content of the response, but also watched the participants’ non-verbal behaviour.

The researcher also paraphrased responses, reflected content and gently probed for further information or clarification when it was deemed appropriate. In acknowledging the participants’ responses, minimal encouragers were used such as nodding of the head, smiling, or simply saying yes, no, or uh-huh. When the interviews had reached saturation level (Morse & Richards, 1996) and no new information was forthcoming, the researcher began closing the interview by asking the participant if they had anything further that they would like to add. The researcher then asked the participant if they had any further questions. The

interview was concluded with answering any questions the participants raised and reiterating the research process. This opportunity was also used to discuss the focus group and to seek the participants' consent to participate in this process. All of the participants agreed to participate and were advised that they would be contacted to inform them of the date and venue. Several participants also chose to use this time to talk informally with the researcher about their experiences.

Focus Group

A focus group was also made available to the ten registered nurses who participated in the semi-structured interviews. The purpose of the focus group was to discuss and validate key themes that emerged from the qualitative data generated from the semi-structured interviews.

All ten registered nurses who participated in the semi-structured interviews were invited at the conclusion of the interview. A telephone call was made to each registered nurse following the interviews to advise of the venue for the focus group. A further telephone call was made to participants the day prior to the focus group. Despite these measures, only three of the registered nurse participants attended the focus group. Despite there being fewer participants in the group than expected, the researcher in conjunction with the participants, decided to continue with the focus group as planned.

It was important for the venue of the focus group to be a comfortable environment. For this reason, a meeting room was hired at a local hotel. This was seen as being a neutral environment and one in which participants would be more likely to express their views. The chairs in the room were setup in a circle pattern so that participants could face each other. This pattern is consistent with the Papua New Guinean traditional manner of gathering together to discuss

issues. Participants were invited to sit on the floor if they felt more comfortable and after a short discussion it was agreed by all present that this would provide for an environment that was more conducive to free discussion so the chairs were removed.

Prior to getting started, the researcher as facilitator, reminded participants that their participation was voluntary and that they could leave at any time they wished. The facilitator also made some housekeeping announcements such as where the restrooms were and identifying the table of refreshments that participants were free to partake of as they desired. To facilitate the focus group, a large pad of butcher's paper and markers were available. To commence the focus group, the facilitator made a four slide power point presentation. The presentation identified the key themes (and sub-themes) that had emerged from the data. The focus group participants were then provided with three questions to consider – (1) Were the key themes that had emerged from the data consistent with their interpretation of the learning and implementation of the IMAI training; (2) If not, how did they differ, and (3) Were there other key themes that had not emerged from the data?

As the participants and facilitator knew each other, formal introductions did not take place. Instead there was informal discussion over a cup of tea or coffee prior to the focus group commencing. The participants were also advised to say when they felt like they needed a break. Prior to commencing participants were again reminded that what they said in the focus group was confidential and that the facilitator would not attribute statements to individuals outside the focus group room. As sole facilitator, the researcher played the role of listener and recorded the issues through paraphrasing responses and reflecting the content of discussions with the group. Probing questions were used by the facilitator when the discussion was unclear or when ambiguous terms were used. The facilitator

also ensured that all participants had an opportunity to give their perspective although with such a small group this did not eventuate as a major issue.

After approximately one hour and when the discussion was ending, the facilitator recapped on the points discussed by referring back to the notes made on the butcher's paper. During this process participants were invited to confirm or correct the notes the facilitator had recorded. At the end of the focus group, the facilitator thanked people for their participation.

Data Analysis

This section of the chapter describes the processes used to analyze the data that was gathered to answer the research question: *What are Papua New Guinean registered nurses' interpretations of learning and implementing the Integrated Management of Adult and Adolescent Illness (IMAI) Chronic HIV Care training?*

Quantitative Survey

Data from the questionnaires were entered into version 16 of the Statistical Package for the Social Sciences® (SPSS) software program. Data tables and graphs were subsequently generated using this program.

The demographic characteristics of the respondents were described with percentages calculated using data collected from questions 1 to 8 of the survey instrument. The responses on the effect of the IMAI training program had on various aspects of how care is provided, learning needs and other program outcomes were analysed. The number and percentage of respondents selecting each option on the seven-point Likert scale for questions 9 to 15 and 17 were calculated.

In addition, the chi-square test was applied to question 9 to 15 and 17 to detect any difference in the response given by the different demographic subgroups in terms of gender, age, care status, current employer and past educational attainment. The chi-square statistics (χ^2) and p-values were calculated for each of these eight questions. The chi-square test was not used for question 16 as only one respondent completed this question.

The study was also interested in identifying whether demographic sub-groups in terms of gender, age, prior experience, employer and highest education attainment had any effect on respondent's assessment of the impact the IMAI training program had on the quality of HIV care.

Qualitative Data

Interpretive studies generally attempt to explore and understand phenomena through the meanings that people assign to them and start out with the assumption that access to reality (given or socially constructed) is only through social constructions such as language, consciousness and shared meanings (Cresswell, 2003; Jasper, 1994; Lopez & Willis, 2004). Interpretive research is emergent rather than tightly prefigured, does not predefine dependent and independent variables, and focuses on the full complexity of human sense making as the situation emerges (Cresswell, 2003; Williamson et al., 2002).

The research study was interpretive and was built upon a hermeneutic conception of how individuals understand and interpret their experience and give it meaning. As a result, the researcher chose to use QRS N-Vivo8® for the qualitative data analysis; a program that has features of easy search and retrieval, easy revision of data, along with a good visual display of the text.

The aim of the data analysis was to identify commonalities and differences in the way individuals experienced the learning and implementation of the IMAI

training – in such a way that it preserved the richness and individuality of that experience. The focus of data analysis remained, therefore, on the participants as individuals, and on how they experienced learning and implementing IMAI training, as seen through their eyes. That is to say the focus remained on individual realities.

As suggested by Patton (1994), the analytical process that the researcher undertook was creative, required analytical rigour and intellectual discipline, and a “great deal of hard work” (p. 381). Prior to importing the interview transcripts into N-Vivo, the researcher repeatedly listened to each tape while concurrently reading the transcripts. Listening to the tapes helped the researcher to take account of the nuances of speech, tone of voice, laughter, and pauses. Later, following the approach suggested by Denzin (1989), the researcher re-read the transcriptions again, on up to seven occasions, during the analytical process.

The researcher considered each transcript was a portrayal of each participant’s interpretation of his or her experience of learning and implementing the IMAI training program. Through re-reading the researcher was seeking to become engaged and familiar with the data while searching for patterns of meaning with the statements. This process was undertaken utilizing the generic steps for qualitative data analysis as proposed by Creswell (2003).

Step 1: The tapes of the semi-structured interviews were transcribed and checked against the audio tape of the interview. Once the researcher was satisfied that the transcripts reflected the participant’s discussion, the transcripts were imported into N-Vivo.

Step 2: The transcripts were read and re-read multiple times so as to become immersed in the data and to search for general ideas and patterns that were emerging from the data. The researcher also utilized this step to commence recording this thoughts and ideas on memos.

Step 3: At this step, detailed analysis of the transcripts occurred with coding of text into nodes by N-Vivo. The node reports were printed out and compared with the researcher's preliminary analysis.

Step 4: Using the results of the coding process in Step 3, a detailed description of the people and events as well as a smaller number of categories for analysis were generated. Three major themes were identified, and under these major themes data was arranged as sub-themes and the researcher sought to identify and detail the connection of these sub-themes to the major theme.

Step 5: The researcher then further reviewed the data to identify narrative passages that would represent the themes and convey the findings of the analysis.

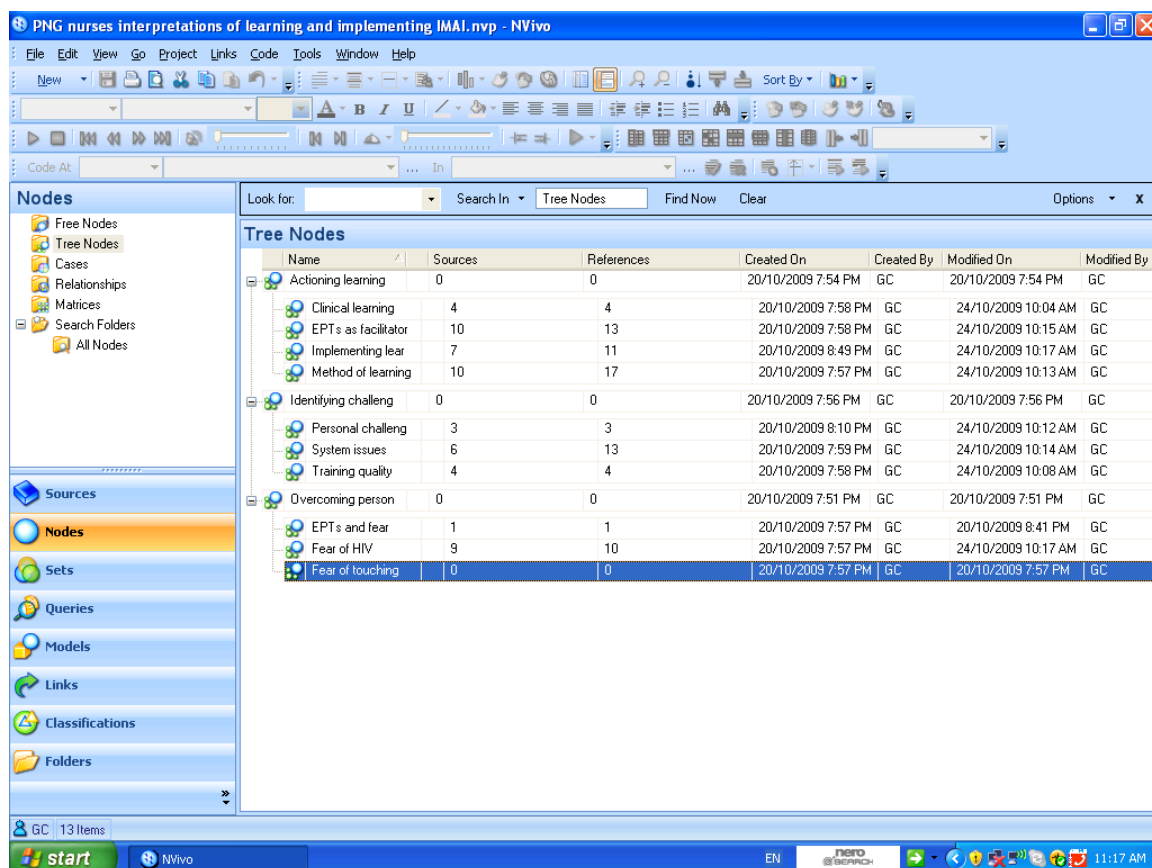
Step 6: The final step in the data analysis was to give meaning to the data through interpretation. This interpretation was couched in both the researcher's own context and within findings identified in the literature. Through the use of a critical lens, these interpretations will also assist in creating the agenda for change within the IMAI training program.

The three major themes identified were:

- Overcoming Personal Anxiety
- Actioning Learning
- Identifying Challenges

These three themes are used to report the major findings in the results chapters.

Figure 5.2 – N-Vivo Thematic Tree



Trustworthiness

The primary technique for data collection was the semi-structured interviews. Associated techniques to enhance the trustworthiness of the interview data were a quantitative survey and a focus group. The intention was to select data from sources containing different biases and strengths (Cresswell, 2003; Fielding & Fielding, 1986; Halcomb & Andrew, 2005; Knafl & Breitmayer, 1989; Miles & Huberman, 1994; Shin, 1998; Webb, Campbell, Schwartz, Sechrest, & Grove, 1981) so that complementary and conflicting information could be used to reduce the uncertainty of interpretation and “...consequently increase [e]...trustworthiness of the data and its interpretation” (Halcomb & Andrew, 2005, p. 80).

The aim of trustworthiness in a qualitative inquiry is to support the argument that the inquiry's findings are "worth paying attention to" (Lincoln & Guba, 1985, p. 290). This is quite different from the conventional experimental precedent of attempting to show validity, soundness, and significance. In this study, trustworthiness was enhanced through the strategies detailed below.

In designing the research study, the researcher employed three techniques of data collection. The intention here was to generate three layers of data from the participants. This technique provided a richer, more multilayered and more credible data set than would have been generated with only one or two techniques.

Secondly, through my supervisors, I refined my research proposal and received regular questions regarding the research questions, methodology, trustworthiness and other research issues. My supervisors also regularly reviewed and critiqued my work enabling me to further refine my research methodology, method and ultimately data analysis.

Thirdly, I utilized a focus group of participants to discuss and validate key themes that emerged from the qualitative data generated from the semi-structured interviews. All ten registered nurses who participated in the semi-structured interviews were invited at the conclusion of the interview to participate in the focus group.

Ethical Issues

Researchers are considered as having a responsibility to take an ethical approach to their research and therefore should situate their research within an ethical framework (Babbie, 2004). An ethical framework is seen as a way of ensuring that participants are treated with respect, dignity, integrity and with

acknowledgement of their right to privacy (Babbie, 2004; Lincoln & Guba, 2000). Babbie (2004) highlighting the two key ethical rules of social research – voluntary participation and no harm to research subjects, also suggest that an ethical framework assists confidence with the trustworthiness of data. He further argues that anyone involved in research needs to be aware of the key ethical concerns in research and ensure that these issues are operationalized within the research. Frankel and Siang (1999, p. 2 - 3, cited in Babbie, 2004, p. 72) summarize these key ethical concerns:

The current ethical and legal framework for protecting human subjects rests on the principles of autonomy, beneficence and justice. The first principle, autonomy, requires that subjects be treated with respect as autonomous agents...The second principle, beneficence, involves maximizing possible benefits and good for the subject ...[while] the last principle, justice, seeks a fair distribution of the burdens and benefits associated with research.

Qualitative research has some additional ethical issues that can impinge upon the researcher. Mason (1996) states that the rich and detailed character of qualitative research means that researchers must have intimate involvement with individual participants and that the evolving directions in qualitative research as a result of data gathered can give rise to unexpected ethical concerns. Well constructed research problems, including the purpose, design and implications of the research, can serve to reduce these ethical concerns (Silverman, 2000).

An additional ethical issue for this study is the cross-cultural context in which the study occurred. Anderson (1996) highlights that it is not sufficient to simply produce 'good science' if the community being studied does not find the results acceptable within their cultural values. As a means of reconciling these issues and ensuring the maximum benefit to communities studied, Anderson (1996) highlights the need for constructive relationships to be established between the

researcher and the community; a further support to the choice of a mixed methods study.

The use of a constructivist approach to the inquiry in this study facilitated the development of relationships between the researcher and the participants. The constructivist paradigm holds that it is impossible for a researcher to remain detached from participants in studying their experiences. Therefore, to examine the lived experience of participants, it was important to take account of the subjective meanings that participants attribute to their experience and to give consideration to the social context in which events occur (Cherry, 1999; Silverman, 2001). “Qualitative researchers stress the socially constructed nature of reality, the intimate relationship between the research and what is studied...and emphasise the value-laden nature of inquiry” (Denzin & Lincoln, 2003, p. 13). A participative process between the participants and the researcher was also considered to be important in supporting the foregoing requirements.

As outlined earlier, ethical approval was obtained from both the Papua New Guinea Medical Research Advisory Committee and the Standing Committee on Ethics in Research Involving Humans at Monash University (see Appendices A & B Ethics Approvals). All participation in the study was purely voluntary, and participants were able to withdraw at any time prior to data integration should they choose. Participants were informed of the aims of the study, the reason for their selection, and participants in the semi-structured interviews and focus group voluntarily signed consent to participate (see Appendices C & D Consent Forms).

Reporting of the data required the use of direct quotations to enhance the narrative and to fulfill the aims of thick description (Denzin & Lincoln, 2003). The aim was to ‘bring to life’ for the reader, the experience of the participants as they learnt and implemented IMAI training. Reporting data in this way however, runs the risk of making it possible for others to identify participants. Maintaining

confidentiality and privacy when using direct quotes in writing up the analysis was therefore seen as being of paramount importance. To this end, participants were given a pseudonym by the researcher to facilitate the protection of their anonymity (Roberts & Taylor, 2002).

An essential part of the analytical stage of interpretive research is to ensure that interpretations made about the participants are understandable to them (Denzin & Lincoln, 2003). The strategy to facilitate this occurring within this study was a focus group. The aim of the focus group was to discuss and validate key themes that have emerged from the qualitative data generated from the semi-structure interviews. While the group was small, the discussion produced data and insights that would be less accessible without the interaction found in a group setting -- listening to others' verbalized experiences stimulated memories, ideas, and experiences in participants. This is also known as the group effect where group members engage in "a kind of 'chaining' or 'cascading' effect; talk links to, or tumbles out of, the topics and expressions preceding it" (Lindlof & Taylor, 2002, p. 182).

Finally, because the researcher was both a facilitator in terms of the learning experience and a researcher in terms of participants' learning and implementing experiences, he was entwined both within and with the learning and inquiry process. On the one hand, he was a learning facilitator in the IMAI training program and by contrast a researcher of the experiences of participants learning within the program. One way to deal with the concerns raised in this section as potential ethical issues was to declare the issues openly. Thus, the researcher openly acknowledged his closeness to the research site that formed part of the study, and to the participants in the study. Furthermore the methodology that was used in this study required that the researcher share the lived experience of the study participants. In this way the researcher was "...*Being-in-the-world* of the participants" (McConnell-Henry, Chapman, & Francis, 2009, p. 8) and

considered that he might better understand the experiences of the participants learning and implementation of the IMAI training program. Such an understanding was seen as assisting the researcher in bringing life to the stories of the participants in a narrative that was easily accessed by the reader. Access for the reader to these stories will be guided by the quality of the researcher's account of those experiences, influenced as they are, by his own subjectivity and the methodological framework.

Conclusion

A detailed description of the research process including the three methods of data collection – survey, semi-structured interviews and a focus group - were outlined and discussed in this chapter. The following chapters will take the reader through the study findings, the discussion and recommendations. The next chapter provides an analysis of the quantitative survey.

CHAPTER SIX

Surveying Health Professionals

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Surveying Health Professionals

Introduction

The purpose of this chapter is to detail the analysis of the quantitative survey. The chapter focuses on the effect the IMAI training program had on various aspects of how care is provided, the learning needs of participants and other program outcomes. It also examines any differences in response given by different demographic subgroups, specifically gender, age, care status, current employer and past educational attainment.

The chapter presented here as a published refereed journal article was successfully submitted to the International Journal of Nursing Practice under the title “Surveying health professionals’ satisfaction with the Integrated Management of Adult and Adolescent Illness Chronic HIV Care training programme: The Papua New Guinea experience”.

**SURVEYING HEALTH PROFESSIONALS SATISFACTION WITH THE
INTEGRATED MANAGEMENT OF ADULT AND ADOLESCENT
ILLNESS CHRONIC HIV TRAINING PROGRAM: THE PAPUA NEW
GUINEA EXPERIENCE**

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Submitted to: the International Journal of Nursing Practice

Monash University

Declaration for Research Article

In the case of paper entitled: SURVEYING HEALTH PROFESSIONALS' SATISFACTION WITH THE INTEGRATED MANAGEMENT OF ADULT AND ADOLESCENT ILLNESS CHRONIC HIV CARE TRAINING PROGRAMME: THE PAPUA NEW GUINEA EXPERIENCE

Name	% contribution	Nature of contribution
Geoffrey Clark	85%	Concept development, key ideas, development and writing up
Ysanne Chapman	10%	Contribution to drafts and revision
Karen Francis	5%	Contribution to drafts and revision

Declaration by co-authors

The undersigned hereby certify that:

- (1) they meet the criteria for authorship in that they have participated in the conception, execution, or interpretation, of at least that part of the publication in their field of expertise;
- (2) they take public responsibility for their part of the publication, except for the responsible author who accepts overall responsibility for the publication;
- (3) there are no other authors of the publication according to these criteria;
- (4) potential conflicts of interest have been disclosed to (a) granting bodies, (b) the editor or publisher of journals or other publications, and (c) the head of the responsible academic unit; and
- (5) the original data are stored at the following location(s) and will be held for at least five years from the date indicated below:

Location(s)

	Date
Signature 1 <input type="text" value=""/>	10/11/09
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Signature 3 <input type="text" value=""/>	12/11/09

❖ RESEARCH PAPER ❖

Surveying health professionals' satisfaction with the Integrated Management of Adult and Adolescent Illness Chronic HIV Care training programme: The Papua New Guinea experience

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Surveying health professionals satisfaction with the Integrated Management of Adult and Adolescent Illness Chronic HIV training program: The Papua New Guinea experience

This study reports findings from a survey of Papua New Guinean registered nurse who completed the Integrated Management of Adult and Adolescent Illness (IMAI) Chronic HIV Care training conducted between November 2005 and December 2006. The survey conducted is one component of a mixed method evaluation of the IMAI program in Papua New Guinea. Data from the questionnaires were entered into version 16 of the Statistical Package for the Social Sciences (SPSS) software program. The responses on the effect of the IMAI training program had on various aspects of how care is provided, learning needs and other program outcomes were analysed with a chi-square test being applied to detect any difference in the response given by the different demographic subgroups in terms of gender, age, care status, current employer and past educational attainment. The survey revealed that all thirty-five respondents have a positive impression of the IMAI program and expressed the view that the IMAI program had a positive effect on various aspects of patient care and their learning and experience. Overall, the survey identified that registered nurses who participated in the IMAI Chronic HIV Care training program perceive the program to be beneficial for improving the way HIV care is provided.

Key words: chronic care, HIV, Integrated Management of Adult and Adolescent Illness, Papua New Guinea, resource-limited settings.

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INTRODUCTION

The global percentage of people living with the human immunodeficiency virus (HIV) has stabilized since 2000. However, the overall number of people living with HIV has increased as a result of the ongoing number of new infections each year and the beneficial effects of more widely available antiretroviral therapy (ART).¹ Advances in treatment and outcome data from the introduction of Comprehensive Care (including ART) (hereinafter referred to as 'Comprehensive Care') programmes in resource-limited settings²⁻⁴ have shown that Comprehensive Care can be successfully implemented in resource-limited settings.

In resource-limited settings such as Papua New Guinea (PNG) with poorly functioning public health systems, care for HIV-infected patients has not been considered a priority. Minimal effort has been made in the training of staff to cope with demands of providing HIV care and non-government organizations and faith-based organizations have been left to provide stop-gap measures.⁵ Coupled with this lack of prioritization, many communities where Comprehensive Care is needed already suffer from a lack of health-care workers to provide basic services.⁶

Access to Comprehensive Care in resource-limited countries has seen significant improvements in prognosis for those people living with the human immunodeficiency virus/acquired immune deficiency syndrome (HIV/AIDS). Despite the successes of scaling up Comprehensive Care in resource-limited countries,^{2-4,7} few of the people living with HIV/AIDS in resource-limited settings receive such care.⁸

Key factors have been identified as being integral to the successful scale-up of Comprehensive Care in resource-limited settings. These include:

1. Successful Comprehensive Care programmes are based on a team approach. People living with HIV/AIDS are key members of the team.^{9,10}
2. Task shifting or skills substitution as a practical, feasible and effective means to overcome human resource skill shortages.^{11,12}
3. Simplification of treatment regimes and the use of fixed-dose combination ART make prescribing easier and facilitate increased adherence.¹²
4. Integration and coordination of services, including prevention, testing and treatment and psychosocial support within the current health system and at the community level.^{10,12,13}

Although there is considerable research in relation to the effectiveness of ART therapy in resource-limited settings, there is a dearth of evidence on the models of training used to prepare health-care workers to provide Comprehensive Care. The lack of adequately trained health-care workers forms a key barrier to achieving increased access to Comprehensive Care in resource-limited settings and therefore research in this area was seen as a key priority in the response to the PNG HIV epidemic.

Globally, a lack of training of health-care providers at all levels of health systems has been identified as a critical bottleneck in efforts to scale up Comprehensive Care.¹⁴ This situation is mirrored in PNG, which has the highest prevalence of HIV infection in the western Pacific region. Epidemiological data show that PNG has a generalized HIV epidemic with prevalence rates among antenatal women varying between 0.7% and 3.7%,¹⁵ driven predominantly by heterosexual transmission. The national HIV prevalence is estimated by the National AIDS Council to be 1.28% among adults aged 15–49 years with much higher prevalence in rural areas.¹⁵ Over 70% of PNG's population are aged ≤ 49 years and $\approx 85\%$ of the population resides in rural areas.¹⁵

In May 2005, the National Department of Health determined that the Integrated Management of Adult and Adolescent Illness (IMAI) model, modified for the PNG context, would serve as the training programme for health workers to provide HIV/AIDS care and treatment. Given registered nurses will be the main health worker group to provide Comprehensive Care, our research aimed at identifying the effectiveness of the IMAI Chronic HIV Care training programme in preparing Papua New Guinean registered nurses to provide Comprehensive Care as this was seen as critical in facilitating the scale-up of Comprehensive Care in PNG.¹⁶ This survey was conducted to provide information about the learning experience of PNG nurses and the implementation of the IMAI Chronic HIV Care training.

Integrated Management of Adult and Adolescent Illness is a strategy to improve the quality of health care for underserved populations in resource-limited settings.¹⁷ IMAI builds on and complements previous experience with other integrated approaches such as the Integrated Management of Childhood Illness. It extends the integrated management of the most common clinical conditions to the relatively neglected adolescent and adult groups, including the elderly. Within this life cycle approach, IMAI responds to the need for more and better

health care in these age groups resulting from the increasing burden of disease due to chronic conditions and the high prevalence of HIV/AIDS in many resource-limited countries. IMAI is designed to better meet the health-care needs of adolescents and adults, through improved case management, disease prevention and health promotion.¹⁷

Two key aspects of the IMAI approach are the integration of prevention and care activities and task shifting. Integration within the approach is seen as key to ensuring the optimal use of resources, an increased usage of HIV services and the improvement of the lives of those infected and affected by HIV.^{18,19} Equally, task shifting is seen as essential for resource-limited countries if Comprehensive Care is to be achieved and will largely mean shifting tasks traditionally performed by physicians to other health-care workers such as nurses. Despite the resistance and reluctance to such an approach by many established health-care workers,²⁰ many initiatives have shown the safety and success of such approaches.^{18,21}

The development of IMAI was a joint effort carried out in a working partnership involving World Health Organization, Geneva, the World Health Organization Regional Office for Africa, as well as many international collaborating institutions including the Centre for Disease Control, Columbia University, Harvard Medical School, London School of Hygiene and Tropical Medicine and the MacFarlane Burnett Institute for Medical Research and Public Health. IMAI uses a 'horizontal' approach, already well developed with programmes such as Integrated Management of Childhood Illness, with the integration of specialized 'vertical' programmes input in the development of simplified tools to help improve health care in resource-limited settings.

Although no formal evaluation studies have been undertaken of IMAI, anecdotal evidence from Uganda attributes the country's success in facilitating a large-scale increase in the level of Comprehensive Care given to people living with HIV/AIDS (PLWHA) to the IMAI strategy.²¹ The development of teams of health-care workers, task shifting and the use of PLWHA to train and evaluate health-care workers was seen as some of the key benefits of using this model.²¹

METHODS

A survey of registered nurse participants from IMAI training programmes conducted between November 2005 and December 2006 was undertaken using a self-administered questionnaire ('the study population'). Ninety-five regis-

tered nurses (84 women and 11 men) who completed the IMAI training programme during the above period were invited to complete the survey. The survey instrument was distributed by the National Department of Health to the last known place of employment of each of the 95 participants with a letter explaining the purpose of the survey and inviting them to participate. A letter was also sent to the Director of Nursing/Nurse in Charge asking for their support. The original invitation was followed up by three subsequent letters and two phone calls.

The survey conducted is one component of a mixed-method evaluation of the IMAI programme. As the overall aim of the research is to understand how Papua New Guinean nurses experience learning and implementing the IMAI Chronic HIV Care training, more in-depth and richer data will be collected through semistructured interviews and a focus group with a subset of 10 registered nurses participants.

The survey instrument that was used was based on the tool used by Panther *et al.*²² in the 'Healthcare provider characteristics and perceived confidence from HIV AIDS education' evaluation survey as reported in the journal *AIDS Patient Care and STDs*. The quantitative questions used in Panther *et al.*'s survey tool were contextualized to the PNG context with the name of the training programme, aim and objectives of the study being altered. The adapted tool was piloted with four Papua New Guinean registered nurses before use in the study to ensure that the questions were clear and easily understandable.

The survey was self-administered and contained 17 close-ended questions, which included eight questions on participant demography and nine questions on participants' views and impressions of the IMAI training programme. Questions concerning participant demography consisted of multiple-choice response categories, for which respondents were asked to select a single response. Questions relating to participants' views and impressions of the IMAI training programme consisted of a seven-point Likert scale on which respondents quantified the effect the IMAI training programme had on a particular aspect of their care, practice and learning outcome. Overall, 35 of the 95 participants returned the survey resulting in a response rate of 37%.

Data analysis

Data from the questionnaires were entered into version 16 of the Statistical Package for the Social Sciences (SPSS

Inc., Chicago, IL USA) software program. Data tables and graphs were subsequently generated using this program.

The demographic characteristics of the respondents were described with percentages calculated using data collected from questions 1–8 of the survey instrument. The responses to the effect of the IMAI training programme on various aspects of how care are provided, and learning needs and other programmes outcomes were analysed. The number and percentage of respondents selecting each option on the seven-point Likert scale for questions 9–15 and 17 were calculated.

In addition, the χ^2 test was applied to question 9–15 and 17 to detect any difference in the response given by the different demographic subgroups in terms of gender, age, care status, current employer and past educational attainment. The χ^2 statistics and *P*-values were calculated for each of these eight questions. The χ^2 test was not used for question 16 as only one respondent completed this question.

The study was also interested in identifying whether demographic subgroups in terms of gender, age, prior experience, employer and highest education attainment had any effect on respondents' assessment of the impact the IMAI training programme had on the quality of HIV care.

RESULTS

Thirty-five completed self-administered questionnaires were collected giving a response rate of 37%. There was no statistical difference in the gender and employment breakdown of respondents vs. non-respondents (see Table 1).

Overall, the survey revealed that all 35 respondents have a positive impression of the IMAI programme. All of the respondents expressed the view that the IMAI programme had a positive effect on various aspects of patient care and their learning and experience, with six (17%) respondents ranking the effect as small, 16 (46%) ranking the effect as medium and 13 (37%) ranking the effect as large. In particular, 100% of respondents believed that the use of expert patient trainers had a positive effect on their learning.

Most respondents had prior experience working with HIV/AIDS patients, with 29% of respondents having had > 3 years of experience with an average duration of 28 months. The majority of respondents (66%) identified their employer as being a government health service with the remainder (34%) being employed in faith-based health

Table 1 Comparison of demographic characteristics of study population and respondents

Variable	Total participants (<i>n</i> = 95)		<i>P</i> -value
	Respondents (<i>n</i> = 35)% (<i>N</i>)	Non-respondents (<i>n</i> = 60)% (<i>N</i>)	
Gender			
Male	11 (4)	12 (7)	0.97
Female	89 (31)	88 (53)	
Employer			
Church	34 (12)	45 (27)	0.30
Government	66 (23)	55 (33)	

services. This sectioning of respondents by employer was nearly a mirror image of the training participants' employment profile with 59% of participants coming from government health services and 41% coming from faith-based health services although this difference was not statistically significant (*P* > 0.05). Sixty per cent of respondents had a certificate or diploma as their highest education whereas 9% of respondents had postgraduate qualifications.

Eighty-one per cent of female respondents and 100% of male respondents believed that overall the IMAI training programme had a medium or large positive effect on the manner in which HIV care is provided, with 32% of women and 75% of men rating this effect as large. The result was not significantly different between the two groups.

The effect a respondent's age had on their overall assessment of the impact the IMAI training programme had on the quality of HIV care was also not significantly different between age groups, nor was there any significant difference by employer category. All respondents believed that the use the expert patients had a positive effect on their learning, with 83% of the respondents rating the positive effect as medium or large

Among those respondents who are currently providing care to HIV-positive patients, 81% believed that IMAI training had a medium or large positive effect on the way HIV care is provided, with 38% of them rating this effect as large. Among those who were not currently providing care to HIV-positive patients, 85% believed that IMAI training had a medium or large positive effect on the way HIV care is provided, with 31% of them rating this effect

as large. The result is not however significantly different between the two groups. Overall, the χ^2 test did not detect any statistically significant difference (at a 95% significance level) in the responses given by the different demographic subgroups with all of the P -values calculated using the χ^2 test being > 0.05 .

DISCUSSION

The survey revealed that all 35 respondents have a positive impression of the IMAI programme. All of the respondents believe that the IMAI programme has a positive effect on various aspects of patient care; their learning and experience; and ultimately the provision of HIV care. The majority of respondents ranked this effect as medium or large. All respondents also identified the positive effect that the IMAI training programme had on how they educate HIV-positive patients about their options for care, with 82% of the respondents rating this effect as medium or large.

The use of expert patient trainers was also viewed extremely positively by respondents, with 83% of the respondents rating this effect as medium or large. Expert patient trainers are people living with HIV/AIDS (PLWHA). Involvement of PLWHA as patients who are experts in their own illness is a valuable educational strategy to support the training of health workers.²³ PLWHA are trained to role play specific HIV cases with the participants during the skill stations sessions, in addition to joining small groups during the interactive classroom training.

All respondents reported that the team approach used in the IMAI programme also assisted their learning and the way that they and the health-care system generally provide HIV care to clients. This response might have been influenced by the fact that nurses were the group of health-care providers who were selected for this survey and other health-care providers might not perceive this benefit as strongly. Previous experiencing with providing HIV care was weakly associated with a more positive ranking but this was not statistically significant.

There are several limitations of using a structured questionnaire in conducting an evaluation. The self-administered mode requires respondents to both read and write, and therefore can exclude people who do not feel confident in reading, writing or both. Given the respondents were all registered nurses, it is unlikely that illiteracy would have had any significant effect on the response rate as all participants had completed at least

10 years of schooling before undertaking nursing education.

Furthermore, this questionnaire only evaluates the participants' impression of the programme and not the actual care delivered by graduates of the programme. Panther *et al.* comment on this issue and note that:²²

While it is a continued empirical question how these self-reported estimations of ability relate to actual practice, [they] . . . may denote a provider's propensity to be open to further educational and clinical experiences

which can serve as a proxy for a provider's efficacy in caring for patients. Establishing the interface between participants' confidence levels and longer-term sustained improvements in the quality of care or use of the leaning is not possible given the available data.

The response rate of 37% is low. One factor that might have contributed to this paucity in returning the questionnaire is an inability to post survey documents to participants' home address as there is no home mail delivery service in PNG although it is not considered that this lack of postal service would have resulted in any bias as the factor applied equally to all registered nurses who were sampled.

Although the response rate was limited to 37% and the study population was not randomly sampled, both the study population and the respondent group have similar demographic characteristics in terms of gender and employment and therefore it is reasonable to conjecture that the views expressed by the respondents are representative of the study population as a whole.

In conclusion, this study has identified that overall registered nurses who participated in the IMAI Chronic HIV Care training programme perceive the programme to be beneficial for improving the way HIV care is provided. All respondents believed that the use of PLWHA as 'expert patients' in the training programme had a positive effect on their learning and all respondents evaluated the model of care and team approach taught within the IMAI programme as being appropriate within the context of PNG.

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CHAPTER 7

Introducing the Interviewees

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Introducing the Interviewees

Introduction

The purpose of this chapter is twofold. Firstly, the chapter aims to reveal something of the unique background of each of the nurses who participated in the semi-structured interviews to facilitate the reader to contextualize the reported experience of each participant. The intention is to provide some insight into the work, family circumstances and education of each of the participants. This however, raised a dilemma about how much detail of the participants should be revealed; a dilemma often confronted by qualitative researchers (Roberts & Taylor, 2002). This concern was discussed with each participant during the interview process and all participants agreed to the inclusion of a brief biographical introduction. A brief introduction was recorded on audiotape at the beginning of each interview and later transcribed separately to the interview transcript.

To assist the reader, a brief edited introduction to each participant has been provided. This section is written in the first person to simulate each participant's presentation of themselves. The information that was supplied by the participants was edited to help present an informative and readable account of the participants' unique background without identifying them. Pseudonyms were given and the edited information was approved by the participants.

The second aim of the chapter is to enable the reader to build on the socio-cultural, epidemiological and political environment detailed in Chapter 2. By doing so, the reader will be better able to contextualize each participant's lived

experience within the broader context of Papua New Guinea. Such contextualization should assist the reader in gaining a deeper appreciation of the participants' experiences in terms of their interpretation of their learning and implementation of the IMAI program to provide Comprehensive Care. The following introductions are presented in alphabetical order by pseudonym.

The Participants

Agatha

I am married with two children and two grandchildren. I completed my general nurse training at the Papuan Nursing College when Papua was a Territory of Australia¹. I then completed my midwifery training at Rabaul and then I went to Hawaii and completed a course on the management of a Labour Ward. I was then selected to do my Diploma of Nursing Administration in Sydney, and following my marriage, I went to India in 1974 to complete a certificate in Public Health Nursing.

After my return I undertook a course in Middle Management at the Port Moresby Business College. My professional education was completed with a Graduate Diploma in Community Medicine at the University of Papua New Guinea. I now work for a non-government Maternal and Child Health service that also provides Prevention of Parent to Child Transmission of HIV (PPTCT) and Voluntary Counseling and Testing. I enjoy working with these mothers and their families and after many years of nursing, feel that I have found an area where I can utilize my skills to their best.

¹ Papua was a Territory of Australia from 1905 until 1975.

Agnes

I am a registered nurse and a midwife and a certified trainer. I did my training as a nurse and a midwife in Port Moresby. I have three children, two girls and one boy. I am also the proud bubu (grandmother) to a very beautiful grandson. I am now single but I used to be married.

I am from the Central province of Papua New Guinea and my village is on the Kokoda Trail. I have spent a large part of my nursing work in midwifery, especially in labour ward and other areas of Obstetrics and Gynaecology; this is my real passion. I have also worked on international Aid projects focused on maternal and child health issues which I enjoyed. I came to HIV care due to the need for employment but have found that having this knowledge coupled with my midwifery skills has been very useful.

Before undergoing the IMAI training I used to be frightened of HIV patients but I have come to know that they are no different to anyone else and now I feel comfortable being with them. The reality is that HIV now occupies nearly every conversation in Papua New Guinea and knowing about it is no longer an option. I now combine my knowledge of midwifery and HIV in the work I do for a non-government organization. I trust in God that this is the work he wants me to do.

Joseph

I am a married man from Madang province and have five children. I am a registered nurse and work in a government run district health centre. After completing my general nurse training, I undertook a certificate in paediatric nursing. I have also done other in-service courses. One of these was the IMAI training.

We have not yet started HIV treatment at the Health Centre where I work because we have no drugs and we have no HIV tests although I am a trained counselor and can do HIV rapid tests. I am not sure why this is so but it is. We have had a few patients that we knew were HIV positive who have died at the Health Centre but because we can not do testing we are not sure although I think there are more HIV positive people who have died and more in the community than what we know. I try to use my knowledge about HIV to educate my community on HIV prevention and home-based care for those who are HIV positive.

Kathy

I am from the Gulf Province and am married to a man from Morobe Province. I have two children and trained as a nurse at the Balimo School of Nursing. I worked for several years after graduating at a rural mission hospital and then went to work in Western Province at Kiunga Health Centre.

I then moved with my family to Port Moresby and obtained a position as a nursing officer in the Paediatric Unit at Port Moresby General Hospital. I worked there for two years and then transferred to outpatients in the STI/HIV section. I have now been working in the clinic for nearly ten years. I have undertaken a few other continuing education courses since graduating including Palliative Care and Voluntary Counseling and Testing.

Leslie

I am from Enga Province and have 4 kids. My husband is a doctor and he is also from Enga Province. I completed my nursing training in 1979 at the Port Moresby School of Nursing. In 1981 I moved to Enga Province with my husband as he was posted there as a resident medical officer. In 1983 we moved back to Port Moresby and I have lived in Port Moresby ever since.

My children were born and raised in Port Moresby and my eldest child is now 31, married and lives back in Enga Province. My youngest child is 15. In 1989 I completed my midwifery training at the College of Allied Health in Port Moresby. I wanted to do it before this time but the only midwifery school available was in East New Britain². In 1996 I completed my Bachelor of Nursing Administration at the University of Papua New Guinea. In 2006 I went back to University and completed a Graduate Diploma in Community Medicine. I have worked in the Obstetrics and Gynaecology section of the hospital since completing my midwifery training.

Mary

I am 29 years old and am married with one child and expecting my second child shortly. I graduated as a general nurse in 2002. After I graduated I initially worked in a general hospital doing medical nursing. I then married and moved to where my husband's family live.

After moving, I worked at a church Urban Health Centre as a general nurse and during this time I first saw HIV patients. After working at the church Urban Health Centre for nearly two years, I went and did my Bachelor of Nursing in Maternal and Child Health. During this time I learnt about HIV and how babies can get the virus from their mothers. I also met some HIV mothers when I did my clinical placements.

When I returned to the Urban Clinic where I worked I applied for the IMAI training and was lucky to be sent to do this. This helped me with my work. I am now working as the PPTCT co-ordinator for a non-government organisation and use my knowledge from the IMAI training to help mothers and their children.

² East New Britain is a maritime province and is only accessible by plane or sea. It is approximately 1500kms from Port Moresby.

Ruth

My name is Ruth and I am from the province of East New Britain. I am married to a man who is also from East New Britain. We have four children and one grandchild. I am a nurse by profession having graduated from the Rabaul School of Nursing some years back.

Since graduation I have worked in a number of clinical roles in hospitals in East New Britain province. I then went to work in Enga Province in a church run hospital until the hospital closed in 2000. Following the closure of the hospital, I went back and joined the staff at Vunapope Hospital in East New Britain Province for one and a half years. I then was successful in gaining a position in the Accident & Emergency Department in the Government Hospital where I worked from 2002 until 2006. In 2006, after completing my IMAI training, I moved into the area of STI/HIV care and have remained there since.

Steven

I am a Sepik man who was raised in Madang province. I am married with four children and am a registered nursing officer. I undertook my nursing training in Goroka, Eastern Highlands at the Highlands Regional School of Nursing.

All my work has been in medical nursing. Apart from the IMAI training I have also completed a Bachelor of Nursing Administration. I normally work in the medical ward but at the moment I am now working in the Accident and Emergency/Outpatient Department.

People in my community know I have been trained in HIV and so they come to me for advice and information. Now people will look after their family in the settlement but before they would not.

Susan

I completed year 10 at high school and then attended nursing school in Rabaul, East New Britain. As I am from the area, I returned to Port Moresby General Hospital as a general nurse after completing my nurses training.

I worked in ICU first and then went to Accident and Emergency/outpatients department. In 1997 I was asked to move to the STI outpatient clinic. I undertook training in STI management and have remained in the STI clinic since this date.

In the early 2000s we started to see patients with HIV. I knew nothing about looking after HIV patients and was actually quite scared to be around them. I was then selected to attend the first IMAI training in Port Moresby. After completing this training I felt much more comfortable with HIV patients and now regard many of them as my friend. I have also completed a Bachelor of Nursing Administration at the University of Papua New Guinea.

Sylvia

I am a registered nursing officer, married with three children. I am from the Western Highlands of Papua New Guinea. I trained as nurse at Vunapope in the East New Britain province.

I have been working for a rural non-government health service now for nearly two decades. We provide HIV services along with other general health services. I have been looking after HIV patients for quite a few years now but until I undertook the IMAI training I did not really have any knowledge of HIV or the drugs or anything.

After the training and working with the positive patients, it touched my heart and I felt I should care for them. The training changed me and I felt I should work with them.

Summary

This chapter provided a potted biographical introduction to the nurses who participated in the semi-structured interviews. The purpose of this chapter was to facilitate the reader in contextualizing the reported experience of each participant and to build on the socio-cultural, epidemiological and political environment detailed in Chapter 2. The next chapter is the first of three which detail the qualitative analysis of the semi-structured interview transcripts.

CHAPTER 8

Overcoming Personal Anxiety

CHAPTER 8

Overcoming Personal Anxiety

Introduction

This chapter is the first of three chapters that report the findings of the data analysis of the semi-structured interviews. The objective of these chapters is to re-create the lived experiences of the participants by locating events, acts, meanings, and recurring themes within an analytical framework (Denzin & Lincoln, 1994).

The purpose of this chapter is to identify and discuss the important factors that both created and helped participants overcome personal anxiety with regards to providing Comprehensive HIV Care. Their experiences highlight that learning is more than simply acquiring information. Rather, learning is also about personal growth that often is not captured within the remit of learning objectives.

The Fear and Anxiety of HIV

The fear and anxiety of HIV dominates this discussion as most of the participants were affected in some way by this apprehension. Most participants openly admitted that they were afraid of HIV patients; either they were simply fearful of contact with HIV positive patients or they feared they would get HIV through an occupational accident.

The fear of HIV and AIDS among health workers is a significant issue as it can lead to the avoidance of treatment of persons with HIV disease or those suspected to be infected with HIV. This stigma and discrimination is not new. It has existed since the inception of the epidemic and is acknowledged as one of the

greatest challenges to the goal of universal access to treatment, care and support (Herek & Glunt, 1988; UNAIDS, 2007). Studies completed earlier this decade indicated that the most extreme forms of stigma and discrimination occur within the healthcare sector (Panos, 2001). The panic which generates this stigma and discrimination has manifested itself in the segregation/isolation of patients believed to be HIV positive; labeling them and denying them care, treatment and support, and the inappropriate use of protective equipment (Panos, 2001).

Studies that have evaluated health care workers' attitudes towards providing care to people living with HIV/AIDS found that a substantial proportion would avoid treating HIV/AIDS patients if they had a choice (Eastham, Thompson, & Ryan, 1991; Gerbert, Maguire, Bleecker, Coates, & McPhee, 1991; Kinsler, Wong, Sayles, Davis, & Cunningham, 2001). More recent studies show that these attitudes have not significantly altered and despite increasing public and professional information and education, perceived stigma among health care workers continues to be associated with lower access to services, resulting in lower uptake of prevention, treatment and care (Posse, Meheus, vanAsten, vanderVen, & Baltussen, 2008).

One of the participants highlighted exactly how this fear of HIV resulted in the denial of care to an unconscious patient:

...when I went to the medical ward...there was a positive patient in the ward who was unconscious and we had to treat that patient but we were very scared. For two months the case was unconscious before he died and I was frightened to touch him...we all were. (Steven)

Another participant described how her fear manifested in her avoiding patients attending an Urban Clinic for care:

...before working at the Urban and nursing with HIV issues it was not something for me to do. It was for other people and I was just doing medicine and treating outpatients. Then I realized that everything had to do with HIV/AIDS; all the children and mothers that came in. The babies lived with HIV. (Mary)

This fear can be influenced by several factors including the life threatening nature of the disease, the association of the infection with behaviors that are already stigmatized such as homosexuality and prostitution, and a dread of becoming infected from patients. For one participant, this fear of becoming infected was a key issue:

...[O]nly thing I came across...was...PEP³...that sort of thing. I was worried about that...but as soon as I started it is normal...to have the fear...you have to take precautions...it is the normal thing. But no...I don't think...except the PEP thing...because one of the participants in the training had a needle injury...that sister there...she was telling me what happened and what she went through...and having no medical doctor I worried what I would do if I had a needle injury. (Agatha)

Evidence suggests that the fear of infection in the workplace compounds the negative attitudes and beliefs of health care workers towards individuals who are HIV positive and continues to perpetuate the stigma and discrimination they experience in the health care sector (UNAIDS, 2007).

³ PEP or Post Exposure Prophylaxis is a one month course of combination anti-retroviral therapy given immediately following exposure to HIV in an attempt to prevent the health care worker becoming infected

Personal Change as an Outcome of Learning

Most participants identified that their participation in the IMAI program contributed to their personal change process. The experience of participating in the IMAI program helped them to identify and understand their fear of HIV. This enabled participants to recognize that a lack of knowledge had led participants to fear that which they did not understand, namely HIV.

...Oh my challenge was...I did not know anything about HIV. I really don't want to touch the patient or go near the patient...I was scared as I did not know. But now I am not like this. I know about HIV and am happy to touch and talk with the patients. This was my biggest challenge. When I did not know...I did not know how to approach the patient. (Leslie)

...My biggest personal challenge was overcoming my fear of HIV but after the training I no longer fear it so it is good. (Sylvia)

Other participants describe this fear as causing them to be frightened or scared of approaching HIV patients and that the knowledge gained from the IMAI program had helped them to overcome this:

...It made a very big difference because...how we approach to the patients a bit different and when we heard about HIV it was...it was frightening area where we should approach our patients [sic]. (Kathy.

This personal change included a deeper self-understanding; a deeper appreciation of and empathy for HIV positive patients and a change in the way they interacted with HIV positive individuals. Some participants considered themselves to be

more considerate of HIV positive individuals and that they had developed a new approach to interacting and caring for HIV patients.

...The training has changed the way I relate to HIV patients. Before the training I was scared of them...I did not want to touch them or you know. Now I can take care of them. I used to be really scared...you know I did not want to talk to them. Now I am pleased. (Susan)

Revitalised by their challenging experiences, most participants discussed being excited by the experience of personal change particularly as it applied to overcoming their own personal fear of HIV. In striving for personal change, participants discovered their potential was an iterative process in which new learning formed after previous learning was extended. They also found that they became more self-critical as they tried to move outside their comfort zone in a deliberate attempt to deepen their understanding of HIV and its impact on individuals and their families.

The Reward of Personal Change

Despite their initial fear, a majority of participants saw reward in their personal change. In trying to meet the needs of their communities, some participants became more self-critical as they tried to move outside their comfort zone in a deliberate attempt to deepen personal and professional understanding.

...I think that there was something that I picked up from here...looking at people...people with HIV...people are not the same...they are different people...and so to have this training I...picked up lots of knowledge to [go] back...and care for people. (Agatha)

Participants also recognized that applying their learning was associated with an element of risk in relation to their capacity to fulfill the provision of Comprehensive Care to HIV positive individuals. Most participants still expressed a concern regarding the risk of contracting HIV, albeit small, and felt comfortable that they understood standard precautions and that through their use they could protect themselves. While at times participants may have expressed cautiousness about implementing their learning, they also indicated a preparedness to do so; it was a risk they were willing to take.

...Yes...I think it is a good training and helps you to do the necessary treatments for the patients with HIV. I hope I am able to do and remember all these things correctly...it worried me that I was the only one. We need to train more nurse with this training though...because...there are so many people who need to have the care and the ART drugs. (Ruth)

Some participants, while initially being reluctant learners, embraced the learning and intended to continue to practice their new learning. They also found personal reward in doing so which in turn has facilitated their desire to continue to provide Comprehensive Care.

...[W]ell at the time I had not [sic] choice because I needed a job. So I had no choice but to move along with the training...and...because you know maybe I am willing to learn and go forward with the challenges I have so it was...it was easier for me to just focus well...With the church, the pastor and I are doing a lot of...work on HIV/AIDS...I have found that rewarding and also with that knowledge...also on obstetric...it is a bonus for me because I am able to do two thing together and I do it so well. (Agnes)

For several of the participants the desire to serve their community made them more willing to engage in personal change and overcome their fear of HIV. Thus, they were of the view that the personal change benefits to be gained from their learning outweighed the personal costs of risk taking (i.e. overcoming their fear of HIV so as to provide Comprehensive Care to HIV positive individuals).

*...I think the IMAI training program is good. Like if it does not happen...if I did not have the training my patients would die. Now that I have the knowledge I am able to treat them in their community and they do not have to go for long travels to get medicines because the fare are very expensive on the PMV⁴.
(Sylvia)*

Although some participants expressed concern about their fear of HIV and providing Comprehensive Care for HIV positive individuals, most were excited about the challenge, actively engaged in the learning process, and were prepared to accept responsibility for change.

Self-Doubt and Personal Change

While some participants experienced personal change, several participants saw their ability to change being challenged by self-doubt. Self-doubt was expressed in terms of their perception of themselves and centered on their ability to overcome their fear. Paradoxically, self-doubt was part of how they came to understand themselves, and helped them to make sense of, and give meaning to, their learning and implementing experience. In the case of three participants, self-doubt formed an initial hindrance to achieving their potential that was later extended as part of the learning process.

⁴ A PMV is an abbreviation for a Public Motor Vehicle or bus.

For three participants, self-doubt manifested itself prior to the learning program. They bought with them uncertainty about their ability to overcome their fear of HIV.

...[O]ne of the things that I worried about before the training was whether I would be able to do the HIV care...you know...the HIV positives always made us worry. (Agatha)

These doubts were further evidenced in expressions of participants' ability to implement their new knowledge and skills. These performance issues were also linked to their fear of HIV and their concern that they would not be able to overcome this fear.

...[F]irstly...I did not know my fear of HIV...can I learn the care and not be frightened. The training was...was with the nurses...I had that language with them so it made it very easy for me to work with them and with doctors it was a bit difficult because...they thought that they know what to do...so it was easy with the nursing officers. This helped me. (Kathy)

...[A] big challenge is...for me is...will I be ok with the HIV positives...I had knowledge about HIV...and exposure but I still am frightened. (Agnes)

Despite the initial self-doubt, all of the participants were able to apply their learning, notwithstanding the different opportunities that each participant had, and the different levels of confidence they felt. As suggested by Smith (1995), application of learning increases the likelihood that learning will be further enhanced by way of practice.

Positive Exposure Leading to Change

The use of ‘expert patients’ (EPTs) is an integral component of the IMAI training program. This term ‘expert patient’ became widely known at the beginning of this decade as a result of the United Kingdom’s (UK) policy initiative “*The Expert Patient: A New Approach to Chronic Disease Management for the 21st Century*” (DoH, 2001). While the concept of self-management is not new, the UK initiative pioneered the establishment of self-management as a pillar of the national health system.

Expert patients have been defined as people who:

[U]nderstand that the quality of their lives is primarily up to them; believe they can exert significant control over their own lives; are determined to live a healthy life despite their chronic condition; are realistic about the impact of their disease; and have worked out what services exist and how they can be accessed. (Jones, 2003, p. 1)

EPTs in the context of IMAI are usually recruited from groups of people living with HIV/AIDS. In the learning setting, EPTs discuss living with HIV and help participants understand HIV as it affects HIV positive individuals. Course participants spend approximately two hours per day in "skill stations"; multiple-station assessments consisting of one-on-one encounters with EPTs.

Several participants particularly discussed the role EPTs had in assisting them to overcome their fear. While the literature reveals the positive impacts that EPTs have had on reducing the use of health services and improving outcomes for people living with chronic conditions, only recently has attention been given in the literature to their role in assisting health care workers to overcome fear

(Nyblade, Strangl, Weiss, & Ashburton, 2009). One participant, Agnes, discusses how even though she had some knowledge of HIV and prior exposure to HIV clients prior to the IMAI training, the exposure and interaction with the EPTs throughout the IMAI training resulted in her ‘personal change’ – the removal of fear and the development of comfort in dealing and interacting with HIV positive individuals.

...The biggest personal change...it bought to me was...like...I had knowledge about HIV/AIDS tasol⁵...and...exposure to HIV clients. Because...before when I didn't know I didn't attend IMAI training I...I was thinking HIV...positives were a different group of people and I don't want to have anything to do with them and I fear them and all that but the IMAI training actually bought me to come down and relax with them and eat with them...and...I'm able to...and...it humbled me you know at that time to...be able to go along...around with these people who have been like...who can cough and cough in front of me but I still took it. At first I could not stand it but the IMAI training made me see these people differently and now I can say that everybody is the same. (Agnes)

Joseph and Kathy similarly describe how interaction with the EPTs during the IMAI training changed their attitude in dealing with HIV positive individuals.

...I used to feel...actually HIV cases the AIDS patients that suffer from the disease...you the people are scared to talk to them but...but during the training I learnt to go and approach the patient, the EPT and now even when the patient dies I go in there to help their parents, and yeah...their guardians or relatives...so I

⁵ Tasol – a tok pisin word that means “that is all”

*have changed my attitude in the approach...I no longer have fear.
(Joseph)*

...[D]uring the course I...and before I worked with them and then attended my IMAI course and it made me feel that they are just like any other patient...so...so we have to give them all that...to help them for their living otherwise if we ignore them and all that they are also affected...so...like during my time working in here I have asked for the HIV patients...so...I have to treat them making sure they have received all the correct treatments...It's been a challenge to me...working with HIV patients. (Kathy)

As identified by these participants, the role of EPTs in the process of personal change and overcoming fear of HIV for these nurses was critical. While this role of EPTs was not explicitly identified by other participants, all participants viewed EPTs as a positive component of the IMAI training program. This will be discussed in greater depth in Chapter 9.

Summary

This chapter is the first of three chapters that report the findings of the data analysis of the semi-structured interviews. The purpose of this chapter was to identify and discuss the important factors that both created and helped participants overcome personal anxiety with regards to providing Comprehensive Care. The next chapter describes the journey of participants in actioning the learning from the IMAI training program.

CHAPTER 9

Action Learning

CHAPTER 9

Action Learning

Introduction

The purpose of this chapter is to identify and discuss the important factors that both assisted and hampered participants in actioning their learning in the IMAI training program. Within the context of this chapter actioning learning refers to the interpretations of participants of their learning journey and how this influenced their ability to implement their learning.

The Value of Flexibility

The methodology of the IMAI training was developed by WHO and its partners based on evidence-based normative guidelines and a thorough review of field experience with HIV/AIDS treatment provision in resource limited settings. The methodology simplifies and operationalises these normative guidelines utilizing flexible, interactive, low technology, participatory learning techniques. The purpose of the IMAI approach is to support the rapid expansion and access to antiretroviral therapy (ART) by supporting the shift of key tasks to multi-purpose health workers at first-level facilities, specifically in the PNG context this means nurses (WHO, 2006).

The flexibility in the IMAI approach extends from imparting information about HIV Comprehensive care, to facilitating participants' theoretical learning, to providing opportunities for participants to practice their new learning. This flexibility includes the use of structured experiences, role-plays, skill stations with EPTs and open-ended discussions and includes the room layout.

Participants considered there were benefits for them with this type of learning and they came to value the flexibility.

...I...like the reading and matching in the IMAI training was interesting [sic] because most nurses did not have any idea...they did not have any knowledge about what is HIV and AIDS. So during the teaching...they learnt about it...so...doing the different teachings they have some idea...like learning which patients belong to which staging groups. Some people are a bit slow in taking up learning [sic] so...they are better at learning with role plays and other things than lectures and reading too much. These teaching methods are better than normal. (Kathy)

...Of course it helped me...it helped me because...given that I knew that staging like you go to it...we had been given papers...but I did not understand it. So after going through the IMAI I know that I should do this, do that and all this and to really assess the patient. The different ways to learn were good. (Mary)

While generally the program was delivered to each participant in a similar manner, individual perceptions, interpretations, and understandings of the experience differed slightly between each participant. Factors such as the specific components they regarded as more beneficial differed slightly between participants although there was also a commonality in responses. A common factor related by the majority of participants as being important in the success of IMAI as a learning methodology was the perception that Papua New Guinea nurses learnt best through participation and ‘hands on’ learning.

...The different methods are...very good for learning for Papua New Guinea nurses. Because there are some nurses who have been in the clinical working area for quite some time...they are not very good at learning from books. That is why using the different ways like the group work and the skill stations are very good for them. (Ruth)

...The different methods helped me learn. Papua New Guinean nurses do not learn well with too much book work and lectures as we are not good. We understand group work and practical activities so it was good as we could all learn together. (Steven)

...I think the different types of teaching were very useful. Like role plays are very good...we sort of do the practical and we see it and we are learning to do it...Like lecturing...it is just a bit hard to remember so this is why IMAI was good because it does not do this. (Susan)

Not all participants had a positive experience of the learning though. One participant's experience of learning reflected a perceived lack of flexibility in the learning approach.

...We just went through the books and tried to memorise it...it is the experience and the way you do it can pick up more than really facing the clients so that is the part that I think should be different. For ART education we should go in groups so that some of us can be with the experienced physicians...and then we will be more experienced and really be more experienced [sic] and be able to do something better. (Mary)

The same participant also highlighted the need for facilitators to be experienced HIV clinicians and to ensure the integration of both theory and clinical learning.

...I think it is good that the IMAI program has teachers who know HIV care. This is important and it helps you to learn. I think the IMAI program is good but there needs to be more combining of the clinical and the book learning. (Mary)

The researcher attempted to probe further to identify the factors that may have been related to this negative learning experience of this participant such as the particular facilitators of the program they attended, but the participant was reluctant to divulge any further information so the researcher did not pursue this issue further.

A particular aspect of learning that was selected out for comment by the majority of participants was that of clinical learning. In the main, the participants agreed that clinical learning was valuable and essential to understanding the concepts of IMAI.

...The clinical is also very good as this helps the nurses...all the health workers to learn and see how to do the care properly. This is very important for PNG nurses learning...the nurses are used to the clinical learning on the wards so they like it. (Ruth)

...OK...like...I think everything that was needed...was given. The clinical is important...we nurses learn more from the clinical than from the theory. (Kathy)

...Yes...the clinical was important because I got to see the HIV people [sic] and do the assessments with the doctor and also to get to know the HIV staff. (Mary)

Several participants, while valuing the clinical learning, raised concerns that the current two week period of time devoted to just clinical learning may not be sufficient.

...The clinical component was good but it was too short. Some of us need a month or so as the more practical we do with the patients the better we understand what we have to do. So I think it should be longer. (Steven)

...[I]t was an excellent program [the IMAI program] ...but maybe a little patching up with the clinical. The Hederu clinic is excellent because that is where the doctors and patients are but...the two weeks is also not enough. (Agatha)

This focus on clinical learning and the comments made by participants on the importance of the flexibility of the IMAI training in facilitating the integration of theory with practice highlights the importance of clinical learning as an integral component of Papua New Guinean nurse's interpretation of learning and implementing the IMAI training.

The valuing of flexibility in learning methodology by the participants in the study demonstrates that providing a totally structured approach to learning about HIV Care and Treatment with Papua New Guinean nurses is not only unnecessary but would most likely be counter productive.

Learning in Teams

In health care settings ideally, individuals from different disciplines come together to care for patients. These groups of health care personnel are generally referred to as teams; though in order to earn true team status the group needs to demonstrate teamwork. Research strongly supports the use of collaborative team-based care for people with chronic diseases such as HIV (Kemp, 2007). Teams can also be an effective way to provide primary health care services to rural, remote, and under-serviced areas that don't have enough (or any) doctors, such as is the case in Papua New Guinea (Martin-Misener, Downe-Wombaltdt, Cain, & Girouard, 2009).

The IMAI training program advocates a team approach to the delivery of Comprehensive HIV Care and Treatment at the district level. This model is premised on a task shifting approach to the provision of care and aims to address the extreme shortages of health care workers in resource limited countries.

This approach resonated well with the participants in the IMAI training program as the concept has been entrenched (at least in theory) in the Papua New Guinea health system and forms the basis of the [theoretical] referral system.

...Yes we learnt a lot in the team approach by going through the...wards and interviewing patients...that is when we went out for ward rounds...and then...we were been taught [sic] on bedside on the patient...what treatment they were being given by the nurses and the doctors...so that where we actually saw what we should be doing when we come out. (Joseph)

...The team approach is a good approach in the learning of nurses in PNG as nurses are used to working in teams...with the doctors and HEOs⁶. (Ruth)

Some participants particularly commented on the importance of the patient as a member of the team.

...[T]he team approach is a good one to my way of thinking. I think it is also good to include the patient in the group...because...some patients are very selective...they like certain people...and so to have these people [the patients] is a good approach [in PNG]. (Agatha)

...I found the team approach very useful for learning because...in theory and the clinical the team approach was so easy...so easy and nice because we have a doctor there and a nurse, a HEO and a patient...and you know...you do the work together. The team approach is good. I like that. (Agnes)

On probing by the researcher, participants identified that their support for such a model related to their perceived security in having other team members to support them and to refer to.

The team also helps the nurses to know what they should do as they can ask the team for help. (Ruth)

⁶ HEO means Health Extension Officer. HEOs are a mid-level practitioner unique to Papua New Guinea. The concept was developed originally to provide health care to the rural and remote areas although in reality this has not been borne out. The stated level of competence of a HEO is equivalent to a Nurse Practitioner in a western health care system or a Clinical Officer in the African continent.

In discussions with participants, the majority of participants identified that in reality the support from other team members was often not available and that they were left to undertake clinical care on their own.

...[E]veryone then thought that I could do the caring...you know...for all the HIVs. This was lots of responsibilities for me [sic] ...the doctors did it too...they said “Ruth can look after them now.” (Ruth)

The use of a team approach and its support by participants presents as a paradox to their reality. In-practice support from other members of the clinical team largely does not exist and nurses are left to manage patients on their own. The team therefore often consists only of two – the nurse and the patient which contradicts their understanding of what constitutes a team in other nursing situations. While acknowledging this, participants still felt that as a learning method it was important, particularly with the inclusion of patients, and even if the current health care system did not support it.

New Ways of Learning

The use of standardised patients (SPs) in health care professional education and evaluation has spanned over four decades and its efficacy has been well established through extensive research (Levine & Swartz, 2008). As discussed in Chapter 8, standardized patients in the IMAI training program are called Expert Patient Trainers (EPTs) to emphasize their role in the training of health workers. EPTs were first used in IMAI training in Uganda in 2004. Since then, the method has been adopted by a number of other countries including Papua New Guinea (Kober & VanDamme, 2006).

EPTs are usually recruited from groups of people living with HIV/AIDS. In the classroom, EPTs discuss living with HIV and help participants understand HIV as it affects patients. Course participants spend approximately two hours per day in 'skill stations'; multiple-station assessments consisting of one-on-one encounters with EPTs. In each encounter, the health worker interacts with an EPT portraying a standardized case. Instructions on how to portray each case provides only broad outlines of the major clinical and counseling points; the EPT is expected to use his or her own life experiences to fill in emotional details.

The concept of a standardized patient or EPT to assist with learning is not a traditional feature of nursing education in Papua New Guinea and therefore none of the participants had experienced this phenomenon previously. It was a new way of learning. In addition to the value the participants ascribed to the EPTs in assisting them to overcome their personal anxiety created by the fear of HIV, as discussed in Chapter 8, all of the participants expressed how beneficial they found the EPTs from the perspective of assisting them to learn.

...I think they [EPTs] were helpful and it makes you...improve...and doing better [sic]. I think it was good...especially when client comes with ideas I must go and get my treatment...it is a fixed mind for to come and get the treatment [sic]. Many have to go and have other things...we don't ask them...we just say do this and do that...so I learnt something from that experience. (Agatha)

...[E]xpert patient trainers...yes...we have been...actually they and they taught us their experiences [sic]...so we learn from them. How to approach them...and how they come in and ways to assist them so they actually taught us their...how they feel when they get sick so that we can assist them...say in terms of

counseling...the counseling side we have to assist them and protect them...patients when they come for assistance or treatment. (Joseph)

For some participants, this new way of learning with EPTs carried a quality improvement focus in that they recognized that this learning occasion provided them with an opportunity to reflect critically on their practice and improve the care they delivered.

“...Yes...involvement of expert patient trainer is very good because...it helps the nurses...or the health workers during the skill stations. Most of the health workers...you know...they have forgotten...they have forgotten the good approach to patient care but after going through...the training...the IMAI training especially the expert patients...health workers you know...the health workers recognize their failures...especially the good approach to the patient...attending to patients...asking and listening to the patient. (Ruth)

...I learnt a lot from them [EPTs]. When the patient comes into the hospital we tell them what they need to do and we don't really think of them. But this way we had to think about what patients think. We used to think they know nothing and that we know everything but in this training I learnt from them and that they have knowledge too and that if we worked together it would be better...this was a new thing for me. (Steven)

...The expert trainers or patients just tell us what we are doing wrong. Some of us were thinking this is what we ask and this is what we do as a health worker and that is what we write and that

was it. And we even forgot some of the procedures like taking temperatures. So it was good for us...knowing that the patient was part of the team and the expert patients saying first you do this and this is what you should do. So it was good the expert patient training with the team. (Susan)

In addition to their learning and professional development opportunities recognised by participants, some participants also identified the expert patients as assisting them with the development of therapeutic relationships with patients generally.

The importance of the establishment of a successful therapeutic relationship has been long recognized within the health care arena although not necessarily practiced or overtly endorsed. The Institute of Medicine's [IOM] 2001 publication "Crossing the Quality Chasm" succinctly describes the importance of this relationship. A "[s]table, trusting relationship between a patient and the people providing care can be critical to healing or managing an illness" (IOM, 2001, p. 6).

Numerous studies reviewing the use of programs that include patients in the teaching of undergraduate medical students have also demonstrated the importance of this and the improvement in communication skills and therapeutic approach of students who participate in such a program (Biasco, Kohen, & Shapland, 1999; Fisher & Gilbert, 2001; Kelly & Wykurz, 1998). Nowhere is a stable, trusting relationship between patient and health care worker more important than in the effective management of a chronic disease such as HIV. In such situations it is essential that there be an active therapeutic relationship that facilitates the patient assuming an active role in their management, rather than the patient being a passive recipient of care, treatment and instruction (Kober & VanDamme, 2006).

...Yes...it helped me a lot. Right now I am using on my patients what the expert patients did to me, what I learnt. So it helped me a lot. Because they told me what...how to...for me to get to know the patient and for me to listen to the patient. So...I ...like now when I am more confident with approaching the patients. I've got 20 patients on treatment...so I get to know them...get to know them and they get to know me and it is better for both of us. I think this is a very good way to train...the IMAI. Through the training I have learnt a lot from these expert patients. (Sylvia)

This view of the importance of an active therapeutic relationship between patient and care provider is consistent with the importance and value that the participants placed on the use of expert patient trainers in the IMAI training program and is supported with the findings in the literature.

Utilising Learning

A key measurement of the utility of any health care worker training program must be its efficacy in assisting participants to incorporate the learning into their practice. All participants discussed how they had implemented their learning from the IMAI training program. The variation in the manner of implementation was not wide as most of the participants were either clinicians or in a teaching/facilitator role. Therefore the discussion centered on these two areas. Some participants also expressed their difficulty in trying to implement their learning because of system issues. This notion will be discussed further in Chapter 10.

The practice settings varied from prevention of parent to child transmission (PPTCT) centres to large urban treatment centres to small rural clinics to private

industry clinics. Despite their practice setting, all of the participants described the effect of the IMAI training on their ability to provide service as positive.

...After that I get the parents in if I can...I counsel them and then offer them VCT. We also support positive mothers on treatment and for some I do home visits. There are increasing numbers of mothers I have to visit to support them and their baby...I help them with their feeding and their medicines. I also make sure that the mothers come to the clinics and bring their baby...some we pick up when they can't...don't have the money for the PMV...I also make sure that the babies get their dried blood spot test [for HIV] collected when they are 6 weeks old. (Agatha)

...[After IMAI] we were able to start treatment on patients. This was a good thing. Prior to that people would just stay in hospital till they died of an opportunistic infection...we did not know what to do. The doctors used to stay away from the patients too. This was very hard. I also have helped the other staff on the ward to know how to look after the positive patients so this has been good because they also used to be scared of touching these patients. (Steven)

...Yes, yes...it is very good, it's very good. We did not know what HIV was. Now we learnt what...we know the symptoms and the treatment and we can help our patients...which is very good [sic]. So things like educating the patients...we are already doing this. We were thinking that all of the HIV complications were going to be for doctors, not nurses. But through the IMAI we are doing many treatments now and managing complications. (Susan)

Several of the participants also spoke of the challenges and the joys of having the necessary skills and knowledge to provide Comprehensive HIV Care. The descriptions of 'joy' centre on the reality that now these nurses have received training they can do something to stop their patients dying. Previously they could only watch while patients succumb to the natural progression of HIV infection.

...Lots of challenges I think. I mean the drug names were new...we tried to pronounce them...like every time we get new drugs they are called another name like Nevilast is now called Truviro. This is difficult to explain to patients..."no no mi no takim raun marasin, yupela long givin mi long brown wun"⁷. And so we explain that it is the same medicine but it is hard for them to understand that even though it is a different shape it is the same drug. (Susan)

...To see my patients...to get them on treatment and the follow up was the biggest challenge. Before I came to the [IMAI] training we had some patients with HIV...they were positive. A lot of people there so...before the training I did not know what to do. At least...one patient who had money...we sent him to a private clinic in Port Moresby and he was put on treatment. Then after I completed my IMAI training I told them to transfer him back to us so now I look after him. My other challenge was getting the medicine because one patient urgently needed to be on treatment so when I came back I tried to get the drugs for him but he died before I could get them. I don't have trouble getting the drugs

⁷ The participant is recounting a discussion with a patient that she is trying to give a different brand of the same drug too. The English translation is "No I do not take the round medicine, can you give me the brown one".

now though...now that I have the knowledge I am able to treat them in their community and they do not have to go for long travels to get medicines because the fares are very expensive on the PMV...I think the course is good because the way it is taught is good for Papua New Guinea nurses as we get to learn the practical and not just all the theory...this can be hard for us.
(Sylvia)

Several participants discussed their implementation of their learning through the facilitation of others' learning.

...Well...I came and...what I was taught which I was not doing in the clinic I tried to improve myself in that area and every other IMAI training when they are coming up to me for their clinical teachings I try to help them...teach them during their clinical training. (Kathy)

...Oh yes...we draw up...a training program within our division here...on Wednesday morning...and...we presented what we learnt in the IMAI program. We also have other students who come for their attachments with their HIV training...they work here with me...I sent them to the PPTCT clinic and they said "Oh Sister we are very grateful...we have never been exposed to this." So I said "you are here to learn everything...so you are going to learn about HIV care so that you can give it to your patients."
(Leslie)

While participants varied in both the approach and difficulty in implementing their learning from the IMAI training, all participants were able to realise their learning to the extent to which they could control the situation. In some

circumstances, system issues prevented participants from doing so to the desired extent. These issues will be discussed further in Chapter 10.

Summary

Overall, participants considered that the IMAI training program methodology was appropriate for Papua New Guinean nurses. In particular they valued the flexibility of the program and its focus on team learning and practice. Of specific value to the participants was the use of expert patient trainers, particularly with regards to assisting nurses to develop therapeutic relationships with people who they traditionally feared. The next chapter discusses the challenges identified by participants in attempting to learn and implement Comprehensive Care.

CHAPTER 10

Identifying Challenges

CHAPTER 10

Identifying Challenges

Introduction

The purpose of this chapter is to identify and discuss the challenges identified by participants in relation to learning and implementing the IMAI training program. The issues described in this chapter focus on the system challenges inhibiting current and ongoing implementation and the challenge of maintaining quality in the IMAI training program.

System Challenges

Papua New Guineans have experienced an overall deterioration in their health status over the last two decades. Much of the decline is attributed to the neglect of the local health system, especially in rural areas. Hundreds of rural health facilities have either closed or are not fully functioning. Limited resources, deteriorating infrastructure, inadequate and declining accessibility to basic health services are core issues which undermine the health status of the PNG population (WHO, 2008).

The poor road infrastructure and rugged terrain pose formidable challenges to effective health services delivery nationwide. There is a persistent and serious law and order problem which affects access to health facilities and staff supervision. Logistics and medical supply issues also continue to plague the system despite significant efforts to improve this (AusAID, 2004; Morris & Stewart, 2005; WHO, 2008).

Responsibility for delivery of health services post independence has to a large extent been decentralized in PNG under the 1995 *Organic Law on Provincial Governments and Local Level Governments* (Organic Law). The Organic Law however did not adequately address implementation issues, which led to incomplete and open-ended arrangements with responsibilities poorly matched to authority. Health service delivery is the domain of the provinces and districts where services are delivered through hospitals, health centers and aid posts (ECDPM, 2005b). Provincial governments have the authority to set local priorities within the national policy framework developed by NDOH. However, lines of authority between the tiers of government are largely absent, and NDOH is left with limited mechanisms for influence and oversight of provincial health operations (ECDPM, 2005a; Morris & Stewart, 2005).

There has also been a serious deterioration in the integrity of budget institutions and accountability. This, together with a worsening fiscal situation, has led to reduced public expenditure, deteriorating infrastructure and a very marked deterioration in public service delivery and morale. The country's ability to improve this situation over the next five years is expected to decline, not strengthen (Morris & Stewart, 2005).

It is within the above context that the stories of the participants are told. Their issues centre on medical supplies, including antiretroviral drugs (ART), human resources and professional education. All of the participants who raised system issues are employed within the public health system.

One of the significant system issues which does not just hamper implementation but inhibits is that of medical supplies. The failure of the medical supply system has resulted in one of the participants who underwent the IMAI training and works in an isolated rural area where HIV is present in the community, being unable to utilize his knowledge to prevent unnecessary morbidity and mortality.

...The challenges...the problems we are facing now is...currently we haven't...actually we haven't been doing what we have been taught so I think the problem is or the challenge is maybe we are not screening the patients. This is one area. We don't have...testing equipment so that we could be able to...screen the patient and then treat the patient. We can't carry out what we have been taught in this area. We also have no ART drugs. I am trained as a VCT specialist and then went to the IMAI training as well. I don't know why we don't have any test kits or drugs.
(Joseph)

...Another problem though is that some nurses have been trained but they have no drugs so they still can't help the patients.
(Susan)

...Yes...a lot of challenges...challenges of getting ART drugs and...how to store them...how to order...getting all the resources.
(Ruth)

While most participants who were concerned about access to drugs were concerned about current access, one participant was concerned about the future and the ability of the country to continue to supply ART drugs.

...[I]t is a challenge that...our government is not able to buy these drugs...so they [patients] have all that opportunity...if there given an opportunity for them and it's a free treatment that they have got to get...they have to look after themselves...I haven't heard anything that the government is ready to...buy the treatment for the patients. This is part of my advice to the patient when I am talking to them...that we have to be honest in attending the clinic

and whatever advice that is given...we have to follow the advice. "Your attendance will enable us to report back so that the people who are giving the drugs will...see that it's important to help us for to provide medicine for you people"...So we have to stress to them...it is not bought by our government...somebody else is helping us to give you this medicine. (Kathy)

The shortage and mal-distribution of human resources is a serious issue in PNG. There is a shortage of nurses and community health workers in most rural areas (AusAID, 2004; Morris & Stewart, 2005; WHO, 2008). A Human Resources for Health forum held in 2008 in Port Moresby demonstrated that to achieve basic primary health care, a density of 2.5 health care workers (counting only doctors, nurses and midwives) per 1,000 population is needed (WHO, 2006). In applying this formula to the number of doctors and nurses in PNG would mean a shortfall of 13,177 doctors and nurses using 2006 population data (NDoH, 2008).

Poor collaboration between providers of health education and training sector at all levels has impacted negatively on the provision of an adequate supply of competent healthcare workers and on the delivery of health services, and is responsible globally for a chronic imbalance and mismatch between health care needs and poor use of human resources. This is manifested in PNG by the lack of coherent policy or strategy for human resource development within the sector and especially with regard to education and training strategies (Dussault & Dubois, 2003).

Several participants identified a shortage of staff as an issue and particularly expressed concerned regarding inadequate staffing to deal with the workload that implementing the IMAI training has brought.

...My biggest challenge in the work place is lack of staff. We just don't have enough staff to care for the patients. (Steven)

...[T]he patient education side of it. Like taking all the patients in and doing all the ART education...managing all the patients on ART and making sure that they have no side effects and are taking their medicines. With ART we have a huge influx of patients but no more nurses so it is hard to look after them all...there is just too many patients and the administration will not give me more nurses. (Susan)

The need for continuing education was an issue identified by the majority of participants. The participants focused on the need to maintain contemporary knowledge of treatment options and in particular, given that most participants are in a generalist practice, the need to keep current in all areas of HIV care and treatment. As with formal education in the health care sector, the capacity of the PNG education sector to respond to the continuing education needs of PNG health care workers is limited at best. Many health care workers spend an entire career with very little education post their pre-service preparation. Where continuing education is available, the cost is largely unaffordable for the majority of health care workers.

...Trying to deal with all the different problems. There are lots of patients and now they have many issues you have to deal with like... "I am on ART and I am already pregnant." And I only deal with adults so I can not remember PPTCT or paediatrics...they are on the other side of the hospital but you still get these problems to look after...this is why I really need the refresher course so I can better deal with all these problems...you know I have forgotten the PPTCT and the paediatric because I don't

practice it. I once knew it you know but it is hard to remember everything. (Susan)

...[M]y only suggestion is like if we can some refresher course [sic]...like the first time I attended IMAI, HIV was new to me so some of the things I have forgotten and some of the things I didn't...if we can get some refresher course like this as we go on I will learn more. (Sylvia)

One of the participants, Joseph, recognized that he would need refresher training. He stated that it is now nearly four years since he did his training and due to a lack of medical supplies and drugs, he has not yet had the opportunity to implement his learning from the IMAI training. He felt that his knowledge and skills were not current and that he would need additional training before engaging in the delivery of care to people with HIV/AIDS.

...[T]he IMAI training I have gone through is good...at the moment though we should be given some test kits and medicines and...then we will need to go for refresher training as I have not been able to treat any so far. (Joseph)

One of the goals of the National Department of Health's National Health Plan is to give priority to in-service training and that within this priority, with rural front line health staff taking precedence for all training (NDoH, 2000). However, the weight of the anecdotal evidence to date is that in-service training is limited, if provided at all, and that few rural front line staff have had any opportunities for continuing education.

Maintaining Quality

Quality education requires teachers with appropriate qualifications and experience, the necessary equipment and facilities, and the appropriate clinical and public health settings for clinical training. Numerous authors have reviewed the quality of health care worker education in Papua New Guinea and raised concerns regarding quality particularly with regards to clinical assessment, diagnosis and treatment (Ashwell & Freeman, 1995; Beracochea, Dickson, Freeman, & Thomason, 1995; Freeman, Beracochea, Edwards, & Dickson, 1995). A review of midwifery education in 2006 by Kruske also identified similar concerns. Kruske stated that:

...all [midwifery] courses require more attention to the complications of pregnancy and childbirth, particularly those conditions that contribute to the high rates of maternal mortality (PPH, pre-eclampsia, puerperal sepsis etc) as the response from those students, educators and clinical midwives [interviewed] failed to demonstrate an in-depth understanding of these events, particularly pre-eclampsia. (2006, p. 58)

In 2008, the management and teaching of the IMAI course was taken over by the Papua New Guinea National Department of Health. During the preceding two years, capacity building had been undertaken with national doctors and nurses to facilitate this occurring. Since 2008, there have been anecdotal comments with regards to the quality of the IMAI program. Similar views were also expressed by some participants, particularly with regards to the training of nurses.

...With the clinical, at the time when I was doing my training, it was good but now there is not much help...friends of mine have told me. From my point of view people are concentrating more on teaching the doctors than the nurses...I have seen that. They are trying to build doctors up...so the nurses are basically doing

work instead of looking at patients and examining them and learning. With the problem of organization at the clinic it is very difficult. There is not enough staff or supervision and the teachers don't come for clinical anymore. (Agnes)

Other participants raised concerns with regards to the quality of clinical teaching and learning.

...I think the IMAI training is good. Like what I said in the beginning the clinical is important. After the theory, the students have said that they have not seen the facilitators in the clinical to help them follow up. Like previously when I did the training, after the theory there was facilitators who came down after the theory to follow up. So now it is not done. (Kathy)

...The thing...the clinical training was alright but my friends tell me it isn't any more...it needs more people to supervise...people on the ground. This is definitely the area they need to correct now. (Ruth)

One participant also raised the concern regarding the apparent abandonment of the team approach to learning.

...Well...it's good but some times you know different people are taught and at different times and when you are trying to tell them you're supposed to you know...this is how we did it...like teams are changing...like after IMAI training it was different because we all had learnt together. But what they are taught today is different so when we are trying to tell them they are saying "no we should do it this way because this is what we learnt". (Susan)

While no objective evidence exists to support these concerns, these HIV clinicians who are engaged in facilitating clinical learning or working with graduates of the program felt sufficiently concerned regarding this to raise it with the researcher. This issue will be further considered in the following chapter.

Summary

This chapter discussed the challenges identified by participants in relation to learning and implementing the IMAI training program. In particular the chapter focused on system issues which impede the ability of nurses to implement their learning from the IMAI training program. The chapter concluded with concerns of maintaining quality with regards to the IMAI training program. The next chapter will combine the results of the quantitative survey, the qualitative analysis and the outcome of the focus group.

CHAPTER 11

Discussion

CHAPTER ELEVEN

Discussion

“Cognosco ergo sum” (I experience, therefore I am) (Marton & Booth, 1997, p. 14)

Introduction

As the above quotation suggests, our experiences, and how we reflect on those experiences, are important considerations for our personal and professional growth. The purpose of this chapter is to undertake reflection on the experiences of participants through the integration of the findings of this study. This discussion incorporates the results of the quantitative survey, the qualitative analysis of the semi-structured interviews and the outcome of the focus group.

Overview of the Study Findings

The purpose of the study was to establish the meaning and understanding Papua New Guinean registered nurses gave to learning and implementing the IMAI Chronic HIV training program. In particular, the study sought to answer the question: *What are Papua New Guinean registered nurses’ interpretations of learning and implementing the Integrated Management of Adult and Adolescent Illness (IMAI) Chronic HIV Care training?*

The research design to address this research question was interpretive and was built upon a hermeneutic conception of how individuals understand and interpret their experience and give it meaning. Given the aim of the research, an approach that allowed for a deep and rich understanding of the meaning individuals gave to the learning and implementing of the phenomenon under study was required. To facilitate this, a mixed methods design was chosen as it offered methodological and practical advantages and provided a holistic and flexible

approach to the research problem (Andrew & Halcomb, 2006). Data collection included a range of techniques consistent with the methodology including a quantitative survey, semi-structured interviews and a focus group.

Both the quantitative survey and semi-structured interviews have been analysed and reported in earlier chapters. In this chapter, the three data sets will be combined and triangulated allowing a wider, or more complete picture to emerge than that presented by a single method alone and increasing the depth and breadth of understanding of the phenomenon (Cresswell, 2003).

Data from the quantitative survey was entered into version 16 of the Statistical Package for the Social Sciences® (SPSS) software program. Overall, the survey revealed that all 35 respondents had a positive impression of the IMAI program. All of the respondents expressed the view that the IMAI program had a positive effect on various aspects of patient care and their learning and experience, with 83% of respondents ranking the effect as medium or large. In particular, 100% of respondents believed that the use of expert patient trainers had a positive effect on their learning.

The semi-structured interviews were conducted with identified participants who it was perceived would be able to contribute to understanding the phenomenon under investigation. The interviews were audiotaped, transcribed and reviewed by participants prior to being entered into QRS N-Vivo8®. The researcher also repeatedly listened to each tape while concurrently reading the transcripts. Following a detailed analysis, the transcript text was coded with a smaller number of categories for analysis. A thematic analysis was employed to gather like themes from the interview transcripts, with three major themes emerging from the data.

The themes identified were:

- Overcoming Personal Anxiety
- Actioning Learning
- Identifying Challenges

Discussion of Results

Central to the participants' understanding of their experience of learning and implementing the IMAI training was their ability to conceptualise their experience. Conceptualisation encompassed the experience of how the participants gave meaning to their individual subjective experience of learning and implementing the IMAI training within and beyond the spatiotemporal borders of their learning program. Moreover, conceptualization varied in profundity, tempered by each participant's introspective ability to cognitively and affectively recall and discuss their experience.

Generally, participants used their own feelings, their perceptions of the feelings of others, their value systems, perceptions, intuitions, previous experiences, comments of colleagues, feedback and observations to help them understand their experience. Conceptualising their experience therefore was a subjective process that encompassed participants' perception of, and reflection on, events that occurred in their training program and, on occasions, in either prior or later events. The conceptualisation is inextricably wound up within the cultural context of the participants' lives as is their interpretation of HIV.

Overcoming Personal Anxiety

Coupled with the continued inexorable march of HIV throughout the world, has been the propagation of multitudinous understandings of the virus and its effects

on people and communities as differing belief systems interact to give meaning to the epidemic. To effectively respond therefore, be it in terms of educating health care workers or providing care and treatment, in differing cultural settings requires that there be a “...continua[l] reevaluat[ion of] the concepts through which we understand HIV, looking closely at how the multiple levels of experience and the multiple forms of knowledge interrelate and change over time” (Patton, 2002, p. xxiv). One of these key concepts is the response to individuals who are infected with HIV and the relationship of this response to the dominant contemporary rhetoric.

Many dubious and often highly medicalized distinctions construct the AIDS epidemic in Papua New Guinea as caused by abnormal sex engaged in by members of risk groups defined along loosely affiliative and occupational lines...rather [than being] caused by the severely imbalanced state of gender relations..[J]ust beneath the progressive movements regarding AIDS, lurks the bogeyman who insists, via Christian and public health discourse, that sex is bad, bad, wrong and bad. The answer continues to be said to lie in having *very little sex*, but of *the right kind*. (Hammar, 2008, p. 61 & 64)

This rhetoric influences health workers and their perceptions of HIV as it does all members of the PNG community and contributes towards their fear of people living with HIV/AIDS (PLWHA).

This fear and anxiety of HIV dominated the discussion of most of the participants of the semi-structured interviews with the majority of them being affected in some way by this apprehension. Most participants also openly admitted that they were afraid of HIV patients; either they were simply fearful of contact with HIV positive patients or they feared they would get HIV through an occupational accident. This fear was not discussed in the context of stigma by any of the participants although the literature clearly identifies fear as being at the basis of health care worker stigma and discrimination (Nyblade et al., 2009).

The issue of fear and anxiety with HIV was not canvassed within the quantitative survey so it is not possible to comment whether this fear and anxiety was generalized among the total 95 registered nurse participants. However the majority of the respondents to the quantitative survey (72%) had prior experience working with HIV/AIDS patients before undertaking the IMAI training, with the average duration of experience being 28 months. This may have effected their response as the literature identifies exposure and humanizing the disease reduces fear (Nyblade et al., 2009).

In contrast, only four of the respondents who participated in the semi-structured interviews acknowledged any prior experience with caring for HIV/AIDS prior to undertaking the training program; two of these having only very limited contact with HIV patients. This may account for the overt expression of the fear of HIV given by the participants in the semi-structured interview.

Participants in the focus group felt that the overt expression of fear given by the interview participants more accurately reflected the reality for the majority of nurses in Papua New Guinea. They also acknowledged that most nurses who had been providing care for HIV patients prior to the implementation of the IMAI training, still experienced fear in relation to contracting HIV through occupational exposure but were not as fearful of touching HIV patients as they had experience with caring for them. The participants in the focus group also expressed the view that undertaking the IMAI training and improving their knowledge base had probably removed the fear of occupational exposure for those who had previously provided care. Research has demonstrated that a fear of contracting HIV through contact as a result of incomplete knowledge about HIV transmission is one of the key causes of HIV related stigma within the general population (Ogden & Nyblade, 2005). Nyblade et al., (2009) identify that studies in several countries have also demonstrated that fear of contagion due to a lack of knowledge about HIV and how to implement standard

precautions to protect against infection results in high levels of fear and stigma with health care workers.

A review of research into stigma in health care settings advocates a multi-pronged approach to tackling it. Health care workers need to be made aware of the negative effect that stigma can have on the quality of care patients receive; they should have accurate information about the risk of HIV infection, the misperception of which can lead to stigmatising actions; and they should also be encouraged to not associate HIV with immoral behaviour (Nyblade et al., 2009).

Health care training programmes have been shown to be extremely effective in addressing this fear. Nyblade et al., (2009) advocate training programmes that involve participatory methods like role play and group discussion, as well as training on stigma and universal precautions. The IMAI training includes stigma and universal precautions as key topics with the material being incorporated throughout the training in a variety of modalities.

Nyblade et al., (2009) also highlight that the involvement of people living with HIV has the potential to lead to a greater understanding of patients' needs and to reduce the negative effect of stigma. The greater understanding discussed by Nyblade et al., (2009) is clearly evident in the responses given by several of the participants in the semi-structured interviews with regards to the EPTs. While these participants identified that increased knowledge assisted them in overcoming their fear, a key factor they all highlighted is what Nyblade et al., (2009) refers to as 'putting a human face on HIV'. This humanizing of HIV clearly impacted on these participants and their fear and resulted in a significant personal change for them.

Actioning Learning

One of the key findings in this study in relation to the IMAI training program is the value placed upon the methodology by participants. All of the respondents to the quantitative survey expressed the view that the IMAI program had a positive effect on their learning experience and ultimately the provision of HIV care. They also identified the positive effect that the IMAI training program had on how they educate HIV positive patients about their options for care. While the questionnaire did not specifically ask any question with regards to the training methodology, it is arguable that the implication of such an overwhelming positive response by all participants to their experience of learning implies a tacit endorsement of the methodology.

The qualitative analysis also highlighted the value that participants placed on the flexibility of the methodology in the IMAI program. While participants differed slightly with regards to what component of the methodology they valued most, there was unanimous agreement that the success of IMAI in Papua New Guinea was as a result of the use of a participatory, multi-method, 'hands on' learning approach.

In a systematic review of randomized controlled trials of continuing professional development (CPD) interventions, Davis, Thomson, Oxman & Haynes, (1995) concluded that multiple formats such as small group case discussions; peer review exercises in clinical practice, and role-playing or practice-rehearsal strategies were all interventions that were associated with positive learning outcomes. Other research findings also support the use of a multi-method, multi-phased intervention when changes in practice are the intended outcome (Eraut & DuBoulay, 2000).

From the perspective of addressing fear to HIV, Nyblade et al., (2009) also support a multi-faceted training program for health care workers. “Participatory methods such as games, role plays, exercises and group discussions create a non-judgemental environment that allows participants to explore personal values and behaviours, while improving their knowledge and awareness” of HIV (Nyblade et al., 2009, p. 5).

A particular aspect of the learning that was highlighted in the qualitative analysis was that of clinical learning. Participants spoke strongly of the importance of clinical learning for Papua New Guinean nurses with some participants expressing the view that Papua New Guinean nurses learn more from clinical practice than from theory. Eraut (2006), highlights that being able to receive feedback in practice contemporaneously with receiving new knowledge can be critical to learning. Research among newly qualified nurses as well as other early career professionals, found that certain work processes gave rise to important learning including participation in group processes, working alongside others, trying things out, and working with users/clients/patients and other health care workers (Eraut, 2006).

Working alongside others is particularly important, when it lasts long enough for mutually beneficial relationships and implicit understandings of each other’s practice to develop. Exploring issues such as what prompted a practitioner to do something at a particular moment opens up for discussion and evaluation aspects of practice that had hitherto been tacit. To discuss a problem together, respond and observe the immediate consequences, offers a rich, and often rare, learning opportunity. (Eraut, 2006, p. 3)

While the participants in the IMAI program were not new graduates in the terms of recently graduating from a pre-service course, they were novices in that although they had gained knowledge and skills, they lacked the clinical

experience in providing HIV care and treatment necessary to be an expert (Benner, 1984).

The team approach advocated and utilized in the IMAI training also resonated well with participants. As noted in Chapter 9, this was despite the reality that largely the clinical team consists of only two – the nurse and the patient. Overwhelmingly the current literature on healthcare situates teamwork as essential for safe and effective health care and organizational development. Teamwork has been shown to promote greater effectiveness and innovation and to impact positively on the mental health of team members (Bayley, Wallace, Spurgeon, Barwell, & Mazelan, 2007). Positive relationships within teams have also been shown to contribute to professional learning and to increasing the willingness of health care workers to seek advice in challenging and complex situations (Eraut, 2006). This aspect of professional learning was identified in the qualitative analysis and in the results of the quantitative survey and was reinforced through the focus group discussions. Respondents in the survey also believed that the team approach utilized in the IMAI program had changed or improved the way health care workers provided HIV Care and Treatment.

Research however demonstrates that many teams are not effective and have significant issues of communication (Bayley et al., 2007). In addition to the increased possibility of health care error, poorly functioning teams contribute significantly to the level of stress suffered by health care workers and ultimately to absenteeism and turnover (Bayley et al., 2007). Malfunctioning teams also add considerable additional workload to functioning team members – a situation identified by nurses in both the qualitative analysis and focus group.

A significant issue that was identified through all data collected was that of the use of expert patient trainers (EPTs). All respondents in the quantitative survey believed that the use of EPTs had a positive effect on their learning. Findings

from the qualitative analysis demonstrated that not only were EPTs beneficial for participants in terms of reducing their fear of HIV, but they were also beneficial from the perspective of assisting health care workers to learn. Both of these benefits were supported in focus group discussions.

In traditional health care worker education, health workers gain a large amount of their knowledge and skills from their interaction with real patients seeking care. A modification of this is to use a standardized patient; an approach to learning that was developed and introduced formally by Dr Howard Barrows in the 1960s (1993). He found that using real people to portray cases in a controlled setting was very useful in training students and resident medical officers. He described the standardized patient to be “...the umbrella term for both a simulated patient (a well person trained to simulate a patient’s illness in a standardized way) and an actual patient (who is trained to present his or her own illness in a standardized way)” (1993, p. 443).

The standardized patient can be used in an instructional role and/or evaluative role (Ring, Nyquist, Mitchell, Flores, & Samaniego, 2008). The expert patient-trainers, as used during the IMAI training, were prepared for both roles and trained to portray patients based on specific HIV cases that were often, but not necessarily, similar to their own life experiences. They were also taught to assess the important skills that the health care worker should have acquired from the classroom course. They became effective “expert patient-trainers.” Through skill stations, health workers practiced clinical skills learned in the classroom with the “expert patient-trainer,” who then provided a non-judgmental assessment of the health care worker by giving feedback through a case-specific checklist. A course facilitator was present during these skill stations and would also observe these interactions and subsequently in class review specific skills and training material which needed further clarification.

The literature also identifies that standardized patients or EPTs are not only useful in teaching interviewing, counseling and interpersonal skills, they have also been successfully prepared to provide feedback to health care workers. In this context the EPT provides a standardized clinical stimulus for learners and has the unique advantage of allowing for patient feedback to the learner (Ring et al., 2008). The qualitative analysis and focus group identified that this feedback was a quality highly valued by the participants.

The analysis of the semi-structured interviews also identified that some participants particularly appreciated the role of expert patients in assisting them with the development of therapeutic relationships with patients generally. This was reinforced during the focus group discussion, particularly in terms of promoting adherence with antiretroviral therapy (ART). The importance of the establishment of a successful therapeutic relationship has been long recognized within the health care arena although not necessarily practiced or overtly endorsed.

The Institute of Medicine's [IOM] 2001 publication "Crossing the Quality Chasm" succinctly describes the importance of this concept. A "[s]table, trusting relationship between a patient and the people providing care can be critical to healing or managing an illness" (IOM, 2001, p. 6). Mitchell and Cormack (1998) concurring with this state that "patients themselves value therapeutic relationships which offer respect, trust and care and it seems that such relationships may in themselves prove to be healing in the broadest sense" (p. 50). Nowhere is this relationship more important than in the management of chronic disease.

Chronic diseases have been defined as "Diseases which have one or more of the following characteristics: they are permanent, leave residual disability, are caused by non-reversible pathological alteration, require special training of the

patient for rehabilitation, or may be expected to require a long period of supervision, observation or care” (WHO, 2003, p. 4). Increasingly, there is a view among public health experts that HIV/AIDS is a chronic condition which requires comprehensive care in no different a manner to many non-communicable diseases such as Ischaemic Heart Disease and Diabetes (Pruitt, Annandale, Epping-Jordan, Diaz, Khan & Kisa, 2002; WHO, 2003).

A number of recent reviews have found that adherence among patients suffering chronic diseases in developed countries averages only 50% (Dunbar-Jacobs, Erlen, Schlenk, Ryan, Sereika & Doswell, (2000); Rybacki, 2002). Given the paucity of health resources and inequities in access to health care, the impact of poor adherence in developing countries is assumed to be even higher, further compounding the challenges of improving health and reducing waste of already limited resources (WHO, 2002).

A key quality identified by the literature as being an important determinant of adherence is the effectiveness of the therapeutic relationship (Chesney, 2000; Martin, Bowen, Dunbar-Jacob, & Perri, 2000; Tsai, Morton, Mangione, & Keeler, 2005; Vitolins, Rand, Rapp, Ribisi, & Sevick, 2000). Effective therapeutic relationships are characterized by an atmosphere in which alternative therapeutic options are explored, the treatment plan is negotiated, adherence is discussed and supported, and follow up is both planned and facilitated (Martin et al., 2000; Vladeck, 2001). These characteristics are consistent with the IMAI training approach and the evaluation criteria used by the EPTs – otherwise known as the 5 As – Assess, Advise, Agree, Assist and , Arrange (WHO, 2006).

Key among these characteristics is the ability to communicate effectively. Gale (2008) discusses the challenge that broaching the patient-practitioner relationship in an educational context can be as communication skills are often taken for granted. She dismisses the notion of ‘patient compliance’ on the basis of an

asymmetrical power relationship between health care workers and patients and advocates for utilizing a ‘partnership’ approach in health care worker training that recognizes “...the increasing complexity of managing chronically ill patients who develop forms of expertise about their illness” (Gale, 2008, p. 14).

The IMAI training, built on the Innovative Care for Chronic Conditions (ICCC) framework (Epping-Jordan, Pruitt, Bengoa, & Wagner, 2004), advocates a partnership approach to the provision of HIV care and treatment and as the evidence in this study reveals, this approach has had a positive effect on the participants. The significance of the importance of improving Chronic Care is eloquently summed up by the previous Secretary-General of the United Nations, Kofi Annan.

When we are sick, working is hard and learning is harder still. Illness blunts our creativity, cuts out opportunities. Unless the consequences of illness are prevented, or at least minimized, illness undermines people, and leads them into suffering, despair and poverty. (Annan, 2001)

Another issue that was identified in the qualitative analysis and was supported in the focus group discussions was that of the ‘joy’ of finally being able to provide HIV care and treatment. This positive effect on the morale of health care workers when they acquire the skills and consumables necessary to provide care is well documented in the literature. The moral boost that emanates from having the ability to provide care and treatment to people in need is however not unique to the provision of HIV care and treatment. The literature, particularly the literature that looks at the consequences of providing health care in conflict situations, identifies that the inability to provide care can cause immense trauma and psychological distress to health care workers through a sense of isolation and helplessness (Gross, 2006).

A large percentage of the literature surrounding HIV care and treatment however has focused traditionally on the negative aspects of providing care rather than the rewards (Barbour, 1994; Elridge & Lawrence, 1995). The provision of HIV care and treatment has been shown to increase professional satisfaction through providing comfort and support, developing meaningful relationships with patients, providing education, helping family and friends and through the receipt of positive feedback (Demmer, 2002; Horsman & Sheeram, 1995; Nashman & Hoare, 1990). It has also been shown to lead to both increased mental stimulation and career satisfaction (Gimbel, Lehrman, Strosberg, Ziac, Freedman, Savicki & Tackley, 2002).

Buve et al., (2003) hypothesized that programmes to provide HIV care and treatment could not only boost the morale of health care workers, but could have a positive effect on strengthening healthy systems and other activities as well. They postulated that “[w]ith training and the provision of supplies necessary to manage HIV-related morbidity health staff might again be motivated, as their sense of achieving something may improve” (Buve et al., 2003, p. S49). The experience of Papua New Guinean nurses who participated in the IMAI training program have proven this proposition to be correct at least for their context.

While not explicitly investigated through any of the data collection methods, the issue of quality of care was raised by participants in the semi-structured interviews and in the focus group discussions. The qualitative analysis of the interviews identified that respondents recognized that the learning process, particularly with regards to the use of EPTs, provided an opportunity for critical reflection and quality improvement. A similar discussion was had within the focus group although the emphasis shifted slightly towards using patient feedback as a means of improving quality generally. This occurred within the context of a general discussion regarding EPTs and health service delivery.

As previously stated, this issue was not canvassed within the quantitative questionnaire. Following Panther et al. (2000), while the high ratings of participants' self estimates of practice ability in the quantitative survey can serve as a proxy for a provider's efficacy in caring for patients, they are not a proxy for the maintenance or improvement in the quality of care.

Identifying Challenges

As with many other resource limited countries, one of the key challenges for the successful provision of HIV care is a functioning health care system. From a learning perspective, Eraut (2006) states that the circumstances of work and the associated pressures are one of the most critical factors to effect learning. He further discusses the effect long term dysfunctional systems can have both on learning and the provision of health care:

When people have no time to stop and think, and feel that they are on the brink of disaster, intentional learning disappears from sight. When such conditions persist for long periods of time, considered responses become increasingly rare, situations are poorly investigated and rapid intuitive responses are overused, with a consequent decline in the quality of practice. (Eraut, 2006, p. 3)

The situation of the Papua New Guinean health system has been well documented, and in particular, the significant and continuing decline of the past two decades. Much of the decline is attributed to the neglect of the local health system, especially in rural areas which has been mediated by the decentralization of health services under the 1995 *Organic law on Provincial Governments and Local Level Governments* (Organic Law). The issues associated with the provision of HIV care and treatment have been additive to this already dysfunctional system (Matheson, Elovainio, Howse, Oli, Perrymartin, Mulou, Possey & Azzam (2009).

Every participant employed within the public health system who was involved in the semi-structured interviews raised system issues as being the primary challenge to implementing their learning from the IMAI program. These voices were heard formally within the interview context and informally after the interviews had concluded. They are also heard constantly within the practice environment and were resoundingly reinforced during the focus group discussions. This situation is however not unique to Papua New Guinea and strengthens the rationale for undertaking this research – the need to address the lack of adequately trained health care workers to provide Comprehensive Care for Papua New Guineans (Ranson et al., 2003).

Malfunctioning health care systems and the HIV epidemic itself have combined to create one of the greatest obstacles globally to scaling up comprehensive care. HIV has brought a new and unique threat to the ability of health care systems to deal effectively with health crises as it increases the workload and the required skill of health care workers, adds considerably to the psychosocial stress that health care workers have to endure due to the increasing number of sick and dying patients, and as the prevalence of HIV increases in a community, it has the potential to reduce the number of available health workers and therefore further weaken the health care system (Michaud, 2003). All of this signals the need for countries to focus even more on strengthening their health systems, specifically their health care workforce (Ranson et al., 2003; Wyss, Moto, & Callewaert, 2003).

The reasons for the failure of the health system in Papua New Guinea are multi-factorial but include the failed decentralization policy implemented shortly after independence and revised in the 1990s, inadequate financial, management and technical resources given to provinces and local level governments to support decentralization, and the economic decline of the 1990s coupled with the structural reforms introduced (Izard & Dugue, 2003). PNG spends significantly

less per capita on health services than nearby island states (such as Solomon Islands and Vanuatu) and, unlike these two countries, real per capita health spending has until very recently been on a declining trend (AusAID, 2009). The operational funding going to government health services has been demonstrated by the National Economic and Fiscal Commission (NEFC) to represent only 31% of the funding required to deliver the estimated cost of a core level of services (NEFC, 2009). The lack of overall funding is compounded by inefficiency, waste and limited absorptive capacity in the sector. The limited absorptive capacity when funding is available has recently been documented. Both in 2006 and 2007, 41% of the budgeted central government and donor partner resources for health were unused at the end of the year (AusAID, 2009).

Authoritative reports point to the poor standards of patient care, unhealthy workplace practices, run down and inadequate facilities and equipment, inappropriate distribution of healthcare staff, and education and training which may not always meet the needs of the healthcare system (AusAID, 2004; Iazard & Dugue, 2003). Church-run health services which account for approximately 50% of health care provision in rural areas are generally considered to be of a better standard although this is disputed by some authors (NDoH, 2003a). The real failure has been in the delivery of primary health care services to the rural population (AusAID, 2005a; Matheson et al., 2009; NEFC, 2005, 2006).

The decline in the delivery of health services is demonstrated through the many problems materialising at the district and ward levels, such as an increasing number of non-functioning aid posts, a serious on-going medical supply problem, and a lack of resources at the health centre and aid post level to deliver the basic services required to improve health outcomes in this country (AusAID, 2005b; Matheson et al., 2009). This problem was particularly highlighted in the qualitative analysis and in the focus group discussions and had led to one particular respondent who worked in a remote health centre being unable to

provide any HIV services in the nearly four years since he undertook the IMAI training because of the non arrival of supplies.

Supply problems are augmented by health workforce issues, in particular the lack of staff and the maldistribution of health care workers across hospitals, provinces and districts (AusAID, 2004; Matheson et al., 2009). Nearly all interview respondents, either formally or informally, raised the issue of staff shortages and in particular, the increased workload that implementing the IMAI training has contributed to. Evidence has shown that the staff shortages will worsen over time and that the lack of coherent policy or strategy for human resources for health will contribute significantly to this (Dussault & Dubois, 2003).

The maintenance of educational quality with the IMAI training was also an issue identified in the qualitative analysis. This was not an issue canvassed in the qualitative survey as the questionnaire focused on the participants' impression of the IMAI program they attended. The issue was also raised within the focus group with the discussion centering around second hand anecdotal comments from colleagues of focus group members.

Several reports have highlighted the fact that the steady decline in financial commitments to the health sector over the past 15 years has also put stress on the quality of education and training however this discussion relates to the reduction in educational output and the degradation of educational infrastructure (AusAID, 2005a; Matheson et al., 2009). There has however been no qualification or quantification of the effect of this stress on educational quality.

Only one report during this time has specifically addressed the issue of educational quality and that was the review of Midwifery Education undertaken by Kruske (2006). Kruske found that the graduates of the midwifery education

lacked clinical competence to manage the three prime causes of maternal mortality (Kruske, 2006).

Ensuring quality of educational courses can be labour and resource intensive and therefore requires commitment from all stakeholders. In view of the lack of objective evidence regarding the current IMAI training, the researcher will contend with the issue of quality in the next chapter as a recommendation for the future.

Summary

This chapter integrated the findings of this study, including the outcome of the quantitative survey, the qualitative analysis of the semi-structured interviews and the outcome of the focus group in an in-depth discussion of these findings. The next chapter will present the conclusions, the study limitations, and identify areas for further research.

CHAPTER 12

Conclusion and Recommendations

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Introduction

This chapter presents an overview and the substantive findings of the study. To facilitate this, the chapter draws together the body of knowledge in relation to HIV/AIDS and the preparation of registered nurses in Papua New Guinea to provide HIV care and treatment. The chapter concludes with an overview of the study limitations and identifies recommendations for future research.

The Study

The purpose of this hermeneutic interpretive study was to understand how registered nurses in Papua New Guinea experience the learning and implementation of the Integrated Management of Adult and Adolescent Illness (IMAI) Chronic HIV Care training program. Following the granting of ethics approval from the Papua New Guinea Medical Research Advisory Committee and the Monash University Human Research Ethics Committee, the researcher conducted the quantitative survey and identified participants for the semi-structured interviews and focus group. The study sought to move beyond a reliance on theories and explore the experiences of Papua New Guinean nurses in a more holistic manner. The approach utilized for the study was deemed appropriate for exploring the meaning of the experiences from the point of view of the individual, and within the context of Papua New Guinea and their own life experience.

Overwhelmingly, the fear of anxiety of HIV was identified by all participants of the semi-structured interviews. They admitted openly that they were afraid of HIV patients; either they were simply fearful of contact with HIV positive patients or they feared they would get HIV through an occupational accident. Most participants also identified that their participation in the IMAI program contributed to their personal change process and helped them to identify and understand their fear of HIV. This personal change included from some participants, a deeper appreciation of and empathy for HIV positive patients. Some participants also considered themselves to be more considerate of HIV positive individuals and that they had developed a new approach to interacting and caring for HIV patients. Revitalized by their challenging experiences, and despite initial fear, a majority of participants also saw reward in their personal change. They also identified the importance of expert patient trainers (EPTs) in assisting them to overcome their personal anxiety created by the fear of HIV. Thus, personal change was an important outcome of the experience for the participants of the semi-structured interviews.

There were several key findings in relation to actioning their learning and in particular the value placed upon the flexible methodology by participants of the semi structured interviews and focus group. A value identified as being important in the success of IMAI as a learning methodology was the perception that Papua New Guinea nurses learnt best through participation and 'hands on' learning. The quantitative survey did not address the issue of methodology with respondents, although the overwhelming positive response to questions in relation to their experience of learning and the provision of patient education and HIV care implies a tacit endorsement of the methodology.

Within this methodology, participants in the semi-structured interviews paradoxically highlighted the importance of the team concept within the training approach even though their reality was that the clinical team often consisted only

of two – the nurse and the patient. While acknowledging this, participants still felt that as a learning method it was important. Another aspect of the training approach that was viewed as beneficial was that of the EPT. While not being a traditional feature of nursing education in Papua New Guinea, the concept of the EPT to assist with learning was also a valued aspect of this new way of learning. In concluding the findings on actioning learning, the use of EPTs were also highlighted for their benefit in facilitating active therapeutic relationship between patients and care providers.

In attempting to implement their learning, the key challenge faced by the participants was that of system issues including a lack of medical supplies, including antiretroviral drugs (ART), lack of staff and an absence of continuing professional education. These system issues impacted negatively on the delivery of HIV care and treatment with one of the participants not being able to implement his learning nearly four years after completing the training.

The study was conducted during a period when the prevalence of HIV in Papua New Guinea appeared to be increasing, particularly in rural areas. Current provisional estimates indicate that there may be an overall leveling nationally of the HIV prevalence although this data has not been officially endorsed by the Government of Papua New Guinea (NDoH, 2009). Given the natural history of HIV and the cumulative number of HIV infections in Papua New Guinea, there will be a continuing need for health care workers, and in particular registered nurses, to be prepared to provide HIV care and treatment.

The Experience of the Literature

The literature reviewed in the study indicated that there is considerable research in relation to the effectiveness of ARV therapy in resource limited settings, but there is a paucity of evidence as to the impact of the various models of training

used to prepare health care workers to provide Comprehensive Care. The review of the literature also demonstrated that a lack of capacity in health care workers is a key barrier to achieving increased access to comprehensive HIV care and treatment.

Pruitt and Jordan (2005) identify that effective care for chronic conditions can not be delivered unless there are adequately trained health care workers. They also note that while the world experiences a transition from acute to chronic health problems, the educational preparation of health care workers continues largely utilizing an acute, biomedical care model focus (Pruitt & Jordan, 2005). Chesney, Morin & Sherr, (2000) highlight that experiences with comprehensive HIV care suggest that a multifaceted approach to care, including actively involving patients in their health care decisions and the provision of appropriate supports and educational programs, enhance the benefits of comprehensive HIV care.

Two key aspects of the IMAI approach is the integration of prevention and care activities and task shifting. Integration is seen as key to ensuring the optimal use of resources, an increased usage of HIV services , and the improvement of the lives of those infected and affected by HIV with task shifting being essential for resource limited countries if HIV care and treatment is to be delivered (Kitahata et al., 2002; Wilson et al., 2005).

There is a paucity of literature examining the role of registered nurses in providing comprehensive HIV care and treatment, including ART, in resource limited countries although there is considerable literature surrounding the traditional caring and counseling role of nurses. Within Papua New Guinea, the researcher was unable to identify any literature dealing with the topic. Globally however, the evidence supports the need for registered nurses to be prepared to

provide comprehensive HIV care and treatment and the findings of this study support this view.

Contribution of this Study

This study has provided an in-depth understanding of the experiences of how registered nurses in Papua New Guinea make sense of their learning and implementation of the IMAI training program in providing comprehensive HIV care and treatment to people living with HIV/AIDS. The current multitude of factors fueling the HIV/AIDS epidemic in Papua New Guinea are explored as is the current status of HIV/AIDS in New Guinea, and the multitude of cultural patterns, social, and political factors influencing the spread of HIV within the country. This exploration also undertakes a comprehensive discussion of cultural issues related to gender inequality including a rich description of changing cultural patterns and values in Papua New Guinea.

Qualitative methodological frameworks have not commonly been used by scholars researching HIV care and treatment issues. Traditionally quantitative research methodology has been used on the basis that the only reliable approach to knowledge accumulation is empirical falsification through objective hypothesis testing of rigorously formulated causal generalizations (Crossan, 2001; Sabatier & Jenkins-Smith, 1994). The goal of this epistemology is to generate a body of empirical generalizations capable of explaining issues across social and historical contexts, whether communities, societies, or cultures, independently of specific times, places, or circumstances. This study however, required an understanding of the context of experiences and has highlighted the value of, and ongoing need for, descriptive studies that allow for a sound understanding of the interpretation of individual experiences with implementing interventions to facilitate HIV care and treatment. The reality however of many developments in resource limited settings is the implementation of interventions,

conceptualized on an incomplete body of knowledge, lacking the contextual understanding, and as a result, often culturally and contextually inappropriate.

The findings arising from this study will strengthen the understanding of preparing nurses in Papua New Guinea to provide HIV care. The findings will also inform future policy particular as it relates to the preparation of nurses in the current health context of Papua New Guinea. There is also a need for nursing programs at the pre-service level to be reviewed as a result of the outcomes of this research; not only in terms of education for HIV care, but also in terms of teaching and learning methodologies such as the use of expert patient trainers.

This study is the first of its kind in Papua New Guinea that has specifically addressed the issue of the preparation of nurses to implement comprehensive HIV care including antiretroviral therapy. Given the paucity of health resources and inequities in access to health care generally in Papua New Guinea coupled with the importance of effective therapeutic relationships in the successful provision of chronic care such as HIV care, it is hoped that this study will stimulate further research in regards to the preparation of health care workers for, and the implementation of, HIV care and treatment (WHO, 2002).

This study sought to answer the question: *What are Papua New Guinean registered nurses' interpretations of learning and implementing the Integrated Management of Adult and Adolescent Illness (IMAI) Chronic HIV Care training?* This study contributes to the body of knowledge and provides baseline information on the preparation of nurses to provide HIV care in Papua New Guinea. Recommendations include:

1. The NDoH provide resources for the establishment and maintenance of an annual continuing education program for registered nurses providing HIV care and treatment.

2. The NDoH urgently review the system of medical supplies to ensure that health facilities have access to adequate supplies necessary for the provision of HIV testing and care and treatment.
3. That NDoH establish a mechanism to ensure the regular review of staffing levels at facilities that provide HIV care and treatment to ensure that adequate numbers and cadres of staff are provided to facilitate effective care.
4. The NDoH and the Nursing Council of Papua New Guinea establish a mechanism for the endorsement of HIV nursing as a nursing specialty and that positions be created within the health system for nurses with this specialty.
5. The NDoH reclassify the salary level for HIV nursing specialty positions in line with the classification for other nursing specialty positions.
6. The NDoH review the current clinical training component of the IMAI Chronic HIV Care training program to ensure that this component continues to meet the learning needs of registered nurses.
7. The NDoH in consultation with the Nursing Council of Papua New Guinea establish an accreditation process for the IMAI Chronic HIV Care training program that will facilitate the maintenance of contemporaneous knowledge and training standards.
8. The NDoH in collaboration with the Nursing Council of Papua New Guinea, institutionalize the IMAI Chronic HIV Care training program within the pre-service nursing education program.

Study Limitations

In all research studies the limitations impacting on the study are highlighted. The following considerations outline key factors that have resulted in limitations in this study.

1. The quantitative structured survey was self-administered and therefore required respondents to both read and write English. While this can exclude people who do not feel confident in reading English, writing English or both, the respondents were all registered nurses and it is considered that it is unlikely that illiteracy would have had any significant effect on the response rate as all participants had completed at least ten years of schooling in English.
2. The response rate to the quantitative survey was low at only 37% although both the study population and the respondent group have similar demographic characteristics in terms of gender and employment.
3. The qualitative data collection outlined in the study involved small numbers of participants. The results therefore are limited to the sample used and cannot be generalized.
4. Both the quantitative survey and the qualitative data collection only examined the participants' impressions of the program and not the actual care delivered by graduates of the program.

The limitations offered represent a reflection by the researcher on factors that restrain the potential of the study. The researcher believes that this study was

rigorous and that the rights of all participants who agreed to assist him through their involvement have been maintained.

The Need for further Research

It is expected that this study will act as a catalyst for future research exploring topics including:

- The experiences of other health care workers in learning and implementing comprehensive HIV care and treatment.
- Evaluation of the quality of comprehensive HIV care delivered by registered nurses who have completed the IMAI training program.
- The use of ‘standardised patients’ in pre-service nursing education in Papua New Guinea and elsewhere/other developing countries.

The researcher recommends that a similar study examining the experiences of other health care workers in learning and implementing the IMAI Chronic HIV Care training be undertaken. These data would support the development of comprehensive policy by the NDOH with regards to the training of health care workers in Papua New Guinea to implement comprehensive HIV care and treatment.

There is also a need for research to be undertaken to examine the quality of comprehensive HIV care and treatment including antiretroviral therapy provided by nurses. This research would facilitate the continued development of government policy in Papua New Guinea with regards to the implementation of comprehensive HIV care and treatment and the role of nurses. Finally, it is also recommended that a longitudinal study be undertaken to monitor and evaluate

the evolution of the role of nurses in Papua New Guinea with regards to the provision of comprehensive HIV care and treatment.

Conclusion

One of the key obstacles to providing comprehensive HIV care and treatment in resource limited settings is the lack of appropriately trained health care workers. This situation is mirrored in Papua New Guinea and is compounded by the current dysfunctional health system that exists within Papua New Guinea.

This study has highlighted the experiences of registered nurses in Papua New Guinea in learning and implementing the IMAI Chronic HIV Care training program. It has also highlighted the impediment that the dysfunctional system issues such as lack of supplies and human resources are having, and will continue to have, on the provision of comprehensive HIV care and treatment.

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APPENDICES



Standing Committee on Ethics in Research Involving Humans (SCERH)
Research Office

Human Ethics Certificate of Approval

Date: 18-September-2008

Project Number: CF08/2532 - 2008001305

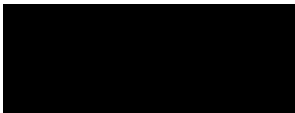
Project Title: Preparing Papua New Guinean registered nurses to provide comprehensive HIV care.

Chief Investigator: Assoc Prof Ysanne Chapman

Approved: From: 18-September-2008 To: 18-September-2013

Terms of approval

1. The Chief investigator is responsible for ensuring that permission letters are obtained and a copy forwarded to SCERH before any data collection can occur at the specified organisation. **Failure to provide permission letters to SCERH before data collection commences is in breach of the National Statement on Ethical Conduct in Human Research and the Australian Code for the Responsible Conduct of Research.**
2. Approval is only valid whilst you hold a position at Monash University.
3. It is the responsibility of the Chief Investigator to ensure that all investigators are aware of the terms of approval and to ensure the project is conducted as approved by SCERH.
4. You should notify SCERH immediately of any serious or unexpected adverse effects on participants or unforeseen events affecting the ethical acceptability of the project.
5. The Explanatory Statement must be on Monash University letterhead and the Monash University complaints clause must contain your project number.
6. **Amendments to the approved project (including changes in personnel):** Requires the submission of a Request for Amendment form to SCERH and must not begin without written approval from SCERH. Substantial variations may require a new application.
7. **Future correspondence:** Please quote the project number and project title above in any further correspondence.
8. **Annual reports:** Continued approval of this project is dependent on the submission of an Annual Report. This is determined by the date of your letter of approval.
9. **Final report:** A Final Report should be provided at the conclusion of the project. SCERH should be notified if the project is discontinued before the expected date of completion.
10. **Monitoring:** Projects may be subject to an audit or any other form of monitoring by SCERH at any time.
11. **Retention and storage of data:** The Chief Investigator is responsible for the storage and retention of original data pertaining to a project for a minimum period of five years.



Professor Ben Canny
Chair, SCERH

Cc: Dr Jane Elizabeth Mills; Mr Geoffrey Clark

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PNGIMR GOROKA PNG

001/002



GOVERNMENT OF PAPUA NEW GUINEA
MEDICAL RESEARCH ADVISORY COMMITTEE
Department of Health

Telephone: +675 301 3650
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P.O. Box 807
Waigani, NCD 131
Papua New Guinea

28th February 2008

Mr. Geoffrey Clark
WHO Office
Port Moresby
Papua New Guinea

Dear Mr. Clark,

This is to certify that the proposal:

**Evaluation of the Intergrated Management of Adult and Adolescent Illness
(IMA) Chronic HIV Care Training Program for Registered Nurses in Papua New
Guinea**

Submitted by you and your colleagues has been examined by the Medical Research Advisory Committee of Papua New Guinea and assigned **MRAC No: 08.12**. The proposal was approved and given ethical clearance for it to be carried out in Papua New Guinea. The Medical Research Advisory Committee of Papua New Guinea act as the National Ethical Clearance Committee and as the Institutional Ethical Committee for the Papua New Guinea Institute of Medical Research and so there is no further bar to this project being carried out in Papua New Guinea.

Investigators are reminded of the importance of keeping provincial health and research authorities informed on their study and its progress. Progressive reports of the study must be submitted to the Medical Research Advisory Committee annually.

With best wishes

Yours sincerely

Ms. Anna Irumai
Chairperson

Cc: Dr. Eserom Daoni - NDOH

MONASH University



Consent Form - Registered Nurse Focus Group Participants

Title: Preparing Papua New Guinean registered nurses to provide comprehensive HIV care

NOTE: This consent form will remain with the Monash University researcher for their records

I agree to take part in the Monash University research project specified above. I have had the project explained to me, and I have read the Explanatory Statement, which I keep for my records. I understand that agreeing to take part means that I am willing to:

1. agree to involved in a focus group
2. agree to allowing the focus group to be audio-taped

I understand that my participation is voluntary, that I can choose not to participate in part or all of the project, and that I can withdraw prior to the time of data analysis without being penalised or disadvantaged in any way.

I understand that any data that the researcher extracts from the focus group for use in reports or published findings will not, under any circumstances, contain names or identifying characteristics.

Participant's name

Signature

Date

MONASH University



Consent Form - Registered Nurse Qualitative Interview Participants

Title: Preparing Papua New Guinean registered nurses to provide comprehensive HIV care

NOTE: This consent form will remain with the Monash University researcher for their records

I agree to take part in the Monash University research project specified above. I have had the project explained to me, and I have read the Explanatory Statement, which I keep for my records. I understand that agreeing to take part means that I am willing to:

1. agree to be interviewed by the researcher Yes No
2. agree to allow the interview to be audio-taped Yes No
3. agree to make myself available for a further interview if required Yes No

I understand that I will be given a transcript of data concerning me for my approval before it is included in the write up of the research.

I understand that my participation is voluntary, that I can choose not to participate in part or all of the project, and that I can withdraw prior to the time of data analysis without being penalised or disadvantaged in any way.

I understand that any data that the researcher extracts from the interview for use in reports or published findings will not, under any circumstances, contain names or identifying characteristics.

Participant's name

Signature

Date

MONASH University



19-Nov-2008

Mr Geoffrey Clark
PO BOX 5896
BOROKO NCD 111
PAPUA NEW GUINEA

Student ID: 20089295
Department: Gippsland Nursing & Midwifery

Confirmation of Candidature - Doctor Of Philosophy

Dear Mr Clark,

The Research Graduate School Steering Committee has approved your confirmation of candidature effective from **19-Nov-2008**

Candidature Start Date: 30-Jul-2007
Candidature End Date: 31-Mar-2014

Re enrolment is an annual event. You will be forwarded re enrolment information via your student email address in October each year. It is also your responsibility to ensure that the University has your current mailing address.

Should you experience delays in your research which prevent you from completing your thesis by the due date, you should contact our office to seek advice as to what options are available to you to extend your candidature. Please ensure that any delays in your research are documented in your annual progress report.

If you have any further queries, please contact our office at: mrgs@adm.monash.edu.au

Yours sincerely,



Lara Osborne
On behalf of Monash Research Graduate School Committee

CC: Supervisor/Department or School

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22 October 2007

Explanatory Statement – Registered Nurse Focus Group Participants

Title: **Preparing Papua New Guinean registered nurses to provide comprehensive HIV care**

This information sheet is for you to keep.

My name is **Geoffrey Clark** and I am conducting a research project with **Dr Ysanne Chapman, Associate Professor** in the **School of Nursing and Midwifery** towards a **PhD** at Monash University. This means that I will be writing a **thesis, which is the equivalent of a 300 page book**.

Why did you choose this particular person/group as participants?

Your details were obtained from the participant list held by the World Health Organisation of health care workers who had completed the IMAI HIV chronic care training. You have been selected as you are a registered nurse who has completed this training and have participated in the semi-structured interviews.

The aim/purpose of the research

To understand how Papua New Guinean registered nurses experience the learning and implementation of the Integrated Management of Adult and Adolescent Illness Chronic HIV Care training program.

Possible benefits

The possible benefits of this study is that it will assist in identify strategies that facilitate Papua New Guinean registered nurses in learning about, and implementing comprehensive HIV care.

What does the research involve?

The study involves the collection of three different lots of data. The first is that collected by audio taped interview with registered nurses who have completed the IMAI training. The second lot of data will come from a survey questionnaire that registered nurses across the country who have completed the IMAI training will be asked to complete. Registered nurses who participate in the audio taped interviews will not be asked to participate in the completion of the survey questionnaire. The third lot of data will come from registered nurses who participate in a focus group. The registered nurses invited to participate in the focus group will be those that participate in the audio taped interviews. The focus group meeting will be held in the National Department of Health.

How much time will the research take?

The expected time that it will take for you to participate in the focus group will be 1 ½ to 2 hours.

Inconvenience/discomfort

The focus group discussion is not likely to cause you any distress. There may be some minor inconvenience in the time involved in participating in the research project but not sufficient to cause any discomfort beyond the normal experience of everyday life.

Can I withdraw from the research?

Being in this study is voluntary and you are under no obligation to consent to participation. However, if you do consent to participate, you may only withdraw prior to the time of data analysis.

Confidentiality

All data will be de-identified and if names are to be allocated then pseudonyms will be used. Names of towns, public buildings and other identifying data will be withdrawn from the reported findings.

Storage of data

Storage of the data collected will adhere to the University regulations and kept on University premises in a locked cupboard/filing cabinet for 5 years. A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report.

Use of data for other purposes

Data will not be used for any other purpose other than the study as detailed in this explanatory statement

Results

If you would like to be informed of the aggregate research finding, please contact Geoffrey Clark on +675 7169 1398 or email gcla4@student.monash.edu. The findings are accessible for 12months from the expected data of completion of the study in December 2009.

If you would like to contact the researchers about any aspect of this study, please contact the Chief Investigator:	If you have a complaint concerning the manner in which this research <insert your project number here, i.e. 2006/011> is being conducted, please contact:
Associate Professor Ysanne Chapman School of Nursing and Midwifery Gippsland Campus, Northways Road, CHURCHILL VIC 3842 AUSTRALIA Tel: +61 3 5122 6670 Fax: +61 3 5122 6627 Email: Ysanne.Chapman@med.monash.edu.au	Human Ethics Officer Standing Committee on Ethics in Research Involving Humans (SCERH) Building 3e Room 111 Research Office Monash University VIC 3800 Tel: +61 3 9905 2052 Fax: +61 3 9905 1420 Email: scerh@adm.monash.edu.au

Thank you.

Geoffrey Clark



22 October 2007

Explanatory Statement – Registered Nurse Qualitative Interview Participants

Title: **Preparing Papua New Guinean registered nurses to provide comprehensive HIV care**

This information sheet is for you to keep.

My name is **Geoff Clark** and I am conducting a research project with **Dr Ysanne Chapman, Associate Professor** in the **School of Nursing and Midwifery** towards a **PhD** at Monash University. This means that I will be writing **a thesis which is the equivalent of a 300 page book.**

Why did you choose this particular person/group as participants?

Your details were obtained from the participant list held by the National Department of Health of health care workers who had completed the IMAI HIV chronic care training. You have been selected as you are a registered nurse who has completed this training.

The aim/purpose of the research

To understand how Papua New Guinean registered nurses experience the learning and implementation of the Integrated Management of Adult and Adolescent Illness Chronic HIV Care training program.

Possible benefits

The possible benefits of this study is that it will assist in identify strategies that facilitate Papua New Guinean registered nurses in learning about, and implementing comprehensive HIV care.

What does the research involve?

The study involves the collection of three different lots of data. The first is that collected by audio taped interview with registered nurses who have completed the IMAI training. The second lot of data will come from a survey questionnaire that registered nurses across the country who have completed the IMAI training will be asked to complete. The third lot of data will come from registered nurses who participate in a focus group. The registered nurses invited to participate in the focus group will be those that participate in the audio taped interviews.

How much time will the research take?

The expected time that it will take for you to participate in the audio taped interviews is approximately 1 hour.

Inconvenience/discomfort

The questions asked are not likely to cause you any distress. There may be some minor inconvenience in the time involved in participating in the research project but not sufficient to cause any discomfort beyond the normal experience of everyday life.

Can I withdraw from the research?

Being in this study is voluntary and you are under no obligation to consent to participation. However, if you do consent to participate, you may only withdraw prior to the time of data analysis.

Confidentiality

All data will be de-identified and if names are to be allocated then pseudonyms will be used. Names of towns, public buildings and other identifying data will be withdrawn from the reported findings.

Storage of data

Storage of the data collected will adhere to the University regulations and kept on University premises in a locked cupboard/filing cabinet for 5 years. A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report.

Use of data for other purposes

Data will not be used for any other purpose other than the study as detailed in this explanatory statement

Results

If you would like to be informed of the aggregate research finding, please contact Geoffrey Clark on +675 7169 1398 or email gcla4@student.monash.edu. The findings are accessible for 12months from the expected data of completion of the study in December 2009.

If you would like to contact the researchers about any aspect of this study, please contact the Chief Investigator:	If you have a complaint concerning the manner in which this research is being conducted, please contact:
Associate Professor Ysanne Chapman School of Nursing and Midwifery Gippsland Campus, Northways Road, CHURCHILL VIC 3842 AUSTRALIA Tel: +61 3 5122 6670 Fax: +61 3 5122 6627 Email: Ysanne.Chapman@med.monash.edu.au	Human Ethics Officer Standing Committee on Ethics in Research Involving Humans (SCERH) Building 3e Room 111 Research Office Monash University VIC 3800 Tel: +61 3 9905 2052 Fax: +61 3 9905 1420 Email: scerh@adm.monash.edu.au

Thank you.

Geoff Clark



22 October 2007

Explanatory Statement – Registered Nurse Quantitative Survey Participants

Title: **Preparing Papua New Guinean registered nurses to provide comprehensive HIV care**

This information sheet is for you to keep.

My name is **Geoffrey Clark** and I am conducting a research project with **Dr Ysanne Chapman, Associate Professor** in the **School of Nursing and Midwifery** towards a **PhD** at Monash University. This means that I will be writing **a thesis, which is the equivalent of a 300 page book**.

Why did you choose this particular person/group as participants?

Your details were obtained from the participant list held by the World Health Organisation of health care workers who had completed the IMAI HIV chronic care training. You have been selected as you are a registered nurse who has completed this training.

The aim/purpose of the research

To understand how Papua New Guinean registered nurses experience the learning and implementation of the Integrated Management of Adult and Adolescent Illness Chronic HIV Care training program.

Possible benefits

The possible benefits of this study is that it will assist in identify strategies that facilitate Papua New Guinean registered nurses in learning about, and implementing comprehensive HIV care.

What does the research involve?

The study involves the collection of three different lots of data. The first is that collected by audio taped interview with registered nurses who have completed the IMAI training. The second lot of data will come from a survey questionnaire that registered nurses across the country who have completed the IMAI training will be asked to complete. Registered nurses who participate in the audio taped interviews will not be asked to participate in the completion of the survey questionnaire. The third lot of data will come from registered nurses who participate in a focus group. The registered nurses invited to participate in the focus group will be those that participate in the audio taped interviews.

How much time will the research take?

The expected time that it will take for you to complete the survey questionnaire is approximately 15 minutes.

Inconvenience/discomfort

The questions asked are not likely to cause you any distress. There may be some minor inconvenience in the time involved in participating in the research project but not sufficient to cause any discomfort beyond the normal experience of everyday life.

Can I withdraw from the research?

Being in this study is voluntary and you are under no obligation to consent to participation. However, if you do consent to participate, you may only withdraw prior to the time of data analysis.

Confidentiality

All data will be de-identified and if names are to be allocated then pseudonyms will be used. Names of towns, public buildings and other identifying data will be withdrawn from the reported findings.

Storage of data

Storage of the data collected will adhere to the University regulations and kept on University premises in a locked cupboard/filing cabinet for 5 years. A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report.

Use of data for other purposes

Data will not be used for any other purpose other than the study as detailed in this explanatory statement

Results

If you would like to be informed of the aggregate research finding, please contact Geoffrey Clark on +675 7169 1398 or email gcla4@student.monash.edu. The findings are accessible for 12 months from the expected date of completion of the study in December 2009.

If you would like to contact the researchers about any aspect of this study, please contact the Chief Investigator:	If you have a complaint concerning the manner in which this research <insert your project number here, i.e. 2006/011> is being conducted, please contact:
Associate Professor Ysanne Chapman School of Nursing and Midwifery Gippsland Campus, Northways Road, CHURCHILL VIC 3842 AUSTRALIA Tel: +61 3 5122 6670 Fax: +61 3 5122 6627 Email: Ysanne.Chapman@med.monash.edu.au	Human Ethics Officer Standing Committee on Ethics in Research Involving Humans (SCERH) Building 3e Room 111 Research Office Monash University VIC 3800 Tel: +61 3 9905 2052 Fax: +61 3 9905 1420 Email: scerh@adm.monash.edu.au

Thank you.

Geoffrey Clark

Semi-structured Interview Questions

1. How would you describe your experience of the method of learning in the IMAI Chronic HIV Care program?

2. Have you been able to successfully implement the learning in the IMAI Chronic HIV Care program?

3. What challenges did you experience in implementing the learning of the IMAI Chronic HIV Care program?

4. What personal change did the learning in the IMAI Chronic HIV Care program bring for you?

5. What personal challenges did the learning in the IMAI Chronic HIV Care program result in?