THE FEASIBILITY AND CHALLENGES OF IMPLEMENTING THE ESSENTIAL DRUGS PROGRAMME INTO OCCUPATIONAL HEALTH SERVICES

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Keywords

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Standard Treatment Guidelines

Drug Management

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Occupational Health Clinic

Occupational Health Nurse Practitioner

Abstract

BACKGROUND: The Essential Drugs Programme (EDP) is one of the tools developed to achieve the objectives of the South African National Drug Policy. The EDP concept encourages effective health care, which requires a judicious balance of promotive, preventative, curative and rehabilitative services and includes guidelines on managing commonly found medical conditions from non-drug and drug perspectives at PHC level (DoH, 1998a). Occupational Health (OH) services are largely in the private sector and usually provide an element of Primary Health Care in addition to Occupational Hygiene, Medicine and Nursing. It appears that, at the present time, little or no attention is given to the EDP within the OH setting.

AIM: The aim of this study was to determine the challenges of implementing the Essential Drugs Programme into Occupational Health settings in the Port Elizabeth and East London areas.

METHOD: A descriptive cross-sectional study was carried out. A semi-structured self-administered questionnaire was administered to Occupational Health Nurse Practitioners (OHNPs) in the Port Elizabeth and East London areas, registered with the South African Society of Occupational Health Nursing Practitioners (SASOHN), to determine their current practices and their knowledge and perceptions of the EDP. The results were analyzed using Survey Gold Version 6.4.

RESULTS AND CONCLUSIONS: The study indicated that the majority of OHNPs were enthusiastic about implementing the EDP in their setting. Some of the EDP principles were already embraced in a number of clinics, such as adherence to management guidelines, use of generic medications and cost containment measures. Respondents cited the evidenced-based approach to management of clients as a motivating factor for adopting the EDP in Occupational Health clinics.

RECOMMENDATIONS: A joint plan of action should be initiated between the District Health Management Team and the SASOHN Eastern Cape (as endorsed by the SASOHN National Executive), in order to guide the implementation of the Essential Drugs Programme within the Eastern Cape private sector Occupational Health services and later, to other provinces.

Declaration

I declare that *The Feasibility And Challenges Of Implementing The Essential Drugs Programme In Occupational Health Services*_is my own work, that it has not been submitted before for any degree or examination in other university, and that all the sources I have used or quoted have been indicated and acknowledged by complete references.

Shaun Petzer May 2006

Signed …….

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CONTENTS

Title page i

Keywords ii

Abstract iii

Declaration v

Acknowledgements vi

Contents page vii

List of Tables and Figures x

Acronyms xi

CHAPTER 1 INTRODUCTION

1.1 Introduction 1

1.2 Definition of Terms 3

1.3 Conclusion 6

CHAPTER 2 LITERATURE REVIEW

2.1 Introduction 7

2.2 South African National Drug Policy 7

2.3 Essential Drugs Programme concept 10

2.3.1 Access to Essential Medicines 11

2.3.2 Affordable medicine prices 12

2.3.3 Rational use of medicines 12

2.3.4 Promotion of standard treatment guidelines / algorithms 14

2.3.5 Drug safety 15

2.3.6 Sustainable financing 15

2.3.7 Reliable supply systems 16

2.4 Essential Drugs Programme at South African primary care level 16

2.5 Occupational Health services 19
2.5.1 Occupational Hygiene 20
2.5.2 Occupational Medicine 21
2.5.3 Occupational Health Nursing 21
2.6 Primary Health Care in Occupational Health services 22
2.7 Medicine usage in Occupational Health services 24
2.8 Legislative framework for medicines in Occupational Health settings 26
2.9 Conclusion 29

CHAPTER 3 RESEARCH DESIGN AND METHODS
3.1 Introduction 30
3.2 Aim of the study 30
3.3 Objectives of the study 30
3.4 Study design 31
3.5 Population and sampling 32
3.6 Data collection methods 33
3.7 Data handling 35
3.8 Data analysis 35
3.9 Validity and reliability 35
3.9.1 Questionnaire 35
3.9.2 Sample 36
3.9.3 Data management 36
3.10 Generalisablity 37
3.11 Ethics 37
3.12 Limitations/assumptions 38
3.13 Conclusion 40

CHAPTER 4 RESULTS
4.1 Introduction 41
4.2 Demographics 41
4.3 Organizational setup 42

4.4 Current practice guidelines 44
4.5 Occupational Health practice milieu 45
4.6 Essential Drugs Programme 51
4.7 Intrinsic and extrinsic factors impacting on the uptake of the Essential Drugs Programme (2003) within the Occupational Health setting 52
4.8 Conclusion 54

CHAPTER 5 DICUSSION OF FINDINGS
5.1 Introduction 55
5.2 Sample demographics 55
5.3 Occupational Health services 58
5.4 Occupational Health practice milieu 63
5.4.1 Occupational Health practice guidelines 63
5.4.2 Occupational Health drug practices 66
5.5 Essential Drugs Programme in Occupational Health services 69
5.6 Conclusion 71

CHAPTER 6 CONCLUSIONS AND RECOMMENDATIONS
6.1 Introduction 72
6.2 Conclusions 72
6.3 Recommendations 74
6.4 Final remark 75

REFERENCES 76

APPENDICIES
Annexure 1: Questionnaire For Occupational Health Nurse Practitioners

LIST OF TABLES

1.	Ten key areas of the National Drug Policy	8
2.	Components of an ideal comprehensive Occupational Health service	22
3.	Qualifications of Occupational Health Nurse Practitioner respondents	42
4.	Average Occupational Health clinic attendances for 2005	43
5.	Primary origin of guidelines being implemented in Occupational Health settings	44
6.	Guidelines in Occupational Health clinics	44
7.	Most commonly presented conditions at the Occupational Health clinic	46
8.	Signs and symptoms presenting at the Occupational Health clinic	47
9.	Respiratory conditions presenting at the Occupational Health clinic	48
10.	Gastro-intestinal conditions presenting at the Occupational Health clinic	49
11.	Ear, nose and throat conditions presenting at the Occupational Health clinic	50
12.	Respondents' awareness of National Drug Policy's objectives	52
13.	Factors identified as impacting on the uptake of the EDP	53

LIST OF FIGURES

1.	Number of Occupational Health clinics with a drug limit per client prescription	51

Acronyms

DoH	Department of Health
EDL	Essential Drugs List
EDP	Essential Drugs Programme
OH	Occupational Health
OHNP	Occupational Health Nurse Practitioner
OM	Occupational Medicine
OMP	Occupational Medicine Practitioner
PHC	Primary Health Care
SASOHN	South African Society of Occupational Health Nursing Practitioners
STGs	Standard Treatment Guidelines
WHO	World Health Organization

CHAPTER 1

1.1 Introduction

The White Paper on Transformation of the Health System in South Africa (1997) guided the devolution of certain health services from provincial to local authorities with an increased Primary Health Care (PHC) focus often termed first contact care. PHC aims to promote health, prevent disease (and its complications), through early diagnosis, treatment and rehabilitation based on the principles of health care being available, accessible, affordable and acceptable to all citizens of a country (Siyaba & Muller, 2000). One of the envisaged aims for the development of a District Health System according to DoH (1997) was to encourage greater interaction with the private sector. The National Drug Policy (1996) came to the fore following the 1994 South African democratic elections and a Drug Policy Committee was tasked to develop Standard Treatment Guidelines (STGs) and an Essential Drugs List (EDL) for the public sector (DoH, 1996). The National Drug Policy (1996) for South Africa promotes drugs which are safe, effective and adhere to approved standards. One of the tools developed to achieve some of the National Drug Policy objectives was the Essential Drugs Programme (EDP) (DoH, 2003a). The Essential Drugs concept encourages effective health care, which requires a judicious balance of promotative, preventative, curative and rehabilitative services and includes guidelines on managing commonly found medical conditions from non-drug and drug perspectives at PHC level (DoH, 1998a). The EDP was first actioned in the Department of Health Standard Treatment Guidelines (STGs) and Essential Drugs List (EDL) for Primary Health Care (1998), and has been adopted as the

protocol to be followed when dealing with clients and initiating treatment protocols within the public sector (DoH, 1998a). Gazetted medical aid treatment algorithms and protocols have been introduced in the private sector from 2004 (Government Gazette No 25537, 2003).

Historically, medical practitioners have been seen as the custodians of health care and within Occupational Health (OH) services the Occupational Medical Practitioner (OMP), who is a Registered Medical Practitioner with a specialization in occupational medicine is viewed as the head of the service (Hatting & Acutt, 2003). This practitioner is often employed on a sessional basis depending on the number of organizational employees (Murphy, 2002). Most OH services are situated in the private sector (Geyer, 2001), and according to Hatting & Acutt (2003), seek to address environmental factors by means of Occupational Hygiene and human factors through Occupational Medicine (OM) and OH Nursing. The OH service is usually coordinated and implemented by an Occupational Health Nurse Practitioner (OHNP) who holds a qualification in OH as recognized by the South African Nursing Council as referred to in the Nursing Act, 1978 (Act No 50 of 1978) i.e. a registered nurse with a qualification in OH Nursing Science. The ultimate aim of OH services is the prevention of occupational induced illness or disease and often includes a PHC service.

The researcher was initially employed as a PHC Nurse Practitioner and later as an OHNP within the Buffalo City Municipality. On making the transition from PHC to OH, he noticed that the Essential Drugs Programme (EDP) principles were not actively adhered to within OH. Treatment interventions seemed to be largely based on prescriber preferences and financial constraints, which in turn could contribute to the use of non-standardized

protocols, stocking of expensive medicines and poly-pharmacy. The use of treatment protocols and algorithms is recommended within OH but is not compulsory (Murphy, 2002). The absence of standardized protocols is not in keeping with the EDPs premise of judicious medicine selection and use in order to benefit the majority of the population, bearing in mind the costs to consumer and country, reducing or limiting the effects of drug resistance, side effects and minimizing drug related deaths (WHO, 2004).

The researcher then decided to explore the feasibility and challenges of implementing the EDP into the OH settings within the Port Elizabeth and East London geographical areas.

1.2 Definition of terms

The following definitions shall apply for this document:

District Health Management Team "(a) ... management structure established within a demarcated district to pull together health resources for the delivery of an integrated health service …" (DoH, 1998b:29).

District Health System a national government initiative to sustain health status improvements through the provision of equitable, efficient, technically good, quality, acceptable, appropriate and affordable health care (DoH, 1998b).

Eastern Cape Occupational Health Nurse Practitioners the Occupational Health Nurse Practitioners who are employed in organizations/industries within the Port Elizabeth and East London geographical areas of the Eastern Cape Province.

Essential Drugs List (EDL) a list of recommended drugs, which satisfy the priority health care needs of the population. The choice of drugs/ medicines is based on disease prevalence, evidence of efficacy, safety and cost effectiveness to both the individual and the community (DoH, 2003a).

Essential Drugs Programme (EDP) a national government initiative to rationalize the use, supply and distribution of medicines in the public sector, and to engage in human resource development (DoH, 2003a).

Occupational Health Care Services include Occupational Hygiene, Occupational Medicine and Occupational Health Nursing as referred to in the Occupational Health and Safety Act, 85 of 1993, as amended (South African Government, 1993).

Occupational Health Clinic a devolved level of health care rendering Occupational Health Care services and often incorporating Primary Health Care services within an industry/ organization.

Occupational Health Nurse Practitioner (OHNP) an individual who holds a qualification in Occupational Health Nursing as recognized by the South African Nursing Council as referred to in the Nursing Act, 50 of 1978, as amended (South African Government, 1978).

Occupational Hygiene "… the anticipation, recognition, evaluation and control of conditions arising in or from the workplace, which may cause illness or adverse effects to persons" (South African Government, 1993: i).

Occupational Medicine (OM) "… the prevention, diagnosis and treatment of illness and adverse health effects associated with a particular type of work" (South African Government, 1993: i).

Occupational Medicine Practitioner (OMP) a Medical Practitioner who holds a qualification in Occupational Medicine or equivalent as recognized by the South African Medical and Dental Council as referred to in the Occupational Health And Safety Act (South African Government, 1993).

Primary Health Care (PHC) Services a devolved level of health often termed first contact care aimed at promoting health, preventing disease and its complications through early diagnosis, treatment and rehabilitation based on the principles of health care being available, accessible, affordable and acceptable to all citizens of a country.

South African Society of Occupational Health Nursing Practitioners (SASOHN) a national coordinating professional organization (with sub-branches), which aims to promote the professional status of Occupational Health Practitioners and their practice.

Standard Treatment Guidelines (STGs) a set of treatment guidelines based on a description of the disease/ condition, followed by management objectives, drug and non drug treatment and referral criteria (DoH, 2003a).

This thesis will adhere to the following chapter division

- Chapter 1 – Introduction
- Chapter 2 – Literature review
- Chapter 3 – Research design and methods
- Chapter 4 – Results
- Chapter 5 – Discussion of findings
- Chapter 6 – Conclusions and recommendations

1.3 Conclusion

Chapter 1 serves as an overall introduction to the research topic and indicates the researcher's interest and rationale for undertaking the study. In Chapter 2, the researcher will present a literature review with relevance to the South African Essential Drugs Programme and Occupational Health Services within the South African Health Care setting.

CHAPTER 2

Literature review

2.1 Introduction

Chapter 2 outlines the Essential Drugs Programme concept and its underlying principles within the South Africa Primary Health Care settings, and the link to the Occupational Health setting.

2.2 The South African National Drug Policy

The National Drug Policy (NDP) and the Drug Policy Committee which was tasked to develop STGs and an EDL for the public sector, came to the fore following the 1994 South African democratic elections (DoH, 1996). The NDP is a South African plan to assist the country's health services and population by means of the rational and economic use of drugs within the health sector. The Policy targets prescribers, dispensers and consumers and has three specific objectives namely:

- Health: - To ensure the availability, accessibility and rational use of essential drugs to all citizens by means of informed decision making and individual responsibility for health by prescribers, dispensers and consumers,
- Economics: - To ensure affordable drug prices for both private and public health sectors and to explore public-private partnerships thereby optimizing scare resources to benefit all,

- National development: - To re-orientate and capacitate human resources with the knowledge and skill towards the NDP through both infrastructure and health personal capacitating on rational use, supply management and pharmaco economics (DoH, 1996).

Stemming from the aforementioned objectives, the NDP has ten key areas which are listed in Table 1 below.

Table 1 Ten key areas of the National Drug Policy

No.	Key area	Aim of key area	Overview of how key area will be achieved
1.	Legislation & regulations	Supply of safe and effective drugs	Strengthening the Medicines Control Council (MCC) i.e. drug and practitioner registration mechanisms
2.	Drug pricing	Safe ,cost effective drugs	Generic drug promotion and pricing systems in the public and private sectors
3.	Drug selection	Promote Essential Drugs concept	Essential Drugs List (EDL) and Standard Treatment Guidelines (STGs)
4.	Procurement & distribution	Safe, effective drugs for all peoples	Better use of resources in the public and private sector including public private partnerships
5.	Rational drug use	Informed profess-ionals & clients	Training, information and education based on good dispensing practices
6.	HR development	National implemen-tation of NDP	Strengthen drug management systems, improve quality of service in drug supply and quality
7.	Research & development	Monitoring & evaluation NDP	Best practices principles drug selection, procurement, distribution and attainment of the NDPs' objectives
8.	Stakeholders cooperation	Effective use of limited resources	Ongoing international and local technical cooperation is maintained and strengthened
9.	Traditional medicines	Safe, effective traditional medicines	Cooperation with traditional healers including "Codes of Practice"
10.	Monitoring & evaluation	Mechanisms in place for successful NDP implementation	DoH will coordinate, supervise, monitor and evaluate the implementation of the NDP

(DoH, 1996)

One of the tools to achieve the objectives of the NDP is the Essential Drugs Programme (EDP) which incorporates the STGs and EDL (DoH, 2003a).

The Essential Drugs concept facilitates effective health care, which requires a judicious balance of promotative, preventative, curative and rehabilitative services and includes guidelines on managing commonly found medical conditions from non-drug and drug perspectives at PHC level (DoH, 1998a).

In 1997, the Government of National Unity gazetted the White Paper for the Transformation of the Health System in South Africa which according to Siyaba & Muller (2000) emphasized a Primary Health Care (PHC) and District Health System (DHS) with the devolvement of certain provincial health services to a local level and more interaction with the private health sector (DoH, 1997). The aforementioned White Paper further noted that Occupational Health (OH) had to date been neglected and that the OH service was earmarked as a key priority of the Reconstruction and Development Programme (DoH, 2003c) and should be incorporated into local authorities (ANC, 1994).

The EDP was first actioned in the DoH STGs and EDL for Primary Health Care (1998), and has been adopted as the protocol to be followed when dealing with clients and initiating treatment protocols within the public sector (DoH, 1998a), with later guidelines being developed for both hospital and pediatric usage (DoH, 2004). To date the private sector has merely been encouraged to comply with these principles (DoH, 1998a).

Gazetted medical aid treatment algorithms and protocols have been introduced in the private sector from 2004 for the prescribed minimum benefits management of certain conditions (Government Gazette No 25537, 2003).

2.3 The Essential Drugs Programme concept

The first WHO Model List of Essential Drugs (now referred to as the WHO Model of Essential Medicines) was published in 1977 (HAI - Europe ,1998). By 1998, more than 50 countries had based their national drug policies on this WHO Model. The WHO Model of Essential Medicines list has been amended to suit individual countries/ organizational needs and currently, 140 countries utilize an Essential Drugs List (EDL) with the 14th version being approved July 2005 (WHO, 2005). South Africa is proud to be noted amongst the listed countries. The EDL operates on the premise that a "drug" is selected as an essential medicine based on its ability to be judiciously selected and used in order to benefit the majority of the relevant population bearing in mind the costs to consumers and country. By using a limited number of medicines and avoiding irrational resource usage, the EDP strives to reduce the costs of treating illness, the effects of drug resistance, side effects and to minimize drug related deaths (WHO, 2004).

Key features of the Essential Drugs Programme (EDP) include:

2.3.1 Access to Essential Medicines

Quick et al (2002) estimates that by 2015 the majority of over 10 million global deaths per year could have been avoided through access to essential medicines. Whilst reviewing 25 years of essential medicines, the report notes that an estimated third of the world's population lacks regular access to essential medicines (including vaccines and treatment for communicable diseases) with at least half of these being in Africa and South East Asia (Quick et al , 2002).

When launching the 14th WHO Model of Essential Medicines List (EML) in July 2005, the EML Committee noted that the WHO should urgently seek to identify resources both financial and technical to develop and implement strategic mechanisms in order that its member states have better and easier access to medicines (Bannenberg, 2005).

The DoH (2003a) cites the following criteria for the selection of a limited list of essential drugs based on the WHO guidelines for drawing up a national EDL, namely:

- Drug must meet the needs of the majority of the population
- Scientifically proven effectiveness and drug safety, risk/ benefit profile
- Drug of acceptable quality and ongoing quality control

- Drug ideally containing single pharmacologically active ingredients (in some cases two pharmacologically active ingredients are permissible)
- Use of generic name listing
- In cases of drugs being clinically equally effective, a comparison will be undertaken based on which drug fairs the best with regards to cost advantage, research, pharmacokinetic properties, patient compliance and reliable local supply source.

New additions to the list of essential medicines are encouraged, providing there is scientific evidence to support the changes.

2.3.2 Affordable medicine prices

The EDP aims to make drugs accessible to the entire population of a country for the most common ailments of that country at an affordable cost to the individual and the country (Health Systems Trust, 1996). The EDP addresses drug pricing by means of public health legislative and logistical frameworks (HAI-Asia Pacific, 2005a). The need for affordable drugs with relevance to chronic disease, and the health versus economic constraints coupled with a limited uptake of medical aid schemes continue to plague the health milieu and place a burden on both the private and public health system.

2.3.3 Rational use of medicines

Rational medicine use refers to clients receiving medication relevant to their diagnoses, in tailored doses and optimally prescribed so that costs are suited to the individual and

community (HAI-Asia Pacific, 2005b). It is estimated that more than half of all medicines prescribed, dispensed and sold globally are inappropriate, and half of the recipient clients do not comply with prescriptions The authors continue to note that irrational use of medicines includes over treatment of mild illness, inadequate treatment of serious illness, misuse of injections, self-medication of prescription drugs and premature interruption of treatment. By implication this irrational use of medicines refers to the activities of the prescriber, dispenser and the client (HAI-Asia Pacific, 2005b).

The WHO (2003a) notes that the irrational use of medicines is a widespread problem at all levels of health care, this sentiment is echoed by HAI Asia Pacific, (2005b) who highlight that the non-adherence to accepted prescribing clinical guidelines is a common type of irrational drug/ medicine use. HAI Asia Pacific (2005b) state that the consequences of irrational drug use include ineffective treatment outcomes, which can result in undesired health side effects, drug resistance, deterioration in health and even death. Examples of irrational use of medicines as listed by the WHO (2004) note that during 2000, 60% of antibiotics in Nigeria were inappropriately prescribed or not indicated and that the global figure for inappropriate antibiotic prescribing was estimated at 50%. Challenges of inappropriate prescribing are not limited to developing countries as Goulding (2004) notes that inappropriate prescribing based on clients getting at least one inappropriate drug occurred in 16.7 million doctor visits during 2000 in the United States of America with general and family practitioners more likely than internal medicine specialists to prescribe inappropriately.

According to Ramkisson et al (as cited in Health Systems Trust, 2004), a survey conducted amongst South African public health facilities revealed that the facility's most senior nurse was able only in a mere 41% of instances to correctly list the drug treatment for the 3 most commonly presenting Sexually Transmitted Infections (STIs). The lack of adherence to accepted treatment protocols and algorithms is not limited to communicable diseases and Meyer et al (2001) notes that irrational prescribing practices (those which do not stem from formal training), impact greatly on drug use and costs. There is mixed reaction to the use of the Essential Drugs List (EDL) with those in favor acknowledging the benefits derived from health care professionals working with a scientifically based standardized list of medications (Health Systems Trust, 1996).

2.3.4 Promotion of standard treatment guidelines/algorithms

Many first world countries including the Unites States of America and the United Kingdom have incorporated the experiences of the developing countries into their own essential medicine lists and clinical guidelines (Hogerzeil, 2004). During 1998 drug and non-drug management protocols (including guidelines on rational drug use), were developed in South Africa for use by both medical practitioners and registered nurses at public sector PHC level (DoH, 1998a). As of 2004, similar treatment algorithms and protocols have been gazetted for use by medical aid schemes in the prescribed minimum benefits management of certain conditions (South African Government, 2003). The DoH (1998: iiia) notes that the principles of the EDL include "… treatment will follow recommended standard treatment guidelines, which will specify both treatment and referral details" and furthermore,"...treatment … initiated at primary level, will be competency based and not

restricted to specific occupations". The use of the EDL will greatly promote drug safety and expand the scope of practice for competent individuals including OHNPs. The use of treatment protocols and algorithms is particularly crucial when dealing with communicable diseases and infections like Tuberculoses (TB) and Sexually Transmitted Infections (STIs). Poor control of STIs leads to drug resistance and the increased likelihood of HIV infection with co-infection of Tuberculosis (Ballard, 1995).

2.3.5 Drug safety

The WHO (2004) cites that in America, adverse drug events are estimated to be one of the six leading causes of death. Classic drug resistance (due to medicine misuse) is evident in chloroquine resistant malaria parasites in over 80 countries and globally, an approximate 98% of gonorrhea cases being penicillin resistant. HAI–Asia Pacific (2005b) notes the challenge of teaching medical students to be rational enlightened prescribers.

2.3.6 Sustainable financing

HAI Asia Pacific (2005a) notes that 25-65% of developing countries' total health budgets are spent on pharmaceuticals, but due to poverty, access to medication is limited thereby raising the need to address issues regarding the use of patents, drug pricing and negotiating public private initiatives. The use of EDPs as a means to improve the quality of health care outcomes has been documented by Hogerzeil (2004) which in turn leads to the effective and efficient use of resources including finances.

2.3.7 Reliable supply systems

One of the cornerstones according to HAI Asia Pacific (2005a), for ensuring that the citizens of a country have access to essential medicines is a reliable supply system. Measures noted by the aforementioned authors to ensure a reliable supply system include ensuring that the country's National Drug Formulary and Therapeutic Guidelines are based on the Essential Drugs concept. At a national level the country needs to remove overly rigid regulatory barriers including financial and customs obstacles which may prohibit easy access to these medicines. The harnessing of Public-Private Partnership Initiatives including the use of generic medications by means of a price control mechanism will improve a reliable medicines supply system (HAI Asia Pacific, 2005a).

2.4 The Essential Drugs Programme at South African primary care level

The National Drug Programme (NDP) strives to address inequalities in health care (DoH, 1997) and provides services for commonly encountered medical conditions at PHC levels (DoH, 2003a)

The EDP (the tool for implementing the NDP) objectives' include:

- To ensure the availability and accessibility of essential medicine to all citizens
- To ensure the safety, efficiency and quality of drugs
- To ensure good prescribing and dispensing practices

- To promote the rational use of drugs by prescribers, dispensers and clients through provision of the necessary training, education and information
- To promote the concept of individual responsibility for health, preventive care and informed decision-making (DoH, 2003a).

The objectives relating to informed decision making, training, education, promoting individual responsibility for health and rational use of medicines extends to prescribers, dispensers and clients. The guiding principles used by the National Essential Drugs List Committee in drafting the STGs for primary care included identifying prevalent presenting health conditions at PHC facilities where first contact health services were being rendered, and developing standard treatment/ referral regimens based on a health professionals' individual competency and not on their occupation (DoH ,2003a). The DoH (1996) notes that essential medicines will be provided free of charge at PHC service points.

The South African EDP was first actioned in the STG and EDL (1998) and has been enforced within the public sector (DoH, 1998a). Gazetted medical aid treatment algorithms and protocols have been introduced in the private sector from 2004 (South African Government, 2003). This will positively influence prescribing trends (at least in managing chronic conditions) by general and family practitioners.

During 2003 (using 1996 and 1998 surveys as a baseline), an EDP PHC impact survey was undertaken throughout South Africa. It was noted that 97% of South African PHC facilities had EDP books, with 90% of medicines being prescribed listed in the EDL. Furthermore, a reduction in the number of items being prescribed from 2.5 to 2.2 per client with a drop in

the number of injections being prescribed from 11% to 5% was noted. Some 86% of drugs found in 83% of dedicated dispensaries were from the EDL. On the whole, the findings when compared with the previous baseline surveys, reflected an improvement and were more in line with the EDP (DoH, 2003b).

The use of the South African EDP with its STGs and EDL can be viewed as a tool to guide prescribers based on individual competency and not on specific occupations (DoH, 1998a). Medicine misuse includes the inappropriate/ sub-optimal use of antimicrobials for non-bacterial infections, unscrupulous prescriptions, polypharmacy and lack of patient compliancy, all of which deprive clients of optimal medical benefits and increases the risk of drug reactions and resistance. At the 2003 EDP Impact Report Launch, the need to give greater attention to pharmacovigilance and the reporting of adverse drug reactions was reiterated (DoH, 2004).

In commenting on the monitoring of the implementation of the EDP within the Northern Province of South Africa, Summers (1999) isolates five factors as being pivotal to ensuring an effective drug supply system. These are:

- A National Drug Policy which directs and guides drug/ medicinal supplies
- Wise drug selection
- Effective resource management with resultant cost savings and enhanced performance
- Rational drug usage which entails more than just drug information
- Ongoing assessment and monitoring are essential.

Following the DoH's 2003 review of the impact of the South African EDP at PHC level, it has been shown that whilst implementing the NDP, and in order to ensure sustainability of the EDP, there is a need to capacitate both infrastructure and health personal in drug supply management. To this end, the Pharmaceutical Policy and Planning Cluster have developed/ refined tools to assist various government stakeholders in the provision of "…. adequate and reliable supply of safe, cost effective drugs of acceptable quality" (DoH 2003:7-11b). These tools are; criteria based selection of drugs, secondly, standard operating procedures for the distribution, storage and disposal of drugs, procurement through national coordination processes, and last but not least logistical systems. The implementation of these tools will be guided in conjunction with relevant medicines and pharmaceutical legislation.

2.5 Occupational Health Services

In 1950 the International Labour Office and the WHO suggested that the focus of OH services was on promoting and maintaining holistic health care for all workers in all occupations, preventing loss of health, protection from workplace risks and ensuring a "fit" between the employee and the environment . To this end in 1980 the WHO integrated PHC into OH (Hatting & Acutt, 2003). Jeebhay & Jacobs (1999) note that whilst South African OH services are poorly developed in comparison to international developments, the profession has developed in a variety of settings, both urban and rural, in response to the need to address developments in health and safety legislation, reduce absenteeism and improve productivity. As part of the African National Congress's Health Plan, OH services

were identified for incorporation into local authorities (ANC 1994) but according to Geyer, (2001) most OH services are still situated in the private sector.

An investigative report into OH services was produced during 1996 titled the Abdullah Report, which in addition to highlighting the legislative and statutory agencies in the delivery of South African OH services, profiled the services being rendered for occupational injuries and diseases (DoH, 2003c). Based on an assessment of the OH services setting, the Abdullah Report made proposals for improving and sustained OH services and delineating the role of the Department of Health at National, Provincial and District levels (DoH, 2003c). The White Paper for the Transformation of the Health System in South Africa (1997) highlights the need to develop both OH services and human resources. Furthermore the White Paper specifies that the employer is legally and financially bound to provide OH services (DoH, 1997). Current OH services typically strive to provide a holistic safety / health and environmental service to employees focusing on Occupational Hygiene, OM and OH Nursing (Hatting & Acutt, 2003).

2.5.1 Occupational Hygiene

Occupational Hygiene as a discipline (usually the domain of engineers and safety practitioners) is an art and science devoted to the anticipation, recognition, evaluation, prevention and control of those environmental factors or stressors arising in or from the workplace which may cause sickness, impaired health and well being, or significant discomfort amongst workers in the workplace or members of the community (South African Government, 1993). Environmental factors may include chemical, physical or

biological agents, whilst stressors may include excessive noise, vibrations, organic or inorganic vapors and ergonomic factors. Occupational hygienists focus on qualitative exposure assessments, which are then quantified in order to determine individual doses of exposure to environmental or stressor factors (Hatting & Acutt, 2003).

2.5.2 Occupational Medicine

Occupational Medicine (OM) focuses on the individual and the workplace and emphasizes health promotion/ prevention of illness, early recognition of disease, treatment and rehabilitation. The discipline is tasked with health screening/ placement, medical surveillance, and emergency care and is practiced by suitably qualified OM Practitioners and OHNPs (Hatting & Acutt, 2003). Historically medical practitioners have been seen as the custodians of health care and within OH services the OMP, (who has a specialization in occupational medicine) is viewed as head of the OH service (Hatting & Acutt, 2003). This practitioner is often employed on a sessional basis depending on the number of organizational employees (Murphy, 2002).

2.5.3 Occupational Health Nursing

An OH Nursing programme is typically coordinated and implemented by an OHNP who usually holds a qualification in OH as recognized by the South African Nursing Council as referred to in the Nursing Act, 1978 (South African Government, 1978), i.e. a Registered Nurse with a qualification in OH Nursing Science.. In addition to strategic planning and administrative tasks, the OHP has an implementation role of medical surveillance, health

promotion, client consultations (primary health, acute and chronic disease) and dispensing medications, counseling, workplace, inspections and dealing with workplace emergencies (Hatting & Acutt, 2003). The ultimate aim of OH services is the prevention of occupational induced illness or disease and often includes a PHC service which aims to benefit both the organization and its employees.

2.6 Primary Health Care in Occupational Health services

During 1994 South Africa in striving towards its National Health System, added OH services along with mental and emergency health to the elements of PHC services. The suggested basic basket of services for PHC within OH settings are: health education, early diagnosis accompanied by treatment of common diseases and injuries, provision of essential medicines, maternal / child health, immunization, control of local endemic diseases, community psychiatric services and basic rehabilitation services (Denill et al , 2000); (Hatting & Acutt, 2003).

An ideal comprehensive Occupational Health service includes the following components as indicated in Table 2.

Table 2 Components of an ideal comprehensive Occupational Health service

Component	Description
Wellness promotion	Medical/ health surveillance, personal responsibility for health and combating absenteeism
Occupational injuries and disease	Risk monitoring in the workplace and prevention of injuries and disease

Component	Description
Provision of clinical services	Emergency care, urgent PHC and monitoring of chronic conditions
Occupational hygiene	Identify, recognize, reduce, monitor and evaluate hazards
Consultation services	OH service advices management and other stakeholders on workplace matters
Administration	Develop/ maintain information management system
Research	OH services research and develop new trends
Special Programmes	Chronic diseases of lifestyle i.e. HIV/Aids
Employee Assistance Programme	Holistic employee wellness by means of work, personnel, psychosocial and health (including HIV/Aids support work).

(DoH, 2003c)

On-site PHC strives to ensure healthy, motivated and productive employees and reduces the costs to both employer and employee and this is especially important as medical aid subscriptions may often be out of financial reach of most middle to lower income employees.

In South Africa most OH services provide a model of PHC to their employees which according to Hatting & Acutt (2003:14), "should not take up more than 20% of the OHNPs time". Jeebhay & Jacobs (1999) note that when comparing surveys done in the 1980's and 1990's OH service provision patterns had not changed much with the main focus remaining on safety and general primary health. They further note that surveyed OHNPs estimated that only 44% of their work day was spent on OH with the remainder being devoted to primary curative service delivery. PHC (as per the Declaration of Alma-Ata 1978) advocates an approach to essential health care based on scientifically sound principles and technology including universally available equitable access to and participation in services, affordability of services to both individuals and communities.

2.7 Medicine usage in Occupational Health services

Despite an extensive desk top literature search on medicine use within the OH settings the researcher was only able to source one study carried out by the South African Municipal Workers Union (SAMWU) on 38 municipal clinics. This study noted that there was limited adherence to legal requirements and that treatment protocols and policies were absent with regards to Occupational Health and Safety (Pointer, 2005). In the absence of other literature, the researcher assumes that these findings could therefore be applied to the OH setting which often incorporates an element of PHC.

The WHO (2003b) notes the following as contributing to the irrational use of medicines:

- Firstly the prescriber's acquired habits and cultural beliefs
- Secondly the client's demands versus the amount of authority and supervision afforded the prescriber
- Thirdly the workplace milieu and relationships with peers
- Fourthly the workload and staffing
- Last but not least, the access to unbiased information and genuine knowledge deficits.

The Institute for Safe Medical Practice (2005) highlights the stigma still attached to the use of hospital/ public formularies. This stigma is not uncommon to other health practice settings (including the OH milieu) and is comparable to those recorded 15 years ago.

Typical retorts when addressing the use of formularies include “the specialist knows best” and will not be dictated to by a formulary on suggested medicines which hinders the personal choice of the prescriber. Other noted misconceptions include prescribing drugs based on own practice experience, patient “uniqueness”, the notion that newer drugs are seen as “better” and lastly the drug cost/ economics. In keeping with the PHC approach to health care in South Africa, nurses are at the frontline of the health care service provision and in order to better equip them for the role of clinical nurse practitioner, rational drug prescribing training programmes were initiated during 1996 in South Africa (Health Systems Trust, 1997).

In an attempt to address the ongoing challenges of the rational use of drugs, Orrel in Health Systems Trust (1999) notes that training should include the following core content principles namely; rational prescribing/ dispensing, use of the EDL, drug indicators and stock management. Orrel further notes that in the absence of leadership directives, it is impossible to attain and maintain ideal drug use patterns.

With reference to the OH setting, Hatting & Acutt (2003:253) note the need for treatment protocols for “the more common or sensitive conditions in the OH PHC setting” and the regular update of the OHNP regarding the drug and non-drug management of various conditions. The use of treatment protocols and algorithms is recommended within the OH milieu but not compulsory (Murphy, 2002).

2.8 Legislative framework for medicines in Occupational Health settings

The Occupational Health Nurse Practitioner's (OHNP's) scope of practice has traditionally been governed by two specific acts firstly the Nursing Act 50 of 1978 section 38A as amended and secondly the Medicines and Related Substances Control Act 1965 (Act No 101 of 1965), Section 22A (12) as amended. Historically medical practitioners have been seen as the custodians of health care and within Occupational Health (OH) services the Occupational Medical Practitioner (OMP) is often viewed as the head of the service (Hatting & Acutt, 2003). The OMP is often employed on a sessional basis depending on the number of organizational employees (Murphy, 2002). Most OH services are situated within the private sector (Geyer, 2001).

The first act that governed the OHNP's scope of practice is the Nursing Act 50 of 1978 section 38A which allowed a Registered Nurse in the course of his/her employ to physically examine and diagnose any physical defect, illness of deficiency in a person if the services of a Medical Practitioner or Pharmacist were not available. In terms of this act, the Registered Nurse may keep, prescribe and supply medication provided that he/ she is in the employ of the Department of Health or a Provincial/ Local Authority or a health service designated by the Director General (South African Government, 1978) .

The second act governing the OHNPs scope of practice is the Medicines and Related Substances Control Act 1965 (Act No 101 of 1965), Section 22A (12) as amended, with regards to medicines. The challenge with the second piece of legislation is that a Registered

Nurse is not permitted (outside of the public services) to diagnose or prescribe. The solution lay in a special proviso which authorized the OHNP under very strict conditions to dispense medication based on guidelines as approved by the OMP, provided that the OMP remained ultimately accountable (South African Government, 1965). The origin of these guidelines may have included elements of the EDL.

Some of the provisos included:

- The OMP had to visit the OH clinic weekly
- The OMP had to sign off all prescribed scheduled medications
- Registers had to be kept for all scheduled medicines
- A very limited formulary was kept from which medicines could be used in OH clinics
- The OMP had to formally authorize the OHNP in writing to perform the diagnosing, prescribing and dispensing in his absence
- The OHNP's employer had to apply to the Department of Health for a permit for said medicines and this was issued subject to inspection of said premises and pharmacy practices (South African Government, 1965).

As of May 2003 all OHNPs (who are required to dispense medication) have been required to undergo competency training in order to be issued with a Dispensing License thereby enabling the Department of Health to monitor dispensing including OHNPs. Those OHNPs

without a dispensing license may only issue a “stat” or once off dose of medication (Michell, 2004).

The National Drug Policy (NDP) according to Gray (2004) is very clear on two issues regarding prescribing and dispensing namely; were medicines may be dispensed and by whom and secondly, that prescribing at a primary health care level will be done on a competency basis and not occupation based. This further implies the development and implementation of regulations guiding uniform standards with regards to dispensing to accommodate local conditions and the requirements of rational, effective and safe drug supply. When addressing the issue of competency, it is noted that in order to be competent, both prescribers and dispensers will need to be suitably empowered and legitimized in terms of the licensing legislation.

The ultimate aim of OH services is the prevention of occupational induced illness or disease and often includes a PHC service. The author of this research study was initially employed as a PHC Nurse Practitioner and later as an OHNP within the Buffalo City Municipality. On making the transition from PHC to OH, he noticed that the EDP principles were not actively adhered to within OH. Given the erstwhile historical focus of OH on preventing occupational induced illness or disease, treatment interventions seemed to be based on prescriber preferences and financial constraints which in turn could contribute to poly-pharmacy, non-standardized protocols and stocking of expensive medicines. It is the viewpoint of this study’s author that within the realms of OH very little attention or adherence is given to the EDP principles.

The researcher then decided to determine the challenges of implementing the EDP into OH settings within the Port Elizabeth and East London geographical areas.

2.9 Conclusion

This chapter notes the transformation within the South African health system and the strong emphasis on the Essential Drugs Programme (EDP) concept at Primary Health Care level. Despite this, within the realms of Occupational Health practice the EDP concept and its guiding principles (including EDL treatment protocols and algorithms) are not formerly embraced. Chapter 3 will detail the research design and methods utilized in this study.

CHAPTER 3

Research design and method

3.1 Introduction

In chapter 3 the researcher will detail the research design and method used in the research study. The chapter will discuss sampling strategies applied to the study population, as well as the research processes followed during data collection and analysis in order to ensure that the study produces trustworthy data which can be verified and which is meaningful to academic processes.

3.2 Aim of the study

The aim of this study was to determine the challenges of implementing the Essential Drugs Programme into Occupational Health settings in the Port Elizabeth and East London areas.

3.3 Objectives of the study

In order to achieve the aforementioned aim, the following objectives were formulated which aimed to:

1. Describe the demographics of the Eastern Cape Occupational Health Practice.
2. Establish the current use and origin of treatment protocols by the Eastern Cape Occupational Health Nurse Practitioners within their practice milieu.
3. Determine current drug cost containment practices being implemented by Eastern Cape Occupational Health Nurse Practitioners.
4. Establish the current knowledge and attitudes of Eastern Cape Occupational Health Nurse Practitioners situated in a variety of industries within the Port Elizabeth and East London geographical areas, with regards to the Essential Drugs Programme.
5. Identify real and perceived factors which inhibit or promote implementation of the Essential Drugs Programme within the Occupational Health settings in Port Elizabeth and East London.
6. Make recommendations to the Eastern Cape District Health Management Team and the South African Society of Occupational Health Nursing Practitioners (SASOHN) with regards the implementation of the Essential Drugs Programme into Occupational Health Services.

3.4 Study design

The researcher chose a non intervention descriptive - analytical study design using a cross-sectional survey in order to determine the current practices and knowledge of the Eastern Cape OHNPs with regards to the EDP, and to measure the various internal and external factors influencing the implementation of the EDP into their OH services.

Burns & Grove (2001) note that the aim of a cross-sectional survey design is to examine groups in various stages of development simultaneously (a snapshot as it were). Babbie (1992) notes that an exploratory study is undertaken when the researcher desires a better understanding of the subject matter in question and where recommendations are deliberately sought to be developed from the study. In this case the knowledge base of OHNPs with regards to the EDP will inform intervention strategies for the implementation of the EDP into OH services.

3.5 Population and sampling

The study population/ study sample was identified as being the 70 OHNPs registered on the SASOHN Eastern Cape database as maintained by the Secretary and who were employed in the Port Elizabeth and East London urban and peri-urban geographical areas. The researcher had intended to engage all attendees at the August and September 2005 branch meetings and invite them to participate in the study in order to further increase the sample size. OHNPs not present at the meetings were to have electronic questionnaires forwarded to them or in instances of no access to e-mail, a self addressed stamped questionnaire. If indicated, the researcher would have (bearing in mind anonymity) followed up the study sample with a reminder telephonic call or postcard after a two week non-return time period thereby encouraging participation in the study (Burns and Grove, 2001).

3.6 Data collection methods

Following a literature review and in consultation with his study supervisor and experts in the field, the researcher developed the semi-structured self-administered "Questionnaire For Occupational Health Nurse Practitioners". The questionnaire focused on the demographics of the OHNPs, their practice milieu and their insight into the EDP and the real or perceived challenges/ opportunities with regards to implementation of the EDP within their OH Services. The questions required both structured and attitudinal responses and strived to obtain data of both a qualitative nature namely attitudes of OHNPs towards the implementation of the EDL and of a quantitative nature namely qualifications and professional knowledge. Making use of a semi-structured self-administered questionnaire allowed responses to be gathered on common factors and open ended questions provided an opportunity to explore pertinent areas in response to some questions (Chopra & Clifford, 2000).

Five pilot questionnaires were forwarded to the Port Elizabeth and East London branch office bearers and no changes were made to the questionnaire format and the attached Addendum 1 - "Questionnaire For Occupational Health Nurse Practitioners" was finalized.

The researcher requested the SASOHN Eastern Cape Secretary via the Chairperson to circulate an e-mail to all SASOH Eastern Cape members prior to the identified meeting dates, detailing the study and requesting their participation in the process. OHNPs were

further requested via the same email to bring their OH clinic stats for the current year to the identified meetings, in order to assist with the meaningful completion of the questionnaires.

The researcher couriered the questionnaires to Port Elizabeth. At the Port Elizabeth August 2005 meeting when attendees were invited to participate in the study, the consensus was that the questionnaire was too long and that respondents would rather complete the questionnaire at their convenience and return completed questionnaires to the researcher. The same sentiments were raised at the East London September 2005 meeting.

Stemming from this, the researcher initiated telephonic contact with the SASOHN Eastern Cape database members in order to canvass respondents for the study (including those in attendance at the branch meetings). Those indicating a willingness to participate in the study had a questionnaire forwarded to them either electronically or per facsimile if they were not already in possession of a hard copy questionnaire as circulated at the branch meetings. In order to increase study participation, given the poor response to circulated questionnaires at the SASOHN Eastern Cape meetings and to monitor the number of completed questionnaires per branch, the researcher requested OHNPs to write their names on the front page of the completed questionnaire. On submission of the questionnaire, the front page of the questionnaire was discarded and respondent's names were checked off the supplied database.

Each potential respondent was canvassed to a maximum of three times (or until a completed questionnaire was returned by them), over a period of one month with the aim of maximizing participation in the study.

3.7 Data handling

All the raw data from the self-administered questionnaire was processed by the researcher using the Survey Gold Version 6.4 software package and a Windows XP Professional Excel spread sheet.

3.8 Data analysis

Closed-ended question responses were analyzed using nominal scales into mutually exclusive categories for example the OHP demographics, their knowledge base with regards the implementation of the EDP and the various internal and external factors impacting on the implementation of the EDP into OH Services. Open-ended question responses were analyzed using post coding prior to entering data. The study data was cleaned by means of initial frequency and looking for missing and out of range values.

3.9 Validity and reliability

3.9.1 Questionnaire

The questionnaire was developed by the researcher who was an OHNP in consultation with his study supervisor who was an expert in the EDP. The content of the questionnaire was based on EDP - SA National Impact Survey 2003 (DoH, 2003b) in conjunction with the Department of Health Standard Treatment Guidelines and Essential Drugs List - Primary

Health Care 2003 (DoH, 2003a). Copies of the questionnaire were forwarded to the SASOHN National Executive Committee for inputs. Feedback and responses to the questionnaire were assessed for possible tool flaws. In order to improve the reliability of the data, OHNPs were requested to bring copies of their monthly OH clinic statistics or an annual OH report to the meeting at which the questionnaire was to be completed

3.9.2 Sample

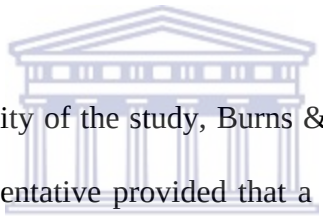
The study sample was the SASOHN Eastern Cape database of all the Port Elizabeth and East London urban and peri-urban OHNPs (approximately seventy in total). Membership of SASOHN is encouraged but not mandatory for OHNPs. It was therefore not possible to get an accurate estimate of all the OHNPs in the Port Elizabeth and East London areas. All Eastern Cape SASOHN attendees at the August and September 2005 monthly branch meetings held in Port Elizabeth (on average 25 monthly attendees) and East London (on average 11 monthly attendees) were invited to participate in the study. By having access to the SASOHN Eastern Cape database, the researcher was able to telephonically contact those SASOHN members who were not present at the meetings in order that electronic questionnaires could forwarded to them or in instances of no access to e-mail, a self addressed stamped questionnaire.

3.9.3 Data management

The researcher had planned to check completed questionnaires and follow up any queries on site at the OHNP monthly meetings in order to ensure the form's completeness.

However, due to the willingness of the OHNPs to complete the questionnaire at their leisure, the returned forms were often not fully completed and this is acknowledged as a limitation to the study. Answers from the open ended questions were post coded using a Survey Gold software package and an Excel master sheet. The supervisor examined a sample of the questionnaires to check the post-coding and a 10% sample of questionnaire hardcopies was directly checked with the data entered. As no errors were detected, it was assumed that data entry was reliable. The reliability of the study was increased by means of data cleaning using initial frequencies and looking for missing and out of range values.

3.10 Generalisablity



When assessing the generalisability of the study, Burns & Grove (2001) cite that a sample could be viewed as being representative provided that a high response rate of >50% was achieved. The response rate to this study was 47% and should therefore be interpreted with caution to the generalisability of the Eastern Cape OHNP sample.

3.11 Ethics

Permission to carry out this study (in partial fulfillment of a Masters in Public Health Degree) was obtained from the Ethics Committee of the University of the Western Cape. The SASOHN National Executive Committee granted permission for the use of the SASOHN Eastern Cape database as the study sample, and granted the researcher access to the SASOHN Eastern Cape database (members' contact details). This enabled the researcher to maximize the greatest number of respondents from the sample. The

SASOHN Eastern Cape database was forwarded electronically by the Secretary with the researcher being made aware of the confidentially issues surrounding the database. OHNPs participating in the study were informed of the purpose of the study and that participation was voluntary, without coercion and withdrawal from the study was permitted at any stage without giving a reason indicating their unwillingness to proceed with the study. Confidentially and anonymity was assured.

The SASOHN Eastern Cape Chairperson was requested to allow the research to be undertaken within the Port Elizabeth and East London branches and to permit the allocation of time on meeting agendas for the completion of the questionnaire.

Respondents were requested to indicate their name on the front page of the questionnaire. On receipt of the questionnaire by the researcher, respondent's names were entered onto the supplied database checklist and once checked off the study sample list, the front page was then discarded thereby ensuring that the completed questionnaire was now anonymous and all findings were automatically confidential.

3.12 Limitations/assumptions

The study was limited to OHNPs either known by and/ or registered on the SASOHN Eastern Cape database and this study may be biased in this regard as SASOHN members may be enthusiastic and dedicated to professional growth and development. Membership of SASOHN is encouraged but not mandatory for OHNPs. It was therefore not possible to obtain an accurate total of the number of OHNPs in the Port Elizabeth and East London

areas. The membership of SASOHN was not limited to OHNPs but also included Affiliate Members (individuals employed in other fields with an interest in OH e.g. Audiometerists). The six SASOHN Eastern Cape database Affiliate Members were automatically excluded from the sample.

The fact that within the Eastern Cape Province there is only one OH Nursing Science training institution which is situated in Port Elizabeth may lead to bias and potentially weaken the study.

Further limitations included the willingness of OHNPs to complete the questionnaire at their leisure and not at the monthly Port Elizabeth and East London OHNP meetings as planned. The reasons given to substantiate the completion of the questionnaire in their own time related to limited time constraints of OHNPs attending the monthly meeting and the length of the questionnaire. The faxed or electronically returned questionnaires were often not always fully completed and the researcher acknowledges that this may influence the findings. The accessibility of OHNPs was also a limitation given that the OHNP often has very limited administrative time and was not always willing to engage in research related telephonic conversation topics given the pressures of the practice milieu. To this end each potential respondent was canvassed by the researcher to a maximum of three times over a period of one month or until the completed questionnaire was received.

All data was self reported by the OHNPs and not verified by the researcher. Certain limitations may have presented with the reliability of the statistical data in, pertaining to the classification or categorization of OH clinic attendees (namely the prime reason for

consulting of the OHNP) if the data was not readily on hand. The researcher has (in view of the greater response rate anticipated when administering the questionnaire at the OHNP meeting) acknowledged that the accuracy of these figures was not critical to the study and has conceded to accept the figures as presented by the questionnaire respondents.

3.13 Conclusions

Chapter 3 discussed the research design and method followed for this study. In Chapter 4, the researcher will present the findings as collated from the questionnaires.

CHAPTER 4

Results

4.1 Introduction

In chapter 4 the researcher will present the study findings of the sampled Occupational Health Nurse Practitioners (OHNPs) registered with the South African Society of Occupational Health Nursing Practitioners (SASOHN) Eastern Cape situated in the Port Elizabeth and East London geographical areas.

4.2 Demographics

The total study population as listed on the SASOHN Eastern Cape database was 70 members. The sampled response rate was 33 (47%) with 19 (57.58%) being based in East London and 14 (42.42%) in Port Elizabeth. Not all returned questionnaires were fully completed and this was duly indicated when reporting the results. The gender distribution of respondents was 31 (93.93%) female and 2 (6.06%) males. Of the 31 (93.96%) female respondents, the majority 19 (57.57%) were between 41-60 years of age.

Table 3 Qualifications of Occupational Health Nurse Practitioner respondents (N=33)

		Post Basic Occupational Health (OH) qualification				Respondents %
		Certificate	**Degree**	**Diploma**	**No formal OH qualification**	
Basic nursing qualification	3 Year Diploma	15 (45.45%)	3 (9.09%)	4 (12.12%)	3 (9.09%)	25 (75.76%)
	4 Year Diploma			1 (3.03%)		1 (3.03%)
	4 Year Degree	3 (9.09%)		1 (3.03%)	3 (9.09%)	7 (21.21%)
Total		**18 (54.54%)**	**3 (96.09%)**	**6 (18.18%)**	**6 (18.18%)**	**33 (100%)**

Table 3 highlights that the Occupational Health Nursing Certificate was the most common qualification, 18 (54.55%) with 15 (45.45%) of these respondents being in possession of a 3 Year Nursing Diploma qualification. Twenty-one (63.63%) of the respondents have been an Occupational Health Nursing Practitioner (OHNP) for less than 10 years, 8 (24.24%) for 11-20 years, and 4 (12.12%) for more than 21 years.

4.3 Organizational setup

The automobile-manufacturing and related industries was the most common employing industry indicated by the sampled OHNPs namely 16 (40%). The sampled OHNPs were in the majority of cases supervised by Human Resources personnel, 16 (48.48%) whilst 12

(36.36%) were supervised by Safety, Health and Environment personnel. When questioned as to the presence of OHNP colleagues within the organization, 11 (33.33%) respondents indicated that they had OHNP colleagues, with the average number of colleagues being six. It must be noted that the question did not differentiate whether colleagues were within the same physical setting, region or nationally. Occupational Health (OH) clinics (N=26) varied in size as did the total number of organizational employees to whom the OH service was rendered and responses ranged from 60 – 3200 employees.

Table 4 Average Occupational Health clinic attendances for 2005

Reason for OH clinic attendance	**Average monthly attendance**
Primary Health Care (N=25)	530
Medical Surveillance including clinical examinations and medical screening (N=25)	88
Chronic Diseases including Hypertension, Diabetes and Asthma (N=23)	68
Injuries on Duty (N=23)	22
Other (N=15)	47

Table 4 notes the average Occupational Health clinic attendances for 2005. When asked to elaborate on the 47 OH clinic attendances listed as "other" in the Table, respondents indicated that 9 (47.36%) were attributable to psychosocial counseling and 7 (36.84%) to reproductive health including contraception and HIV/Aids.

The OHNP respondents (N=24) indicated that their OH clinic statistics were utilized in 23 (95.83%) of the cases as the data source for determining the average monthly OH clinic attendance during 2005.

4.4 Current practice guidelines

Twenty-four (88.88%) respondents indicated that they adhered to treatment protocols for commonly found medical conditions, minor ailments and emergencies.

Table 5 Primary origin of guidelines being implemented in Occupational Health settings (N=24)

Guideline origin	Respondents	%
Medical Practitioner	12	50%
Department of Health but not Essential Drugs Programme	2	8.33%
Essential Drugs Programme	2	8.33%
Self sourced in literature	3	12.5%
Other including company polices	5	20.83%
Total	**(N= 24)**	**100%**

Table 5 indicated that guidelines originated from a variety of sources with the Medical Practitioner being the primary source (50%). When questioned on the availability of specific guidelines within their OH clinic milieu and their reported adherence thereto, the OHNPs provided the following responses:

Table 6 Guidelines in Occupational Health clinics

Guidelines	Available in clinic	Adhered to in clinic
National Government Tuberculosis Guidelines	15 (55.55%) **(N=27)**	16 (69.56%) **(N=23)**
National Government HIV & Aids and Opportunistic Infections Management Guidelines	10 (38.46%) **(N=26)**	11 (55%) **(N=20)**
National Government Syndromic Approach to Management of Sexually Transmitted Infections Guidelines	15 (55.55%) **(N=27)**	15 (68.18%) **(N=22)**

According to Table 6, the National Government HIV & Aids and Opportunistic Infections Management Guidelines were the least available and least adhered to at OH clinics.

In addition to having Chronic Disease Management Guidelines for Hypertension, Diabetes and Asthma, (N=10) 6, (60%) respondents in the "other" guidelines column indicated Epilepsy Guidelines.

OHNPs indicated that in general, non-adherence to National Department of Health Guidelines was as a result of clients being referred to external public or private service providers, and included clients adhering to medical aid scheme funded Medical Practitioner initiated treatment guidelines.

4.5 Occupational Health practice milieu

Respondents (N=24) were requested to list the five most commonly presenting conditions at their Occupational Health clinic. A total of (N=116) responses were collated and grouped according to number of responses as shown in Table 7 with the highest number of responses being 36.

Table 7 Most commonly presented conditions at the Occupational Health clinic (N=116)

Conditions & chapter in *DoH STG/EDL PHC 2003	Responses %
Signs and symptoms – Chapter 18	36 (31.03%)
Respiratory conditions – Chapter 15	22 (18.96%)
Gastro-intestinal conditions – Chapter 2	17 (14.65%)
Ear, nose and throat conditions - Chapter 17	11(9.48%)
Cardiovascular conditions – Chapter 5	6 (5.17%)
	(N=116)

***Department of Health Standard Treatment Guidelines and Essential Drugs List – Primary Health Care 2003**

It is noteworthy that the most commonly presenting condition at the sampled OH clinics was in fact classified as signs and symptoms 36 (31.03%). It is this very approach which the Department of Health Standard Treatment Guidelines and Essential Drugs List – Primary Health Care 2003 seeks to harness through the use of treatment algorithms and standard treatment guidelines. Given the wide range of number responses and that the lowest response number was six, the table and subsequent findings need to be interpreted with some caution.

When collating the findings regarding adherence to the Department of Health Standard Treatment Guidelines and Essential Drugs List – Primary Health Care 2003 within the OH practice, the researcher adhered very strictly to the drug treatment guidelines and no drug treatment deviation was allowed. The details of the five most commonly presenting conditions at the Occupational Health clinic follow in the underlying section but as stated earlier, need to be interpreted with some caution due to the broad range of responses.

Table 8 Signs and symptoms presenting at the Occupational Health clinic

		Adherence to * DoH STG/ EDL PHC 2003 Guidelines				
		Res-pondents %	Non-drug treatment guidelines adherence		Drug treatment guidelines adherence	
			Yes	No	Yes	No
Commonly presenting signs and symptoms at clinic	Cough	7 (6.03%)	2 (1.72%)	5 (4.31%)	4 (3.44%)	3 (2.58%)
	Pain	17 (14.64%)	13 (11.20%)	4 (3.44%)	3 (2.58%)	14 (12.06%)
	Headache	9 (7.75%)	6 (5.17%)	3 (2.58%)	7 (6.03%)	2 (1.72%)
	Itching (pruritis)	3 (2.58%)	2 (1.72%)	1 (0.86%)		3 (2.58%)
	Total number of respondents	**36 (31.03%)**	**23 (19.82%)**	**13 (11.20%)**	**14 (12.06%)**	**22 (18.96%)**

***Department of Health Standard Treatment Guidelines and Essential Drugs List – Primary Health Care 2003**

In Table 8, headaches were listed by (N=9) respondents as a commonly presenting condition at the OH clinic, and the non-drug and drug guideline adherence was almost equal for this condition. The Department of Health Standard Treatment Guidelines and Essential Drugs List – Primary Health Care 2003 has a number of flow diagrams which (and not surprisingly) also include a dedicated headache flow diagram.

Table 9 Respiratory conditions presenting at the Occupational Health clinic

		Adherence to * DoH STG/ EDL PHC 2003 Guidelines				
		Res-pondents %	Non-drug treatment guidelines adherence		Drug treatment guidelines adherence	
			Yes	No	Yes	No
Commonly presenting Respiratory conditions at clinic	Colds/Flu	20 (17.24%)	13 (11.20%)	7 (6.03%)	1 (0.86%)	19 (16.37%)
	Tuberculosis	1 (0.86%)	1 (0.86%)		1 (0.86%)	
	Asthma	1 (0.86%)	1 (0.86%)			1 (0.86%)
	Total number of respondents	**22 (18.96%)**	**15 (12.93%)**	**7 (6.03%)**	**2 (1.72%)**	**20 (17.24%)**

***Department of Health Standard Treatment Guidelines and Essential Drugs List – Primary Health Care 2003**

The majority 20 (17.24%), of respiratory conditions as listed in Table 9 which present at OH clinics, were classified as colds/ flu. Whilst 13 (11.20%) of respondents indicated appropriate non-drug treatment guideline adherence, a disturbingly high 19 (16.37%) of respondents did not adhere to the drug treatment guidelines.

Table 10 Gastro-intestinal conditions presenting at the Occupational Health clinic

		Adherence to * DoH STG/ EDL PHC 2003 Guidelines				
		Res-pondents %	Non-drug treatment guidelines adherence		Drug treatment guidelines adherence	
			Yes	No	Yes	No
Commonly presenting Gastro-intestinal conditions at clinic	Diarrhea	5 (4.31%)	5 (4.31%)			5 (4.31%)
	Abdominal pain	10 (8.62%)	8 (6.89%)	2 (1.72%)	5 (4.31%)	5 (4.31%)
	Constipation	2 (1.72%)	2 (1.72%)		1 (0.86%)	1) (0.86%)
	Total number of respondents	**17 (14.65%)**	**15 (12.93%)**	**2 (1.72%)**	**6 (5.71%)**	**11 (9.48%)**

***Department of Health Standard Treatment Guidelines and Essential Drugs List – Primary Health Care 2003**

In Table 10 respondents indicated a higher gastro-intestinal non-drug treatment guidelines adherence of 15 (12.93%) as opposed to adherence of 6 (5.71%) to the drug treatment guidelines. Particularly noteworthy was the use of antidiarrheal agents reflected by all respondents, which are not in line with aforementioned drug guidelines.

Table 11 Ear, nose and throat conditions presenting at the Occupational Health clinic

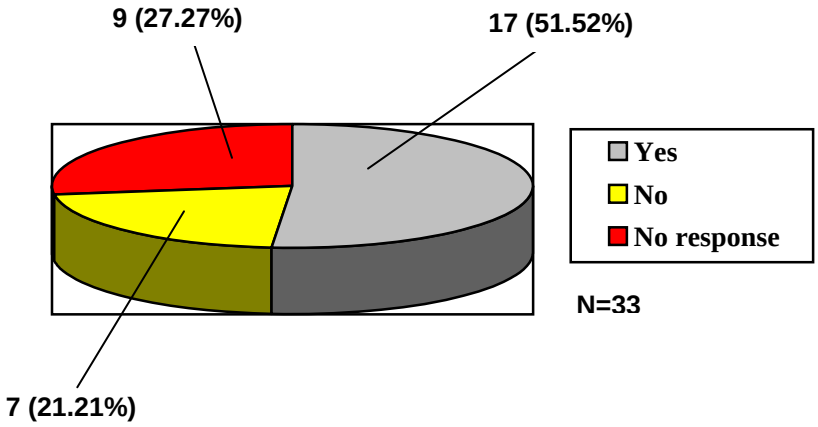
		Adherence to * DoH STG/ EDL PHC 2003 Guidelines				
		Res-pondents %	Non-drug treatment guidelines adherence		Drug treatment guidelines adherence	
			Yes	No	Yes	No
Commonly presenting ear, nose and throat conditions at clinic	Pharyngitis-viral	5 (4.31%)	3 (2.58%)	2 (1.72%)		5 (4.31%)
	Otitis Media	1 (0.86%)		1 (0.86%)		1 (0.86%)
	Rhinitis	1 (0.86%)		1 (0.86%)		1 (0.86%)
	Sinusitis	4 (3.44%)	4 (3.44%)			4 (3.44%)
	Total number of respondents	**11 (9.48%)**	**7 (6.03%)**	**4 (3.44%)**		**11 (9.48%)**

***Department of Health Standard Treatment Guidelines and Essential Drugs List – Primary Health Care 2003**

None of the respondents in Table 11 adhered to the ear, nose and throat drug treatment guidelines. The use of decongestants in treating sinusitis was noted by all respondents, which is not in line with the drug guidelines.

The results for cardiovascular conditions and adherence to the Department of Health Standard Treatment Guidelines and Essential Drugs List – Primary Health Care 2003, with reference to Hypertension indicated that all 6 (5.17%) respondents were adherent to non-drug and drug treatment guidelines.

Figure 1 **Number of Occupational Health clinics with a drug limit per client prescription (N=33)**



Seventeen (51.52%) of OHNPs indicated that they limited the number of drugs prescribed per client attendance at the OH clinic. Repondents indicated an average 2.8 medicines being prescribed for the OH clinic attendees reporting with colds/ flu.

The vast majority, 22 (84.61%), of the (N=26) respondents reported that they did not experience any challenges relating to drug availability within their OH clinic setting arising from supplier problems, exhausted medicine budget or failing to order in time.

4.6 Essential Drugs Programme

Seven (21.21%) of the respondents indicated that they had a copy of the National Drug Policy (1996), whilst 17 (51.52%) indicated a copy of the Department of Health Standard Treatment Guidelines and Essential Drugs List – Primary Health Care 2003 within their OH settings, and 16 (48.48%) indicated an adherence to the latter document's principles.

Table 12 Respondents' awareness of National Drug Policy's objectives

	Awareness of objectives		
	Yes	**No**	**Unsure**
National Drug Policy objectives	**Respon-dents (%)**	**Respon-dents (%)**	**Respon-dents (%)**
Essential medicines available and accessible to all **(N=22)**	**15 (68.18%)**	**1 (4.543%)**	**6 (27.27%)**
Safety, efficacy and quality of drugs **(N=23)**	**18 (78.26%)**	**2 (8.69%)**	**3 (13.04%)**
Good prescribing and dispensing practice **(N=23)**	**19 (82.60%)**	**1 (3.03%)**	**3 (13.04%)**
Rational drug use by prescribers, dispensers and patients through training and education **(N=23)**	**19 (82.60%)**	**1 (4.34%)**	**3 (13.04%)**
Individual responsibility for health, preventive care and informed decision making **(N=21)**	**15 (74.42%)**	**1 (4.76%)**	**5 (23.80%)**

Table 12 indicates that between 15 – 19 respondents were able to correctly identify the National Drug Policy objectives.

4.7 Uptake of the Essential Drugs Programme (2003) within the Occupational Health setting

Respondetns were asked to comment on certain identified intrinsic and extrinsic factors and their impact on the uptake of the Essential Drugs Programme (2003), within the Occupational Health setting.

Table 13 Factors identified as impacting on the uptake of the EDP

	Respon-dents (%)
Economic factors	
Economic factors including tender procurement principles for the selection and purchase of drugs (**N=23)**	**18 (78.26%)**
Purchase and use of generic medications **(N=33)**	**17 (51.51%)**
Focus of OH Services	
Adherence to nationally formulated health policy within the OH setting **(N=18)**	**15 (45.45%)**
Inclusion of PHC into the OH setting **(N=22)**	**17 (77.27)**
Optimistic about benefits of implementing the EDP within OH setting **(N=22)**	**16 (72.72%)**
Willingness of respondents to implement the EDP in the absence of OH setting statutory requirements **(N=20)**	**15 (75%)**
Legislation	
Compliance with Dispensing Certificate Course in terms of the amendments to the Medicines and Related Substances Control Act (No 90 of 1997), **(N=14)**	**9 (64.28%)**

Table 13 highlights the influencing role played by a number of factors within the OH setting.

Notwithstanding the important role played by economic factors, the most common explanation given by respondents for striving to adhere to nationally formulated health policies was the upholding of professional healthcare practice standards. Despite the fact that more than half of the respondents indicated that PHC should be incorporated into OH settings, many were ambivalent about the practicalities thereof and raised concerns about the balance of onsite PHC services versus the benefits of an OH service.

Three quarters of respondents indicated that even in the absence of statutory requirements, they would implement the EDP within their OH setting. Reasons given included the EDP's evidenced based approach to non-drug and drug management guidelines coupled with the fact that PHC was commonplace within OH. Nine (64.28%) of (N=14) respondents indicated that they would require more information, education and training on the EDP (2003) in order to implement the Programme within their OH setting. The minority who were not in favor or unsure of the feasibility of implementing the EDP, noted that their client base had access to medical aid schemes and the Programme was therefore not a priority for them.

4.8 Conclusion

In this chapter the questionnaire responses have been documented and provide a broad overview of the demographics, organizational set up and Occupational Health practice settings of the Occupational Health Nursing Practitioner respondents and their insight into the Essential Drugs Programme (2003) within the Occupational Health setting. Chapter 5 will discuss the research findings and compare these to the literature.

CHAPTER 5

Discussion of findings

5.1 Introduction

In chapter 5 the researcher will discuss the study findings presented in chapter 4 and compare these to the literature.

5.2 Sample demographics

A response rate of 33 (47 %) Occupational Health Nurse Practitioners (OHNPs) was achieved which according to Burns & Grove (2001), could be viewed as being representative given the response rate of almost 50% being achieved. Nineteen (57.58%) respondents were based in East London and 14 (42.42%) in Port Elizabeth. The researcher as previous chairperson of the East London area was better able to follow up potential East London respondents.

The response rate was limited due to the willingness of the OHNPs to complete the questionnaire outside a structured meeting setup. The researcher had initially planned to circulate the questionnaire as an agenda item for completion during the monthly South African Society of Occupational Health Nursing Practitioners (SASOHN) Port Elizabeth and East London OHNP meetings scheduled for August and September 2005 respectively. However based on the perception that the questionnaire was too lengthy, potential

respondents indicated that would rather complete and return the questionnaire at their convenience.

Stemming from this, the researcher initiated telephonic contact with the SASOHN Eastern Cape database members in order to canvass respondents for the study (including those in attendance at the branch meeting). Those indicating a willingness to participate in the study had a questionnaire forwarded to them either electronically or per facsimile if they were not in possession of a hard copy questionnaire as circulated at the branch meeting. Each potential respondent was canvassed either until a completed questionnaire was received, or to a maximum of three times over a period of one month with the aim of encouraging participation in the study. Unfortunately the faxed or electronically returned questionnaires were often not always fully completed and the researcher acknowledges that this may influence the findings. However due to some resistance originating from the OHNPs with regards to time constraints and the length of the questionnaire, the researcher decided to acknowledge this as a limitation of the study and proceed with interpreting the results.

The gender distribution of respondents was 31 (93.93%) female and 2 (6.06%) males. The SASOHN Eastern Cape database was given as (N=70) members with 3 (9.09%) being male. The researcher was unable to source any demographical data on the age, gender and qualifications of OHNPs within the Eastern Cape from the South African Nursing Council (SANC) a body with whom all practicing South African Nurses are required to register. SASOHN National Office (Personal Communication with Linda Stoakes, 02 February 2006) confirmed that the SASOHN National database comprised 1987

members of which 77 (3.87%) are men. The sample gender demography of this study was both in line with the SASOHN National Office and Eastern Cape database.

Of the 31 (93.96%) female respondents, 19 (57.57%) were between 41-60 years of age. Norushe et al (2004), note that studies relating to nurses and their age, indicate that a core of older nurses may resist in-service education and training unless forced to attend. It is therefore important to note that this may influence the willingness of older nurse practitioners to effect changes in the long term.

The OHNP Certificate was the most commonly encountered qualification with 18 (54.55%) of respondents having this qualification, and 13 (72.22%) respondents were employed in the Port Elizabeth area. This is not surprising given that the OHNP Certificate course is offered in this city. The uptake popularity of the Certificate course is supported by South African Nursing Council (SANC) statistics dated 31 December 2004, which indicated that the number of members registered with a Listed Qualification Short Course in Occupational Health Nursing was 1209, whilst those members with an Additional Qualification Post Basic – Occupational Health was limited to 332 (Personal Communication with Louwna Pretorius, 04 May 2006). The study further noted that 6 (18.18%) respondents were currently not in possession of a formal OHNP qualification, the majority of which 5 (83.33%) were from East London where no formal OHNP courses are offered. With reference to years of experience as an OHNP, 21 (63.63%) of respondents had been an OHNP for less than 10 years, 8 (24.24%) for 11-20 years, and 4 (12.12%) for more than 21 years.

5.3 Occupational Health services

Sixteen (40%) of respondents were employed in automobile - manufacturing and related industries as was expected by the researcher. Port Elizabeth and East London are noted for being the home to the automobile, food processing and textile industries within the Eastern Cape Province (Lorentzen, 2006).

The majority of the respondents were supervised by Human Resources personnel, 16 (48.48%), with 12 (36.36%) of the respondents indicating that they had Safety, Health and Environment personnel as supervisors. The DoH (2003c) states that in order for an OH service to be successful, an OH Programme Coordinator/ Manager should have a qualification in OH and or managerial skills.

The researcher was also of the opinion that the OH Programme Coordinator should be suitably qualified in order that the OH service focus is balanced in terms of service provision costs, and not skewed towards effecting cost savings, which could potentially lead to inappropriate treatment protocols including poly-pharmacy and suboptimal health care service.

Whilst the average number of OHNP colleagues was given as six, it must be noted that the question did not differentiate between organizational colleagues within the same physical setting, geographical region or nationally. This data could not be verified as indicated earlier, as the researcher was unable to source any demographical data on OHNPs within the Eastern Cape from the South African Nursing Council (SANC) which would have been

useful to demonstrate the spread of OHNPs throughout the Province. Based on the researcher's observation from being a member of SASOHN Eastern Cape in the East London area, most OHNPs worked alone (with the exception of the larger employers) and may in fact divide their time between more than one OH settings. The researcher was of the opinion that OHNPs working in isolation (absence of fellow OHNPs) would find it difficult to attend SASOHN OHNP monthly meetings and this coupled with an OH Programme Coordinator who was not suitably qualified in OH and or managerial skills could impact on and contribute to the OHNPs professional stagnation.

Norushe et al (2004) note that Registered Nurses often experience conflict between their need to undertake ongoing professional education and training (including in-service training or in this scenario attending monthly OHNP meetings), versus providing an essential service. Based on his experience as a SASOHN group chairperson the researcher is of the opinion that the majority of OHNPs are eager to remain abreast of professional practice developments and this was evidenced at the monthly ongoing in-service and education programmes initiated and sustained at SASOHN branch levels.

The highest number of monthly OH clinic attendances for 2005 as indicated by the respondents was Primary Health Care (PHC), with an average of 530 attendances per OH clinic per month. Medical Surveillance trailed far behind with an average of 88 attendances per OH clinic per month. Occupational Health (OH) clinic settings (N=26) vary in size and total of organizational employees to whom the OH service is rendered ranged from 60 – 3200 employees. Jeebhay & Jacobs (1999) comment that (with the exception of the

mining houses), the number of employers providing workplace – based health services ranks between 11-18% and was more likely to occur where the workforce was >1000.

When comparing OH services in the 1980's and 1990's Jeebhay & Jacobs (1999) note that service provision patterns have not changed much with the main focus remaining on safety and general primary health, with only an estimated 44% of OHNPs time being spent on OH with the rest of the OHNPs time being devoted to primary curative service delivery.

The DoH (2003c) reiterates that "the main purposes of OH services is Employee Medical Surveillance", and acknowledges the following ideal components of comprehensive Occupational Health service as listed in Table 2 namely:

- The promotion of wellness including medical/ health surveillance, personal responsibility for health and combating absenteeism
- The prevention of occupational injuries and diseases through workplace risk monitoring and the prevention of injuries and disease
- Provision of clinical services which incorporates emergency or urgent PHC, and monitoring of chronic conditions
- Occupational Hygiene aimed at identifying, recognizing, reducing , monitoring and evaluating workplace hazards
- OH consultation services to advise management and other stakeholders on workplace matters
- Develop and maintain an information management system

- OH services research and the development of new trends
- Special Programmes including chronic diseases of lifestyle i.e. HIV/Aids
- Employee Assistance Programmes which focus on holistic employee health and wellness in the work, personal and psychosocial arena including HIV/Aids support work.

The suggested basic basket of services for PHC within OH settings include health education, early diagnosis accompanied by basic treatment of common diseases and injuries, provision of essential medicines, control of local endemic diseases, community psychiatric services and basic rehabilitation services (Denill et al, 2000); (Hatting & Acutt, 2003).

Hatting & Acutt (2003) stress that OH services should focus on promoting and maintaining holistic health care for all workers in all occupations, preventing loss of health, protection from workplace risks and ensuring a "fit" between the employee and the environment.

OH services purists like Hatting & Acutt (2003), caution that the PHC service "should not take up more than 20% of the OHNPs time". The researcher based on his experience (being employed as an OHNP within a local government OH clinic setting), noted that at least 50% of his day was spent on PHC services. Whilst the majority, 17 (77.27%) of the (N=22) respondents indicated that PHC should be incorporated into OH settings, many were concerned as to how to balance the benefits of an onsite PHC service versus the benefits of an OH service.

It was surprising to note that when asked to elaborate on reasons noted as "other" OH clinic attendances, respondents indicated that mean visits to the OHNP were attributable to psychosocial counseling in only 9 and 7 cases per month for, reproductive health including contraception and HIV/Aids respectively. With the HIV/Aids epidemic peaking only in 2010, few employers have begun to assess the impact of the HIV/Aids epidemic on their workforce (Zuccarini, 2005). The need for affordable drugs with relevance to chronic diseases of lifestyle was mentioned by respondents with an average of 68 attendances per month which accounted for the third reason for OH clinic attendances.

Jeebhay & Jacobs (1999) note OHNPs were more likely to refer non-medical aid schemed employees and chronic general medical problems including TB, Hypertension and STIs to the district health services due to cost constraints.

The constraints of limited medical aid schemes uptake continue to plague the South African health system and place a burden on both the private and public health system (Steyn et al, 1998). On-site PHC services should be seen as an opportunity in striving towards ensuring healthy, motivated and productive employees and reducing the costs to both employer and employee. These services can be enhanced by means of the EDP concept which facilitates effective health care, based on a judicious balance of promotative, preventative, curative and rehabilitative services and includes guidelines on managing commonly found medical conditions from non-drug and drug perspectives at PHC level (DoH, 1998a).

The researcher is of the opinion that in a mixed first and third world economy like the South African health setting, it is imperative for OH services to embrace the EDP as disparity in access to health care services remains, and will not be resolved unless all employees have access to the same medical aid benefits at an affordable cost to both employee and employer. The uptake of medical aid schemes remains a challenge due to premiums being out of financial reach for most middle to lower income employees.

5.4 Occupational Health practice milieu

The Port Elizabeth and East London Occupational Health Nurse Practitioners'(OHNPs') practice milieu was documented with reference to the origin and use of treatment guidelines, and rational cost effective drug usage.

5.4.1 Occupational Health practice guidelines

Twenty-four (88.88%) respondents indicated that they adhered to treatment guidelines for commonly found medical conditions, minor ailments and emergencies. Medical Practitioners were the primary guideline originators in 12 (50%) of responses, with only 4 (16.66%) respondents indicating guidelines originating from the Department of Health, and then not necessarily the Essential Drugs Programme (EDP) [2003]. This finding is expected and in keeping with the Medicines and Related Substances Control Act 1965 (Act No 101 of 1965), Section 22A (12) as amended, with regards to medicines. An OHNP was only allowed under very strict conditions to dispense medication based on guidelines as developed and or authorized by the Occupational Medical Practitioner (OMP). The OMP

formally authorized the OHNP in writing to perform the diagnosing, prescribing and dispensing in his absence, but the OMP remained ultimately accountable.

Of the five most commonly presenting conditions at the (N=24) OH clinic settings, it is interesting to note that one third of respondents listed signs and symptoms. It is this very approach which the Department of Health Standard Treatment Guidelines and Essential Drugs List – Primary Health Care 2003 seeks to harness through the use of treatment algorithms and standard treatment guidelines. The EDP seeks to facilitate that the health care practitioner is guided from being presented by signs and symptoms, through differential diagnoses to management objectives.

When comparing the OHNP's adherence to the EDP's non-drug and drug guidelines when managing the five commonly presenting OH clinic conditions, there was a 66 (71.73%) non-drug and 28 (30.43%) drug guideline adherence.

A disturbingly high 19 of the (N=20) respondents reported non-adherence to the drug treatment guidelines for respiratory conditions classified as colds/ flu with an average 2.8 medicines being prescribed for the OH clinic attendees. The use of decongestants in treating sinusitis was indicated by all respondents (N=20) as at least one of the drugs of choice for treating sinusitis which is not in line with the Department of Health Standard Treatment Guidelines and Essential Drugs List – Primary Health Care 2003 drug treatment guidelines. The researcher when working as an OHNP within local government Occupational Health was often confronted by colleagues who were of the opinion that

employees should have access to non EDL items which often contributed to poly-pharmacy especially when treating colds/ flu.

It was however very encouraging to note that under chronic disease management (in the cardiovascular conditions section), all (N=6) respondents indicated drug treatment guidelines adherence to Hypertension.

It is noteworthy that of the 9 (7.75%) respondents who listed headaches as a commonly presenting condition at the OH clinic, 6 (5.17%) adhered to the aforementioned Department of Health's non-drug guidelines and 7 (6.03%) adhered to the drug treatment guidelines. The Department of Health Standard Treatment Guidelines and Essential Drugs List – Primary Health Care 2003 has a number of flow diagrams which (and not surprisingly) also include a dedicated headache flow diagram.

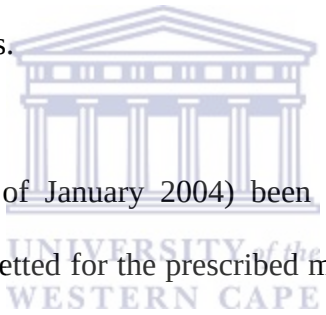
When questioned on the availability of specific Department of Health Guidelines relating to TB, STIs and HIV/Aids within their OH clinic setting, and their adherence thereto, it was noteworthy that the lowest guideline prevalence was that of HIV/ Aids as was the adherence thereto. The use of treatment protocols, algorithms and guidelines was noted as being particularly crucial when dealing with communicable diseases and infections like TB and STIs. Poor control of STIs leads to drug resistance and the increased likelihood of HIV infection with co-infection of TB (Ballard, 1995).

With reference to the OH setting, Hatting & Acutt (2003:253) note the need for treatment guidelines for "the more common or sensitive conditions in the OH PHC setting" and the

regular update of the OHNP regarding the drug and non-drug management of various conditions. The use of treatment protocols and algorithms is recommended within the OH milieu but not compulsory (Murphy 2002).

In terms of the DoH (1998a), treatment guidelines are competency based and primary level initiated, and not restricted to occupations.

Most OH services were situated in the private sector (Geyer, 2001) and the majority 27 (45.17%) of reasons for non-adherence to the EDP as given by respondents, was as a result of clients being referred to external public or private service providers and or adhering to these service providers guidelines.



Medical aid schemes (have as of January 2004) been required to adhere to treatment algorithms and protocols as gazzetted for the prescribed minimum benefits management of certain conditions (South African Government, 2003).

5.4.2 Occupational Health drug practices

When respondents (N=22) were questioned on the role economic factors played in their drug choice and the use of tender drug purchasing as a means to address drug costs, 16 (72.72%) indicated that they would use drugs which were available on tender due to cost implications. Twenty (83.33%) respondents (N=24) further indicated that they were guided by cost when it came to the selection and purchase of medicines. The researcher was

pleasantly surprised to note that the purchase and use of generic medications (N=33) was always or usually 17 (51.51%) advocated by respondents.

Findings from the 2003 EDP PHC impact survey revealed that 61% of South African PHC facilities were prescribing >90% of drugs from the EDPs (2003) Essential Drugs List. Furthermore, 37% of items were prescribed generically with a reduction in the number of items being prescribed from 2.5 to 2.2 per client (DoH, 2003b). It is acknowledged that as a rule, all medicinal products "shall be listed according to their generic names only" (DoH, 2003a).

The researcher was aware that certain private OH settings experience economic challenges in accessing the recommended drugs as per the Department of Health Standard Treatment Guidelines and Essential Drugs List – Primary Health Care 2003 for the management of STIs. By ensuring that all OH settings were able to source the necessary drugs as per the EDP and the use of procurement practices would greatly contribute to effective disease management.

It was surprising to note that 5 (15.15%) of respondents were unsure as to the adequacy of the budgetary allocation to the OH clinic setting in which they were operational. These responses concur with the findings from the 2003 EDP PHC impact survey which revealed that within South African PHC facilities there was a dire need to address "poor financial management practices and an extremely limited awareness of the drug budgets at (PHC) facility level" (DoH, 2003b).

Rational drug prescribing training programmes were initiated during 1996 in South Africa (Health Systems Trust, 1997). In an attempt to address the ongoing challenges of the rational use of drugs, Orrel in (Health Systems Trust 1999) notes that training should include the following core content principles namely; rational prescribing/ dispensing, use of the EDL, drug indicators and stock management. Orrel further notes that in the absence of leadership directives, it is impossible to attain and maintain ideal drug use patterns.

The WHO (2003a), notes that the use of an Essential Medicines List which is overseen by a Drug and Therapeutic Committee (as advocated in the DoH 2003), is capable of effecting savings of 20-40% on health budgets. One of the major reasons (cited in the same publication), which contribute to inefficient and irrational resource usage is inefficient procurement practices with resultant purchase of unnecessarily expensive medicines. It is a well documented fact that procuring fewer items in larger quantities results in greater price competition and economics of scale. This practice impacts positively on quality assurance, procurement, storage and distribution which ultimately results in lower drug prices and greater benefit to those most in need.

The Institute for Safe Medical Practice (2005) highlights the stigma still attached to the use of hospital/ public formularies within various settings including the OH milieu with some noted misconceptions including notions based on prescribing drugs stemming from ones own practice experience, patient “uniqueness”, newer drugs are seen as “better” and lastly the drug cost/ economics. The challenge (as noted by the researcher) was that the Occupational Medical Practitioner often felt his/ her professional integrity was being

undermined through the use of the EDL and that their personal drug preference accompanied by drug cost factors should guide the choice of drugs being used in the OH setting.

5.5 Essential Drugs Programme in Occupational Health services

On average (N=22) of 17 (77.27%) of respondents were able to correctly identify the National Drug Policy objectives than the Essential Drugs Programme (EDP). Respondents were more readily able to list the specifics of the National Drug Policy (1996) objectives versus the Essential Drugs Programme principles.

As the National Drug Policy (1996) is the cornerstone of the Essential Drugs Programme (2003), the researcher was satisfied that the OHNPs would also embrace the Essential Drugs Programme principles.

When exploring the availability of the Department of Health Standard Treatment Guidelines and Essential Drugs List – Primary Health Care 2003 within OH settings (N=33) , 17 (51.52%) of respondents indicated having an OH setting copy with 16 (48.48%) indicating an adherence to the documents principles which was far less than the results from the 2003 EDP PHC impact survey which revealed that 97% of South African PHC facilities had Department of Health Standard Treatment Guidelines and Essential Drugs List – Primary Health Care 1998 or 2003 (DoH, 2003b). The researcher was aware that certain challenges existed in getting the aforementioned EDP books freely distributed

to the private sector OH settings whilst it was mandatory in the public sector. It is therefore not surprising that only half of the respondents had an EDP clinic copy.

The sampled respondents (N=22) were overwhelmingly 16 (72.72%) optimistic with regards to the feasible implementation of the EDP into the OH setting based on its success within the public health sector and the fact that Primary Health Care (PHC) was commonplace within OH. Those who were not in favor or unsure noted that their client base had access to medical aid schemes and that the EDP was therefore not a priority for them. The majority of respondents 15 (75%) were willing to implement the EDP in the absence of statutory requirements. Responses generally related to its (the EDP's) proven effectiveness including evidence based outcomes drug and non-drug management guidelines. An all encompassing response which was indicated by one respondent was as follows "*Yes, it gives me the confidence to know that I am treating – dispensing correctly*".

There will always be a mixed reaction to the use of the Essential Drugs List (EDL), with those in favour acknowledging the benefits derived from health care professionals working with a scientifically based standardized list of medications (Health Systems Trust, 1996). Nine (64.28%) of the (N=14) respondents, indicated that they would require more information, education and training on the EDP in order to implement the Programme within their OH setting. Responses included accessing copies of the Department of Health Standard Treatment Guidelines and Essential Drugs List – Primary Health Care 2003, in-service education and training sessions on the Programme and formal qualifications including completion of Dispensing and Pharmacology Certificate Courses.

5.6 Conclusion

In chapter 5 the researcher discussed the study findings and compared these to the literature and his personal experiences as an Occupational Health Nurse Practitioner. It is apparent from the findings that the Occupational Health setting is accustomed to guideline adherence, including the use of generic medications and drug cost containment measures. These measures need to be harnessed and strengthened with relevance to implementing the Essential Drugs Programme within the Occupational Health setting.

CHAPTER 6

Conclusions and recommendations

6.1 Introduction

The final objective of this study was to make recommendations to the District Health Management Team responsible for Occupational Health services within the Eastern Cape Province, and the South African Society of Occupational Health Nursing Practitioners (SASOHN) with reference to the challenges for the implementation of the Essential Drugs Programme within the Eastern Cape private sector Occupational Health services and later, to other provinces.

6.2 Conclusions

The majority of Occupational Health Nurse Practitioners (OHNPs) were familiar with, and were able to correctly identify the National Drug Policy objectives. Furthermore, there was an overall optimism and willingness to implement the EDP into their Occupational Health (OH) settings. The optimism was primarily derived from the EDP's proven effectiveness including evidence based outcomes drug and non-drug management guidelines within the public health sector.

Many of the EDP principles have already been embraced by the OH setting including the well documented adherence by OHNPs to guidelines, use of generic medications and cost

containment measures. The most commonly presenting conditions at the OH clinic settings was in fact classified as signs and symptoms and herein lies the opportunity to harness the EDP treatment algorithms and standard treatment guidelines. The EDP seeks to capacitate the health care practitioner (based on competency and not occupation) to go beyond the presenting signs and symptoms through differential diagnoses to management objectives.

An overall two-thirds of respondents reported non-drug treatment adherence, with one-third reporting drug treatment guideline adherence to the EDP. When questioned on the availability of specific Department of Health Guidelines relating to TB, STIs and HIV/Aids within their OH clinic setting, and their adherence thereto, it was noteworthy that the lowest guideline prevalence was that of HIV/ Aids as was the adherence thereto. If the OH settings were able to participate and benefit from the DoH EDP procurement practices (including the purchase of reasonably priced EDP approved generic medications), drug treatment guideline adherence would be greatly enhanced.

On-site Primary Health Care (PHC) services are a major component of OH services (as identified by respondents and supported by the literature). The integration of the EDP into the OH basket of services was therefore seen as an opportunity towards ensuring healthy, motivated and productive employees at reasonable costs to both employer and employee, and as a means to relieve the public health care services burden.

Therefore, the researcher is of the opinion that the implementation of the Essential Drugs Programme (2003) is feasible within the Eastern Cape Occupational Health settings and should be used as a pilot study to inform a National process.

6.3 Recommendations

The following recommendations are made as a result of the study;

6.3.1 The findings and the recommendations of this study be presented **to** the District Health Management Team responsible for Occupational Health services within the Eastern Cape Province, and the South African Society of Occupational Health Nursing Practitioners (SASOHN) in order to guide the implementation of the Essential Drugs Programme (2003) within the Eastern Cape private sector Occupational Health services and later, to other provinces.

6.3.2 SASOHN Eastern Cape and the District Health Management Team should initiate a joint plan of action for the implementation of the Essential Drugs Programme (2003) within the Eastern Cape Occupational Health Services.

6.3.3 SASOHN National Executive (as the Occupational Health Nurse Practitioner's professional indemnifying organization), should endorse the Essential Drugs Programme (2003) as the sole mandatory guidelines source for primary level care use by all its members.

6.3.4 SASOHN National Executive should facilitate that all Occupational Health settings should have copies of the Department of Health Standard Treatment Guidelines and Essential Drugs List – Primary Health Care 2003 as a matter of urgency.

6.3.5 SASOHN National Executive should facilitate electronic postings of the Department of Health Standard Treatment Guidelines and Essential Drugs List – Primary Health Care 2003 on the SASOHN endorsed Occupational Health Nurse Practitioner chat line.

6.3.6 SASOHN National Executive should endorse The Essential Drugs Programme (2003) as a standing discussion agenda item on the monthly SASOHN Occupational Health Nurse Practitioners meetings and investigate the allocation of Continuing Professional Development (CPD) points hereto.

6.3.7 SASOHN Eastern Cape and the District Health Management Team should investigate the possibility for Eastern Cape Occupational Health clinics to participate in the Essential Drugs Programme drug procurement practices.

6.4 Final remark

It is the wish of the researcher that the findings of this study will inspire Occupational Health Nurse Practitioners and other stakeholders to implement the Essential Drugs Programme (2003) within the Occupational Health setting as they strive for service excellence.

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"ADDENDUM 1"

QUESTIONNAIRE FOR OCCUPATIONAL HEALTH PRACTITIONERS

PURPOSE

Thank you for taking the time to complete this questionnaire, the purpose of which is to gain insight into the East London and Port Elizabeth OHP and their organizational milieu in order to determine the personal and organizational processes that facilitate or hinder the successful introduction of the Essential Drugs Programme into the OH setting.

The aim of this study is to explore the feasibility and challenges of implementing the Essential Drugs Programme into the OH settings within East London and Port Elizabeth.

The findings of the research will be used to make recommendations to the Eastern Cape District Management Team and the SASOHN National Executive with regards to the implementation of the Essential Drugs Programme into Occupational Health Services.

GENERAL INSTRUCTIONS

Please read through all the questions and answer as honestly as possible.
In order to ensure anonymity, do not put your name on the questionnaire.

Certain questions require you, the respondent, to select a block while other questions may require an explanation/motivation. Indicate with a cross [x] the box most likely to represent your response. If you have your OH clinic attendance statistics with you please refer to these when indicated.
Do not fill in the boxes in the coding column.

Approximately 45 minutes has been allocated for the completion of this questionnaire. If you are unsure regarding a question, kindly ask the facilitator to clarify the question.

IT IS IMPORTANT THAT ALL QUESTIONS ARE ANSWERED

1. PERSONAL DETAILS

Office use only (Code Column)

1.1 Indicate your age range ☐ 20-40 yrs ☐ 41-60 yrs ☐

1.2 Indicate your gender ☐ Female ☐ Male ☐

2. QUALIFICATIONS

2.1 Indicate your basic nursing qualification e.g. 3 or 4 year diploma ☐ Diploma ☐ Degree ☐

Marius can we chat here again please!

2.2 Indicate your post basic Occupational Health Science qualification ☐ Certificate ☐ Diploma ☐ Degree ☐ None ☐

2.3 Indicate years experience as an Occupational Health Practitioner _____ yrs

3. ORGANISATIONAL SET UP

3.1 Indicate the discipline/field your direct supervisor practices in ☐ HR ☐ S.H.E ☐ OTHER ☐

3.2 If other please specify discipline/field: _____

_____

Office use only
(Code Column)

3.3 Do you have Occupational Health Practitioner colleagues within your organization? ☐ Yes ☐ No ☐

3.4 If yes how many colleagues? ☐

3.5 What is the total staff compliment for the organization you provide an Occupational Health service to? ☐

3.6 Over the past year, what is the average number of clinic attendances per month for the following categories?

3.6.1 Primary Health Care ☐

3.6.2 Medical Surveillance ☐

3.6.3 Chronic Diseases (see pt 4.5) ☐

3.6.4 Injuries on Duty ☐

3.6.5 Other ☐

3.6.6 If other please specify

_____

3.6.7 Average total clinic attendances per month ☐

3.7 Indicate the source/s of the data given in point 3.6

Office use only
(Code Column)

3.7.1 Clinic statistics ☐

3.7.2 Estimates by Occupational Health Practitioner ☐

3.7.3 Other sources ☐

4. CURRENT PRACTICE GUIDELINES

4.1 Within your Occupational Health setting;

4.1.1 Do you adhere to treatment protocols for commonly found medical conditions, minor ailments and emergencies? ☐ Yes ☐ No ☐

4.1.2 If yes, where do these protocols originate?

_____

_____

_____

Indicate if your clinic setting has copies of the following guidelines and state if used in your clinic:

4.2 Department of Health TB Guidelines

4.2.1 Is there a clinic copy? ☐ Yes ☐ No ☐

4.2.2 Are the guidelines adhered to? ☐ Yes ☐ No ☐

4.2.3 Kindly motivate your answer to 4.2.2

_____

Office use only
(Code Column)

4.3 National Government HIV & Aids and Opportunistic Infections Management Guidelines

4.3.1 Is there a clinic copy? ☐ Yes ☐ No ☐

4.3.2 Are the guidelines adhered to? ☐ Yes ☐ No ☐

4.3.3 Kindly motivate your answer to 4.3.2

_____

4.4 National Government Syndromic Approach to Management of Sexually Transmitted Infections Guidelines?

4.4.1 Is there a clinic copy? ☐ Yes ☐ No ☐

4.4.2 Are the guidelines adhered to? ☐ Yes ☐ No ☐

4.4.3 Kindly motivate your answer to 4.4.2

_____

4.5 Chronic Disease Management Clinic Guidelines:

4.5.1 Hypertension ☐ Yes ☐ No ☐

4.5.2 Diabetes ☐ Yes ☐ No ☐

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(Code Column)

4.5.3 Asthma ☐ Yes ☐ No ☐

4.5.4 Other chronic conditions ☐ Yes ☐ No ☐

4.5.5 If yes for other conditions, please specify

_____

4.5.6 Are the Chronic Disease Management Clinic Guidelines adhered to? ☐ Yes ☐ No ☐

4.5.7 Kindly motivate your answer to 4.5.6

_____

4.6 Indicate your interventions as an OHP for the following conditions which present at your facility including the non-drug/drug management used:

4.6.1 Male urethral discharge/ burning on micturition

4.6.1.1 Non-Drug management

_____

_____

_____

_____

4.6.1.2 Drug management

_____

_____

_____

4.6.2 Common cold/ influenza

4.6.2.1 Non-Drug management

_____

_____

_____

_____

4.6.2.2 Drug management

_____

_____

_____

5. ESSENTIAL DRUGS PROGRAMME (EDP) 2003 i.e. Standard Treatment Guidelines and Essential Drugs List

Indicate if your Occupational Health setting has the following guidelines:

Office use only (Code Column)

5.1 The National Drug Policy (NDP)

5.1.1 Is there a clinic copy? ☐ Yes ☐ No ☐

5.2 The Essential Drugs Programme (EDP)- Standard Treatment Guidelines & Essential Drugs List (EDL) 2003

5.2.1 Is there a clinic copy? ☐ Yes ☐ No ☐

5.3 Are you familiar with the EDP (2003) principles as advocated by the Department of Health ☐ Yes ☐ No ☐

If yes, please list three of the most important principles in the EDP:

5.3.1 _____

5.3.2 _____

5.3.3 _____

5.4 Do you adhere/subscribe to these principles? ☐ Yes ☐ No ☐

5.4.1 Motive your answer _____

_____

Office use only
(Code Column)

5.5 What is your personal opinion of the EDP (2003) concept?

_____

_____

_____

5.6 In your opinion, do the EDP (2003) objectives include:

5.6.1	To ensure the availability & accessibility of essential medications to all citizens?	☐ Yes	☐ No	☐ Unsure	☐
5.6.2	To ensure the safety, efficiency & quality of drugs?	☐ Yes	☐ No	☐ Unsure	☐
5.6.3	To ensure good prescribing and dispensing practice?	☐ Yes	☐ No	☐ Unsure	☐
5.6.4	To promote the rational use of drugs by prescribers, dispensers and patients through training & education?	☐ Yes	☐ No	☐ Unsure	☐
5.6.5	To promote the concept of individual responsibility for health, preventative care and informed decision-making?	☐ Yes	☐ No	☐ Unsure	☐
5.7	Does the EDL (2003) provide diagnosis and treatment guidelines for common major health problems?	☐ Yes	☐ No	☐ Unsure	☐
5.8	Do you have a limit to the number of drugs you prescribe per encounter	☐ Yes	☐ No	☐ Unsure	☐

Office use only
(Code Column)

5.9 Do you know the average number of drugs prescribed per encounter in your clinic ☐ Yes ☐ No ☐ Unsure ☐

5.10 If yes, indicate the number of drugs prescribed

_____

5.11 Do you ever encounter problems with drug availability due to:

5.11 Supplier/ distributor being out of stock ☐ Yes ☐ No ☐ Unsure ☐

5.11.2 You failing/forgetting to re-order on time ☐ Yes ☐ No ☐ Unsure ☐

5.11.3 Medicines budget exhausted ☐ Yes ☐ No ☐ Unsure ☐

5.11.4 Other (specify)

_____

_____

5.12 If yes to any of the above, please indicate how you overcome the non-drug availability

_____

_____

_____

6. INTRINSIC / EXTRINSIC FACTORS

Office Use (Code Column)

6.1 STATUTORY FACTORS

6.1.1 Would you, in the absence of statutory requirements, implement the EDP (2003) in your practice setting? ☐ Yes ☐ No ☐

6.1.2 Motivate your answer _____

_____

_____

6.2 ECONOMIC FACTORS

6.2.1 Would you purchase the recommended drugs on the EDL (2003) if they were available on tender? ☐ Yes ☐ No ☐

6.2.2 Does the cost of medication influence your selection and purchase of medicines? ☐ Yes ☐ No ☐

6.2.3 Do you purchase generic medications? ☐ Always ☐ Usually ☐ Occasionally ☐ Never ☐

6.2.4 In your opinion, is your medicine budget sufficient for your clinic clientele? ☐ Yes ☐ No ☐ Unsure ☐

6.2.5 List any drug cost containment strategies implemented by yourself excluding bulk buying and dispensing

_____

_____

Office Use
(Code Column)

6.3 SOCIAL-CULTURAL FACTORS

6.3.1 In your opinion, should Occupational Health Services adhere to nationally formulated health policies? ☐ Yes ☐ No ☐

6.3.2 Motivate your answer _____

_____

_____

6.4 FOCUS OF OCCUPATIONAL HEALTH SERVICES

6.4.1 In your opinion, should Primary Health Care Services be incorporated into an Occupational Health Service? ☐ Yes ☐ No ☐ Unsure ☐

6.4.2 Motivate your answer _____

_____

_____

6.4.3 List/ discuss any unique factors pertaining to your Occupational Health Setting and the implementation of the EDP (2003)

_____

_____

6.4.4 What assistance would you require to implement the EDP (2003) within your organization?

_____

_____

_____

Office Use
(Code Column)

6.5 LEGISLATION

6.5.1 Indicate the legislation permitting the Occupational Health Practitioner in the absence of a Medical Practioner or Pharmacist to dispense a stat dose of medication	☐ (Medicines & Related Substances Control Act, 1997)	☐ (Nursing Act 50 of 1978) [sect 38(A)]	☐

6.5.2 Kindly indicate if you have in terms of the amendments to the Medicines and Related Substances Control Act (No 90 of 1997):

6.5.2.1 Registered for an approved dispensing course	☐ Yes	☐ No	☐
6.5.2.2 Completed an approved dispensing course	☐ Yes	☐ No	☐

6.5.2.3 If no to the above mentioned kindly indicate reasons

_____

_____

THANK YOU FOR TAKING THE TIME TO COMPLETE THIS QUESTIONNAIRE! FEEDBACK WILL BE GIVEN TO THE EAST LONDON AND PORT ELIZABETH SASOHN BRANCH MEETINGS IN DUE COURSE