

CAPE HIGHER EDUCATION CONSORTIUM / CITY OF CAPE TOWN

JOINT RESEARCH PROGRAMME

Project Final Report

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Title of project: Enhancing pharmacists' participation in maternal and child health in the Cape Town metropole: Focus on the expanded programme on immunization

ABSTRACT

Maternal and child mortality is one of South Africa's quadruple disease burdens. Child mortality is caused by neonatal and childhood illnesses, maternal HIV and AIDS transmission and malnutrition. Diarrhoea and pneumonia top the list of communicable diseases outside the neonatal period. One of the ways to prevent child mortality is through increased immunization uptake, a highly cost-effective method of prevention. The Expanded Program on Immunization in South Africa (EPI-SA) aims to prevent mortality and morbidity from vaccine-preventable diseases (VPD) of childhood. Annually, an estimated 2.5 million VPD deaths are reportedly averted. However, ideal vaccine coverage in the Cape Town metropole is marred by incomplete or non-vaccination associated with the health system and personal barriers. To achieve the targets of Sustainable Development Goal 3.2, the importance of immunization and its adequate uptake should be emphasized in healthcare professional training and practice. This study will explore the baseline knowledge, skills, attitudes and practice of pharmacists in the Cape Metropole in immunization. As a follow-up to the baseline assessment, a continuing professional development course will be organized to enhance pharmacists' role in immunization. The project is currently at the literature review and ethics application stage.

3. INTRODUCTION AND PROJECT AIMS / QUESTIONS

3.1 Introduction:

Reducing preventable maternal and child mortality and morbidity is a global public health goal (Geller *et al.*, 2018). The Sustainable Development Goal (SDG) 3 targets 3.1,3.2, 3.7 and 3.8 directly promote this agenda through a universal call to action by 2030 (Statistics South Africa, 2019). Maternal and child mortality is one of South Africa's quadruple disease burdens. As a result, policies and programs that support the achievement of these targets have been implemented (Hofman and Madhi, 2020).

One of the programs aimed at the reduction of child mortality and morbidity is the National Department of Health (NDoH) Expanded Program on Immunization in South Africa (EPI-SA) (Makamba-Mutevedzi, Madhi and Burnett, 2020). Vaccine-preventable diseases (VPD) of childhood such as diarrhoea and pneumonia are major causes of child mortality in South Africa (Goga *et al.*, 2019). However, suboptimal levels of vaccine coverage are reported despite the huge investments in vaccines and substantial efforts at providing universal access to routine immunisation services. In addition to increasing the risk of resurgence of VPD, vaccine hesitancy also results in vaccine wastage (Makamba-Mutevedzi, Madhi and Burnett, 2020).

The role of pharmacists in immunization in South Africa includes ensuring the safe supply, storage and dispensing of vaccines in cold chain management, advocacy and acting as vaccinators depending on the practice setting in the public and private health sectors and the supplementary training of the pharmacists (South African Pharmacy Council, 2017). Pharmacists are uniquely placed to enhance the uptake of vaccines and reduce vaccine hesitancy as easily accessible healthcare professionals who offer services to mothers and children, especially in community practice (Alsabbagh *et al.*, 2018; Beresford *et al.*, 2018., Tsuyuki *et al.*, 2018). Their inclusion in provincial and district immunization services will contribute to the improvement of childhood

immunization coverage (Egieyeh *et al.*, 2022). Of uttermost importance is the provision of adequate training with the required knowledge, skills and attitude at the undergraduate level (E. O. Egieyeh *et al.*, 2021). In addition, it is essential to provide continuous professional development (CPD) training for pharmacists to improve their participation in immunization beyond cold chain management and encourage the reduction of vaccine wastage (Van Huyssteen *et al.*, 2020., Bains *et al.*, 2014). Pharmacists' advocacy and vaccinator roles will be enhanced by a CPD (E. Egieyeh *et al.*, 2021).

The current study aimed to identify the baseline knowledge, skills, attitudes and practices of pharmacists in the Cape Town metropole in MCH with emphasis on the EPI. A CPD training will be developed as a follow-up to the baseline study. The study is the first of its kind to be carried out in the Cape Town metropole and South Africa at the time of writing this report.

3.2 Research Question:

How can pharmacists role in immunisation be enhanced?

3.3 Aim and objectives:

3.3.1 Aims:

The study aimed to enhance maternal and child health service delivery in the City of Cape Town with a focus on the EPI through a knowledge, skills, attitudes and practice intervention program for practising pharmacists in the Cape Town metropole.

3.3.2 The objectives of the study were to:

1. Conduct a baseline assessment of pharmacists' knowledge, skills, attitudes and practice in MCH with emphasis on the EPI in the Cape Town metropole using qualitative and quantitative data collection methods.
2. Develop a continuing professional development (CPD) course in MCH with emphasis on the EPI for pharmacists in the primary health care facilities and community pharmacies in the Cape Town metropole.

4. RESEARCH APPROACH AND METHODS

4.1 Research approach:

The study was carried out in two phases. In the first phase, a mixed method study design was used to collect quantitative and qualitative data on the baseline knowledge, skills, attitudes and practice of pharmacists on immunization in the City of Cape Town. In the quantitative study, an online questionnaire survey on Google Forms was used. Participants were recruited using snowball sampling due to the restriction of access to the register of pharmacists based on the Protection of Personal Information Act 4 (POPIA) of 2013. Pharmacists working at primary healthcare clinics and community pharmacies in the Cape Town metropole were included in the study. The questionnaire was prepared from the theoretical domain framework and similar studies. The information sheet, consent form and a link to the questionnaire were emailed to the participants. Qualitative data was collected through semi-structured, face-to-face interviews with seven Responsible Pharmacists (RPs) from City Health clinics. The interviews aimed to identify the barriers to rational vaccine use, solutions to vaccine

wastage and suboptimal uptake. The contact details of community pharmacy stakeholders were not accessible due to POPIA.

In the second phase of the study, the knowledge, skills, attitudes and practice gaps, solutions to vaccine wastage and suboptimal uptake will be used to develop a CPD as an intervention.

4.2 Data management and analysis:

4.2.1 Data management

Electronic data generated from the online questionnaire survey (quantitative) and the audio recordings of interviews (qualitative) were stored and passworded in a folder on the primary researcher's computer. The folder will not be shared with anyone outside the research group and it will be kept for five years before being deleted.

4.2.2 Data analysis

Quantitative data from Google Forms used in the online questionnaire survey was captured onto an Excel spreadsheet. Only fully completed forms were included in the data analysis. The data was cleaned and exported to the Statistical Package for the Social Sciences (SPSS) software for analysis. Continuous data was analysed descriptively using percentages and frequencies. Inferential analysis such as independent t-test, one-way Anova, Mann-Whitney and Kruskal Wallis tests were used to compare categorical variables. Qualitative data from the audio-recorded interviews was transcribed, edited and analysed as themes using Atlas Ti software.

5. CONCLUSIONS AND RECOMMENDATIONS FOR FOLLOW-UP ACTION

5.1 Conclusions

The traditional role of pharmacists in immunisation such as monitoring stock level, issuance and maintaining the cold chain was reemphasised in the study. There is appreciable knowledge and skills required to perform these roles as shown by the minimal record of vaccine wastage. However, challenges such as space constraints, staff strengthening, and backup power generators for load-shedding may compromise the gains on vaccine wastage. To further enhance the role of pharmacists, involving both public and community pharmacists in national, provincial or City Health advocacy and immunisation campaigns will increase the health workforce available for such programmes. In addition, recognising pharmacists as vaccinators if the training has been obtained is desirable, especially in the private sector. CPD training in immunisation and cold chain management is required to refresh and update the knowledge of the workforce. Training in the immunisation injection methods as vaccinators especially in private practice will enhance vaccine uptake.

5.2 Recommendations

- Provision of dedicated fridges and backup generators for correct cold chain management.
- Involvement in advocacy and immunization campaigns
- Providing additional space at City Health clinics for cold chain management
- Increasing the number of staff at the clinic to enable proper attention to be given to cold chain management, advocacy and vaccine health [promotion to reduce hesitancy.
- Requesting CPD training in immunisation and cold chain management.
- Acknowledging pharmacists who have been trained as vaccinators as such.

6. BUDGET

Please reflect the actual spend against the budget included in the original proposal.

Kindly adhere to below description of budget line items			
Every budget ITEM should be motivated in such a way that it justifies the amount/s requested.			
	Detailed description of budget line item	Amount	Actual spend
a.	Travel Motivation: Travel to PHC facilities in the metropole to conduct interviews with 30 facility managers and responsible pharmacists, and community pharmacy leaders. UWC vendor rates (average round trip of 30km + waiting time at the sites for the duration of the interview about 1 hour at 2 interviews per day) of about R1500 (gestimate) per trip	R 22500	R8250
b.	Printing Cost Motivation: Information sheet, consent form and semi-structured questionnaire for interviews 4 pages per participant X 30 = 120 pages at R0.70 per page = R84	R84	Nil
c.	Transcription Transcribers needed for 30 interviews (1 hour per interview X 30 interviews at R200/hour: R6000)	R6000	R3000
d.	Meetings Catering for 50 participants at R100 per participant = R5000 Training manuals (20 pages) X 50 = 1000 pages at R0.70 = R700	R5700	
e.	Recorders For interviews : 5 X Philips DVT1160 - VoiceTracer Audio Recorder R1,290.00	R6,450	R6,450
f.			
TOTAL		R40,734	R17,700

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