

**TRAINING IMPLEMENTATION EVALUATION OF THE UPDATED 2019  
INTEGRATED MANAGEMENT OF CHILDHOOD ILLNESS (IMCI)  
GUIDELINE USING THE CIPP MODEL**

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A full thesis in fulfillment of the requirements for the degree of Master's in Nursing in the School of Nursing, Faculty of Community Health Sciences, University of the Western Cape



**Date:** January 2023

## ABSTRACT

The Integrated Management of Childhood Illness strategy, launched in the 1990's by the World Health Organization and the United Nation's Children Fund uses a clinical guideline to promote evidence-based assessment and treatment, aimed at reducing death, illness and disability in children under the age of 5 years, to improve child health indicators. By 1998, South Africa was one of 100 countries that had adopted IMCI as a strategy in Primary Healthcare facilities. In the Western Cape, after years of using outdated case exercises that were misaligned to the latest IMCI guidelines, the WC Provincial training unit, named the People Development Centre, adapted a selection of cases derived from the 2009 National case exercises, in an effort to align it to the updated 2019 IMCI Guideline. The aim of this study was to conduct an evaluation of the training implementation of the adapted IMCI update training resources, aligned to the updated 2019 IMCI Guideline using Stufflebeam's Context, Input Process and Product model. The objectives of the study were set out to: (i) To explore and describe implementation successes and challenges discovered and identified with the implementation of the adapted IMCI Update session training resources; (ii) To explore the satisfaction of course participants with the adapted IMCI Update training session toolkit and (iii) To explore and describe satisfaction, knowledge, level of skill and use, from course participants post implementation of the adapted IMCI Update session training resources.



For this qualitative study, an explorative, descriptive research design was implemented, using Stufflebeam's CIPP model as a theoretical framework. Eligible research study participants were proposed from Metro and Rural health districts in the Western Cape Province, with the participants obtained through a stratified purposive sampling method, however permission was only received to conduct interviews with a rural health district, limiting the sample size to one geographical setting.

Focus group interviews with between two and four participants from similar, representative demographics were conducted, using a semi-structured focus interview guide. A list of one hundred and five (105) eligible participants from the same rural district was presented for consideration, however, due to operational requirements post COVID-19 and the staff involvement

in the COVID-19 Vaccination Campaign, fewer participants were accessible and available, resulting in nine semi-structured focus group interviews with a total of twenty (20) participants who consented, all of whom were registered/professional nurses falling into the category of either a Trainer, or a Participant. To differentiate between the research participant groups, reference was made to the trainer groups and participant groups respectively.

Thematic analysis was used to analyse and manage the data, using Atlas.ti22. Triangulated main themes and categories was aligned to the Theoretical Framework of the study and demonstrated that the aim and objectives of the study was reached

In the main findings of this study, the majority of research study participants reported that they were able to reach the case outcomes and that they found the resources useful, easy to follow, and that it was aligned to the relevant guideline and policy documents. The visual stimulation of learning through the PowerPoint presentation/ PDF version and colourful workbook, reading of case scenarios for auditory stimulation and the provision of written instructions with practical writing in the workbook for the kinaesthetic learner, created a versatile approach for different learner types who related to the various aspects of the resources provided. The general feedback was that the update session was beneficial, and that ongoing updates and practical application of growth measurements could improve their classification and case management skill. The duration and time of the training update session was highlighted by some research study participants as too short, but they considered the factors of staff shortages and group sizes which had a direct impact on the time spent in the update sessions. The facilitated directed training approach was commended by the participants and trainers, as it created the opportunity to focus on areas where more attention was required and to ensure that the correct case outcomes were reached.

Based on the findings of this study, the researcher offered feedback on experiences reported, and suggested recommendations for improving training implementation and future research.

## KEYWORDS

Case Based Learning

CIPP Model

IMCI Guideline

IMCI Strategy

IMCI Training Resource Adaptation

IMCI Training

Participant

Trainer

Training Approach

Training resources



## LIST OF ABBREVIATIONS

CAH	Child and Adolescent Health Development
CBL	Case Based learning
CNP	Clinical Nurse Practitioner
DL IMCI	Distance Learning Integrated Management of Childhood Illness
GMP	Growth Monitoring and Promotion
ICATT	IMCI Computerised Adaption and Training Tool
IMCI	Integrated Management of Childhood Illness
NFSDSA	National Framework for Sustainable Development in South Africa
NDOH	National Department of Health
PDC	People Development Centre
PDF	Portable Document Format
PHC	Primary Healthcare
PN	Professional Nurse
RTHB	Road to Health Booklet
SA	South Africa
SADOH	South African National Department of Health
SDG	Sustainable Development Goal
WC	Western Cape
WCDOH	Western Cape Department of Health
WCGH	Western Cape Government Health
WHO	World Health Organization
UNICEF	United Nations Children's Fund

## DECLARATION


I, Thanya Petersen, student number 4176838, declare that this thesis entitled: *“Training Implementation Evaluation of the of the Updated 2019 Integrated Management of Childhood Illness (IMCI) Guideline using the CIPP Model”* represents my own work in fulfilment of a Nursing Masters Full Thesis. The literature sources have been acknowledged in the text and a list of references is provided. I also declare that I was the developer of the IMCI Update Training Resources used within the study whilst employed as the WCDOH Programme Coordinator: Clinical Training and was responsible for the IMCI training coordination with the cascade of the IMCI Update training through the IMCI Trainers, based in their Health Districts within the Western Cape Province, South Africa.

Approval for the scientific methodology and ethics of the above-mentioned research project was obtained on 22 December 2021, from the Biomedical Science Research Ethics Committee of the University of the Western Cape. The Western Cape Department of Health: Strategy & Health Support (Directorate: Health Intelligence) also granted approval for the research to be conducted and issued this letter on 08 April 2022.



Name: Thanya Petersen

Date: December 2022

Signed: .....  


This thesis has been read and approved for submission by:

Signed: .....  


Dr Jeffrey Hoffman (Supervisor)

Date: 15 December 2022

## ACKNOWLEDGEMENTS

*“Oh Allah, nothing is easy, except what you have made easy. If you wish, You can make the difficult easy”; “Oh Allah, I ask You for beneficial knowledge, goodly provision, and acceptable deeds”; and “Seek knowledge from the cradle to the grave”.*

*In Sha Allah Ameen*

In the name of Allah, the Most Gracious, and the Most Merciful. All praise, thanks, and honour to the Almighty, for guiding me through the difficulties during my studies, for granting me everything I needed during this period, including my health, strength, and beneficial knowledge, and for affording me the opportunity to undertake and complete my dissertation.

I am deeply grateful to my husband, Nizar Petersen, for his love, moral support, and continued patience throughout my research studies. His keen interest in my academic work and achievement is heart-warming and so appreciated. He has been my anchor throughout.

To my parents, and children, no words can express my complete gratitude for all your love and unwavering support. My Mother, Zuleigha Adams, who motivated and encouraged me throughout my journey. She was my beacon of light every day. May the Almighty be pleased with all of you and fulfil all your needs.

In producing this thesis, I faced many challenges, and I am honoured and privileged to have been guided by my research supervisor, Dr Jeffrey Hoffman, who provided me with his unwavering support, understanding, immense patience and encouragement. Without him, I would not have achieved completion of this thesis, and I am humbled and thankful for all his guidance and trust in me, that I could achieve this under the difficult circumstances and limited timeframe. I can only wish the best for Dr Hoffman.

A special thanks to Professor Margaret Williams who provided me with academic support along the way, but above all else, for her kindness.

Thank you to Mrs Charne Kordom for the encouragement to pursue my application and enrolment at School of Nursing, UWC, your support throughout my journey is appreciated.

To all at the UWC School of Nursing who played a role in my academic journey, thank you.

I am very thankful to the Western Cape Department of Health, Provincial, District and Sub-District/ Sub Structure Offices, and all the research participants for their contribution to this research study.

Last, but not least, throughout my studies I received support and encouragement from family, friends, and colleagues, and I am extremely thankful to everyone. May you all be blessed with goodness and be rewarded for your kindness.





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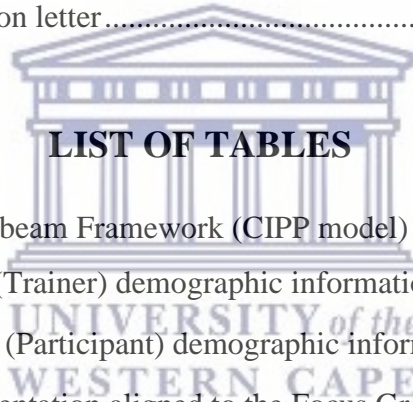
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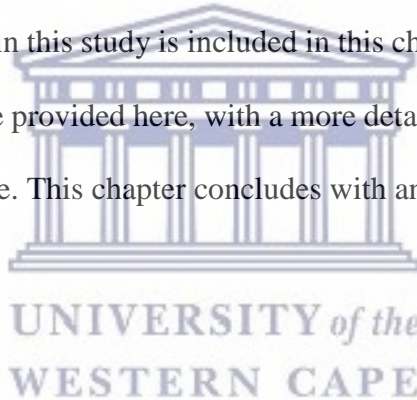


# CHAPTER ONE

## OVERVIEW OF THE STUDY

### 1.1 Outline

In this chapter, the researcher introduces the topic, sets the context, and provides relevant background information for a general overview of this current study, that seeks to evaluate the training implementation of the updated 2019 Integrated Management of Childhood Illness (IMCI) Guideline using the Context, Input, Process and Product (CIPP) model. Further, this chapter serves to orientate towards the background, research problem, aim and objectives, as well as the clarification of the key concepts in this study is included in this chapter. A brief description of the research process and methods are provided here, with a more detailed presentation of the research methods located in Chapter Three. This chapter concludes with an outlay of the thesis and a short summary of each chapter.



### 1.2 Orientation to the study

The Integrated Management of Childhood Illness (IMCI) is a syndromic approach, using a clinical guideline to promote evidence-based assessment and treatment for children under the age of 5. IMCI follows six steps, starting with assessment, followed by classification, identify treatment, treat, counsel and lastly, follow-up (Tshivhase, Madumo & Govender, 2020). The objective is to reduce mortality, morbidity, and disability, and to improve growth and development, with the aim of improving under five-year-old child health indicators (Fick, 2017).

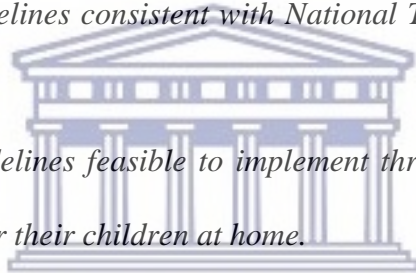
In our context today, reducing child mortality by the year 2030, is a target embedded within the Sustainable Development Goal (SDG) Number Three (3), where all countries are striving to attain



good health and well-being. The sound and optimal application and implementation of the IMCI strategy in our present time, could assist countries to reduce under five deaths and reach this SDG Goal Three (Tshivhase, et al, 2020).

The IMCI strategy was designed and implemented through collaboration with the World Health Organization (WHO) and the United Nation's Children Fund (UNICEF). The generic IMCI training resources were developed by WHO and UNICEF in 1997, and permission was granted to all countries who adopted IMCI, to adapt the guidelines based on the following considerations:

- (i) *To cover the most serious childhood illnesses typically seen at first-level health facilities;*
- (ii) *To make the guidelines consistent with National Treatment Guidelines and other policies, and*
- (iii) *To make the guidelines feasible to implement through the health system and by families caring for their children at home.*



WHO and UNICEF formulated an Adaptation Guide in 2005, to describe the process of adaptation by a country and facilitate continuous evolution of the program (WHO, 2005). Adaptation is defined as making a change to something or making something suitable for a situation or purpose (Britannica, 2022). Adaptation of the IMCI handbook was either through technical or pedagogical approach, but countries had to ensure that the content of the handbook remained consistent with the country's IMCI National Guideline, and that its style and format were compatible with the teaching approach (World Health Organization. Department of Child and Adolescent Health and Development, 2005). The adaptation process involves detailed comparisons of existing guidelines in a country with IMCI, and application of the most effective components of both (Gera, Shah,

Garner, Richardson & Sachdev, 2016). Key features of IMCI include its evidence-based approach to diagnosis and treatment, and its flexibility in terms of adapting guidelines to local epidemiological situations.

Globally, training formal and informal institutions were initially issued with the draft IMCI Handbook, which they could use as an intermediate step to teach IMCI in their relevant courses. The IMCI Facilitator's Guide for Modules, issued by WHO and UNICEF, provided the instruction for teaching the IMCI strategy. The generic in-service training materials included an IMCI Chart Booklet, IMCI Mother's Card, a set of IMCI training modules, photograph booklet, video, and wall charts (World Health Organization. Department of Child and Adolescent Health and Development, 2005). This approach would allow them time to gain teaching experience and equip them with knowledge and understanding to modify the handbook, so that it would be aligned to the institutions and facilitator's teaching approach and curriculum. They could also adapt the modules and exercises to promote problem- solving and to reinforce student learning (World Health Organization. Department of Child and Adolescent Health and Development, 2005).

According to the IMCI adaptation guide, the document provides guidance on the adaptation process for guideline charts, modules and all the training materials, including the photo booklet and videos (WHO, 2002). The document further details the importance of incorporating the adaptations into the training materials once the technical guideline content has been finalised and before implementation. Where translated materials were adapted, a process of proofreading must be in place before they are produced, hence a limited number of printed copies may be circulated with training implementation in order to identify where additional changes may be made, before finalising the materials (WHO, 2002).

In the Western Cape, to facilitate the implementation of the 2019 IMCI guideline, training has been implemented to ensure that health care worker remains competent to address childhood illnesses as per national guidelines. Update session training resources aligned to the 2019 IMCI guideline were developed for the training implementation included: IMCI Facilitators Guide; IMCI Participants Case Exercise Workbook and the Update Session Power-Point presentation. This study sought to determine what the perceptions of IMCI trainers and course participants were about the training implementation of the adapted IMCI

The assumption made was that adapted and aligned training content should provide an improved experience for training implementers, which should ultimately terminate in the teaching of more effective management of sick children under the age of 5. In addition, the implementation of standardised health training protocols aligned to IMCI training, where clinical guidelines are integrated across clinical training platforms, presents the ideal opportunity to monitor, evaluate, and improve health training interventions across all learning platforms.

### **1.3 Background to the study**

The IMCI strategy was launched by WHO and UNICEF in the mid 1990's, with South Africa (SA) introduced to it in 1996, and adopting the strategy two years later, in 1998 (Fick, 2017). The South African NDOH drove the IMCI implementation initiative, supported by external partners to primarily fund the training and capacitation of health workers in IMCI (Fick, 2017). Initially reports showed that the strategy implementation of Primary Health Care Facilities in SA looked promising, with two-thirds of the health workers trained in IMCI (Pandya, Slemming, & Saloojee, 2017). However, years later it is difficult to demonstrate the impact of IMCI implementation, as evaluation data is not available and anecdotal, the training data has not been adequately captured and reported on to reflect the WC training saturation.

A quantitative descriptive survey was conducted during 2019 in Limpopo Province SA, with results revealing that under-five mortality remained unreduced, and this could be related to problems professional nurses face in implementing the IMCI strategy (Tshivhase, et al, 2020). In a 2017 study, it was found that there was no recent review of IMCI implementation in SA. However, in the review of the international literature, implementation challenges relating to human resource constraints, inadequate budgets and suboptimal delivery of the community components were described (Fick, 2017).

#### **1.4 Global and National barriers and constraints to implement IMCI**

Despite reports of significant progress in reducing childhood mortality globally, training and implementation challenges emerged (Pandya, et al, 2017). It became evident that periodical updates of the SA national clinical guidelines were required for IMCI to be fully effective. A qualitative study conducted in SA in 2017 on the health system factors affecting the implementation of IMCI, two key relevant messages from the study stated that: (i) IMCI implementation was inadequately monitored, supported, and co-ordinated; (ii) and limited adaptation of the work environment and routine allocation, compromised quality service delivery. The recommendations of this study were linked to training was that post training supervision and mentoring of practitioners, through appropriate duty allocation and rotation policies, needed to be prioritised, based on the barrier identified that inappropriate rotation of nurses exacerbated incompetency in IMCI (Pandya, et al, 2017). Further “numerous health-system constraints played a key role in limiting the implementation of IMCI” (Fick, 2017). According to Fick (2017), some of the barriers and constraints to implementing IMCI in SA were the same as internationally experienced and reported. These included inadequate supervision, challenges related to training, and poor implementation of community IMCI. Alternative strategies were developed to reduce the

cost associated with IMCI training by adopting an eLearning approach known as IMCI Computerised Training Tool (ICATT) (Fick, 2017). ICATT was developed, tested and introduced between 2002 and 2010 by the WHO Department of Child and Adolescent Health (CAH) and Development and the Novartis Foundation for Sustainable Development (NFSD). The ICATT content was versatile so as to be translated into different languages, for effective training globally (Novartis Foundation, 2011). However, following its pilot, poor and limited resources prevented ICATT from being sustained and adopted in SA (Fick, 2017).

#### ***1.4.1 The history of IMCI in South Africa and its training and implementation barriers***

IMCI was introduced in South Africa during 1996 and by 1998 it was adopted as the PHC strategy in managing children under the age of 5 years. The National Department of Health (NDOH) drove the IMCI strategy and supported provinces with training and service implementation guidelines (Fick, 2017). In the same article as mentioned above, by 2006, 76% of the PHC facilities nationally in SA reported IMCI implementation with only 48% of professional nurses being IMCI trained. At that time, the WHO target for professional nurses to be IMCI trained was set at 60% (Fick, 2017). The funding from donor partners to support IMCI training implementation directed by the NDOH, soon dissipated, and at this stage the 11-day IMCI training course was handed over to the provinces to take responsibility in ensuring that IMCI training continued, whilst the strategy was still being driven by NDOH (Fick, 2017). The NDOH technical team continued to review and revise the clinical guidelines and accompanying tools for effective training and service implementation. However, the cost implications of the 11-day IMCI training for provinces became too high, hence the course was adapted to be shorter, and a decentralised option was introduced later as ICATT (Fick, 2017).

Though ICATT was being piloted, the generic foundational IMCI training resources continued to be used by the provinces to train IMCI. The resources included an IMCI Facilitators Guide for Modules 1 to 6; Module Exercises and a Participants Take Home Booklet. The WHO/ UNICEF photo booklet and videos were not adaptable, but nonetheless also formed part of the training resources. IMCI trainers were selected from various provinces to be trained by NDOH on how to facilitate an 11-day IMCI training and were assigned the role to cascade IMCI training within their own provinces.

#### ***1.4.2 IMCI training and implementation challenges in the Western Cape***

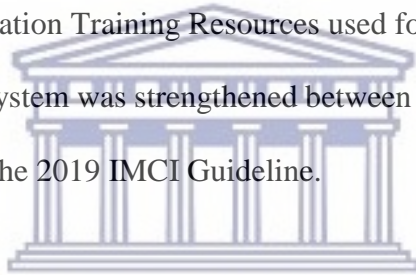
Anecdotally it was known that in 2012 and 2014, the IMCI Guideline was updated by NDOH in SA, however attention shifted away from updating the IMCI Facilitators Guide for Modules 1 to 6 and for the Module Exercises and a Participants Take Home Booklet, resulting in misalignment between the case exercises and the updated IMCI Guideline. Anecdotally, in the WC, following the health districts' decentralisation of IMCI training, a situation arose where trainers individually made adaptations to the case exercises in an effort to align this to the IMCI Chart Booklet, to ensure more effective training. These locally adapted case exercises derived from the NDOH training resources, were not always shared across districts, resulting in various versions of the case exercise memorandum, and in some instances, where the first IMCI Master trainers reached the age of retirement, the update of case exercises would cease. During this period, IMCI training was overseen by the WC Provincial Department of Health's Child Health Programme but was still largely dependent on the National adaptation process (Fick, 2017). As part of the restructuring within the Western Cape Department of Health (WCDOH), a Regional Training Centre referred to as the People Development Centre (PDC) was formed in 2016 to address the broader training needs of health workers, and slowly the scope of the regional training centre extended (Western

Cape Government: People Development Centre, 2016). The expansion of PDC's clinical training unit was motivated for the creation and funding of Programme Coordinator positions, to coordinate the various clinical training programmes. Subsequently, in 2018, the IMCI training coordination was transferred to the relevant Programme Coordinators at PDC, and in the process communication pathways and linkages with the NDOH were established to address the need for periodical IMCI Guideline updates and the adaptation of the training materials. This was based on the feedback received from all training stakeholders in the WC, to the effect that they struggled to implement IMCI training as the training resources were outdated, with case exercises not aligned to the 2014 IMCI Guideline.

#### ***1.4.3 Recent training update in the Western Cape***

In 2019, the NDOH Division Child Health updated the IMCI Guideline which was released for implementation to all provinces during 2020 (WCGH Circular: 45/ 2021). In the WC, two virtual update training sessions were coordinated by the PDC, with the initial training session co-facilitated by the NDOH. The update component focused primarily on the summary of changes in the 2019 IMCI Guideline and excluded updated IMCI case exercises. IMCI trainers were required to roll out further training and to report on the training completion to the PDC in preparation for implementation of the updated guideline (WCGH Circular: 45/ 2021). Initially, in the WC, IMCI Update training implementation was delayed due to the COVID-19 pandemic with reduced capacity for IMCI training. However, during the first quarter of 2021, the WC Provincial Circular 45 of 2021, announced the implementation of the updated 2019 IMCI Guideline. To improve training implementation within the WC, PDC adapted selected IMCI case exercises from the IMCI 2009 National toolkit, to be aligned to the 2019 IMCI Guideline. However, in order for new IMCI facilitators to conduct updated training more effectively, an IMCI Update Session Facilitators

Guide (Appendix A), the PowerPoint presentation (Appendix B) and the IMCI Participants Case Exercise Workbook (Appendix C) were also urgently adapted to address the inconsistency between the latest IMCI guideline of 2019 and the training component of 2009 to facilitate training and the outcomes of the training. Due to the urgency of training roll-out, the draft training resources were released to trainers who requested it, and training outcomes were then reported to PDC, to capture the training for the newly established IMCI central training data base, and also to implement recommended changes through the training roll-out process and feedback system from trainers. To ensure that there was continuous evolution and improvement of the content, a limited number of updated draft resources were printed, and a system to report feedback on the user experience and content was activated. During this process, attention was drawn to the urgency for adaptation of the National Foundation Training Resources used for the 11-day IMCI training, and a communication and feedback system was strengthened between PDC and NDOH, with valuable inputs reported on errors within the 2019 IMCI Guideline.



However, to determine the efficacy and sustainability of the WC-PDC approach with the IMCI Update resource adaptation, a pilot study needed to be conducted in the Western Cape to evaluate the training implementation of the adapted update session resources/ toolkit. This would inform the adaptation process for finalisation of the IMCI National foundation training resources, as well as to open new insights for future IMCI training related research. This research therefore endeavoured to conduct a study of the implementation of the adapted IMCI Update training resources in order to evaluate whether they aligned to the updated 2019 IMCI Guideline, and to describe and explore whether the adaptations made were practical and relevant for practitioners and facilitators to implement IMCI more effectively on the service platform.



## 1.5 Problem statement

In South Africa, the training of health workers in IMCI has been based on the training content developed by WHO and UNICEF, and subsequently adapted by the South African National Department of Health. Based on the researcher's experience as a Programme Coordinator for Clinical Training since 2017, and according to the updated IMCI Guideline, there is anecdotal evidence that the IMCI case exercises produced errors when training and could not align with the case management outcomes. Prior reports were that experienced IMCI trainers were able to update some of the case exercises within their sub-structure, however, this was not shared across districts and did not follow a formal provincial ratification process.

Through the abovementioned evidence it was identified that (a) training resources were outdated; (b) case exercises were not aligned to the IMCI Guideline; (c) case outcomes were not reached; and (d) trainers were unable to adapt case exercises, which may have a direct impact on the ability of more inexperienced IMCI trainers to effectively cascade IMCI training and in addition, this may have an impact on the manner in which our sick children under 5 years, are managed.

To address the training constraints due to the absence of updated IMCI case exercises aligned to the 2019 IMCI Guideline update, PDC initiated the adaptation of IMCI Update training resources. Included in the package is the Facilitators Guide for the IMCI Update case exercises (Appendix A), an update session PowerPoint training presentation (Appendix B), as well as the participants' update session workbook for case exercises (Appendix C) which were aligned to the updated 2019 IMCI Guideline. The draft toolkit was implemented based on the urgency to improve IMCI case management skills, and to report on completed training; how participants experienced its implementation, whether the adapted training materials improved the manner in which IMCI

training was facilitated. It was therefore the intention of this study to evaluate the implementation of the IMCI Update resources training, aligned to the updated 2019 IMCI Guideline.

### **1.6 Research question**

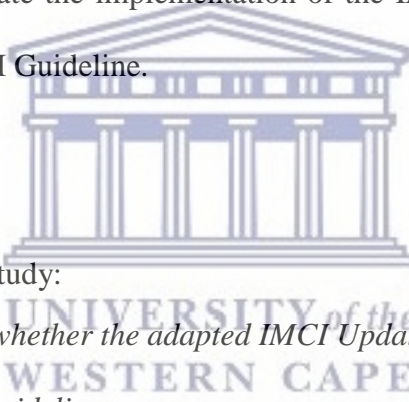
What are the participants' perceptions of the training implementation of the adapted IMCI Updated session training resources (IMCI Facilitators Guide; IMCI Participants' Case Exercise Workbook and the Update Session PowerPoint presentation), and its alignment to the 2019 IMCI Guideline?

### **1.7 Research aim**

The aim of the study is to evaluate the implementation of the IMCI Update resources training, aligned to the updated 2019 IMCI Guideline.

### **1.8 Research objectives**

Four objectives were set for the study:

- 
- (i) *To explore and interpret whether the adapted IMCI Update session toolkit was aligned to the updated 2019 IMCI Guideline*
  - (ii) *To develop an in-depth understanding of whether all the strategies implemented to reach the goal and resources available for the IMCI training implementation, were appropriate and useful*
  - (iii) *To gain an understanding of the quality and execution of the facilitation of the IMCI Update case exercises, the IMCI Facilitators Guide for the update session, as well as the application of the participant's exercise workbook as described in this process, and how stakeholders experienced it.*

*(iv) To explore and describe perceptions and feedback on how participants experienced the training in order to inform future planning.*

## **1.9 Research methodology**

This section provides a description of the research methods utilised in this study. A detailed description will later be presented in Chapter three (3).

### **1.9.1 Research approach and design**

A qualitative research methodology with an explorative, descriptive research design was applied to understand more about the IMCI Update training experiences and processes, and to examine the perspectives of individuals involved in the study (Bradshaw, Atkinson & Doody, 2017). Colorafi & Evans (2016) assert that the utilisation of a qualitative descriptive and exploratory approach is often encouraged in Master's level nurse education programmes as it enables novice clinical nurse researchers to explore important healthcare questions that have direct implications for and impacts on their specific healthcare setting, while applying an inductive reasoning process to draw a general conclusion from their observations. Chafe (2017) adds that qualitative descriptive design is an excellent method to address important clinical issues where the focus is not on increasing theoretical or conceptual understanding, but rather on contributing to change and quality improvements in the practice setting.

### **1.9.2 Research setting**

Qualitative researchers usually collect their data in the natural setting (Polit & Beck, 2017). Geographically, the Western Cape is comprised of a Metro and Rural Health District. The Metro district consists of eight legislated sub- districts, with one sub structure management office responsible for two sub- districts per region. Hence the structures will be represented as four main

sub structures namely, Klipfontein Mitchel's Plain, Northern Tygerberg, Khayelitsha Eastern and Southern Western. The Rural District is comprised of five main rural districts and further divided into various sub- districts. The five main districts represented are Cape Winelands, Westcoast, Overberg, Central Karoo and Garden Route. In this study, the setting will include a representation of both metro and rural health districts in the Western Cape Province, (Metro: Klipfontein Mitchel's Plain and Southern Western Sub Structures; and for Rural: Garden Route and Cape Winelands Districts). This selection was identified, based on the fact that the sub-structures within these districts requested access to updated case exercises to implement the IMCI Update training and also report on their training completed.

### ***1.9.3 Research target population***

The research population refers to a well-defined group of individuals or aggregation of cases who will be the main focus of the study (Polit & Beck, 2017). In this study, the population included Health Care Workers, specifically registered/ professional nurses. These categories comprised of course participants and the course trainers, who participated in the IMCI Update training. For this study, the available listing of all eligible members of the population was obtained from the Western Cape Department of Health's Provincial Clinical Training Unit, People Development Centre once the study was approved.

### ***1.9.4 Research sample and sampling***

Generally, in research it is not necessary to use the entire population, hence a sample refers to the subset of the population which may be selected and will represent the population in a particular study (Nieswiadomy & Bailey, 2021). A stratified purposive sampling method will be applied to the listing of the population that will be obtained from PDC and will permit the researcher to recruit participants into the study who may provide the relevant information related to research question

and satisfies one or more constructs or operations; in this study the geographical location and representative of a diversity of views within the WC (Ames, Glenton & Lewin, 2019). For this study, between two and four individuals, who participated in the IMCI Update training, from the same Health Sub- Structure or Sub- District, will be selected to participate in a focus group discussion.

### ***1.9.5 Inclusion and exclusion criteria***

The participants included in this study should meet the following criteria: A PN in located in a metro or rural health district in the Western Cape Province and participated in the IMCI Update training during 2021 and onward. Hence the PN's not located in above geographical settings and who did not complete the IMCI Update training during 2021 and onward, were excluded.

### ***1.9.6 Data collection***

Data collection consists of various methods, procedures and techniques to collect information. These procedures could include the researcher observing, questioning or measuring methods in order to answer the research question (Brink, Van der Walt & Van Rensburg, 2018). In this study, the researcher will collect data by conducting focus group interviews, with small groups of participants from similar, representative demographics, using a semi structured focus interview guide with standardized questions and making notes to avoid bias. The focus group interview will last between 45 to 60 minutes per session and will explore how participants, subjectively perceived the entire process of the IMCI update training, in order to determine common experiences as well as recommendations for intervention improvements. The audio will be recorded and transcribed verbatim into text format.

Due to the COVID-19 pandemic, there is ongoing risks for participants to be in close physical proximity to each other. The study will be conducted remotely using virtual communication platforms like Microsoft (MS) teams. This will be particularly useful in engaging multiple stakeholders in a focus group from different geographical districts. Participants will still be able to see the researcher, by activating the camera function, making the experience more real. In this study, three to four focus groups of between two and four participants will be interviewed.

### ***1.9.7 Data analysis***

Qualitative research involves gathering a large amount of data in the form of text. In order to facilitate this process, researchers use steps to analyse the data. These steps include managing and organizing the data, finding patterns, and using deductive reasoning, which is also known as coding (Brink et al., 2018). In this study the researcher will apply Thematic Analysis which allows for qualitative data to be identified, analysed, and reported, following main phases to achieve this. The phases include becoming familiar with the data; generating codes; searching for themes; defining and naming themes; and producing the report (Javadi & Zarea, 2016). The researcher will meticulously review all the data collected from the interviews, which will be interpreted before the researcher is able to develop a detailed report. The data management system selected to analyse the data collected from the focus groups, is called Atlas.ti22, which is a software programme that will allow the researcher to upload content, enable the researcher to apply codes to highlight relevant themes through matching and allow the tracking of all data analysed. It will also enable the researcher to export the report as a word document, PDF file or Excel spreadsheet.

### ***1.9.8 Rigor***

Rigor in qualitative research is a way to establish trustworthiness or confidence in the methodology and the findings of the study (Nieswiadomy & Bailey, 2021; Boswell & Cannon, 2018).

Trustworthiness refers to how credible the study is and the degree of confidence in the data (Boswell & Cannon, 2018). In this study rigor will be demonstrated through the credibility, transferability, dependability and confirmability of the research conducted.

### **1.10 The significance of the study**

The results of this study could determine the alignment of the adapted IMCI training resources to the updated 2019 IMCI Guideline since it will explore and reflect on the perceptions of participants regarding the effectiveness of the implemented IMCI Update training. This may facilitate the process to identify the successes and barriers to effective training implementation, and could also inform the standardisation of content development, adaptation, and facilitation of the training. Lastly this study could contribute to a better understanding of the requirements for improved training collaboration and feedback, coordinated within the WC province to NDOH.

### **1.11 Clarification of key concepts**

*For this current research, the following key concepts were defined:*

#### **Case Based Learning (CBL)**

This approach applies to case scenarios or case studies, permitting students to apply critical thinking in order to problem solve, or reach the case outcome. The process can be conducted within a group and is usually guided by a facilitator who ensures that the correct case outcome is reached, or that the group resolves the problem presented (Stufflebeam, 2003).

#### **CIPP Model**

“The model focuses on four areas of a program: the overall goals or mission (Context Evaluation); the plans and resources (Input Evaluation); the activities or components (Process Evaluation); and

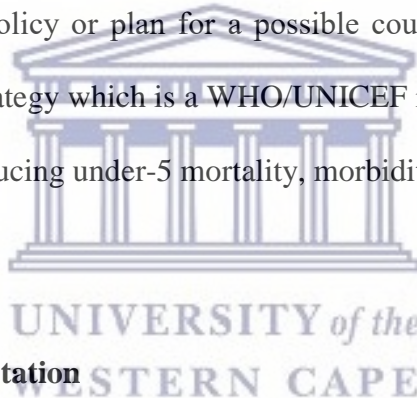
the outcomes or objectives (Product Evaluation)” (Stufflebeam, 2003). The CIPP model guided the research study and focused on these four areas to meet the aims and objectives of the study.

### **IMCI Guideline**

“This is also referred to as a Chart Booklet or booklet, which contains useful information on childhood sickness and offers practical guidance on diagnosis and treatment of said illnesses. It is divided into 2 parts, one for infants (newborn until 2 months) and from 2 months to 5 years.” (National Department of Health, Knowledge Hub, 2019).

### **IMCI Strategy**

“A strategy is a general plan or set of plans intended to achieve something, especially over a long period. It may also refer to a policy or plan for a possible course of action” (Collins English Dictionary, 2021). The IMCI strategy which is a WHO/UNICEF initiative was launched globally in 1995 with the objective of reducing under-5 mortality, morbidity and disability, and improving child growth and development.



### **IMCI Training Resource Adaptation**

Refers to adaption of the IMCI training materials either through a *technical* or *pedagogical* approach (World Health Organization. Department of Child and Adolescent Health and Development, 2005).

#### ***Technical adaptation:***

It refers specifically to the generic in-service training materials included an IMCI Chart Booklet, IMCI Mother’s Card, a set of IMCI training modules, photograph booklet, video, and wall charts. All the adapted training resources were to be aligned to the IMCI Clinical



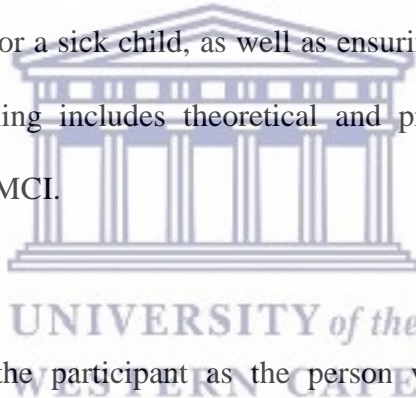
Guideline, to ensure consistency (World Health Organization. Department of Child and Adolescent Health and Development, 2005).

***Pedagogical Adaptation:***

The adaptation evident the modules and exercises to promote problem-solving and reinforce student learning (World Health Organization. Department of Child and Adolescent Health and Development, 2005). This permitted the adaptation to the teaching and instructional strategies to facilitate the IMCI training.

**IMCI Training**

IMCI is taught to health workers, particularly professional nurses, working at a PHC level, in a structured 11-day training course, to ensure that the integrated approach enables them to use the IMCI guideline on how to care for a sick child, as well as ensuring that the whole child is cared for at a single visit. The training includes theoretical and practical components to ensure knowledge and skill transfer of IMCI.



**Participant**

Cambridge dictionary defines the participant as the person who takes part in an activity (Cambridge Dictionary, 2022). The recipient of the IMCI training is referred to as a participant.

**Trainer**

Cambridge dictionary defines the trainer as a person who teaches skills to people in order to prepare them for their job (Cambridge Dictionary, 2022). The facilitator of the IMCI training is referred to as the trainer.

## **Training Approach**

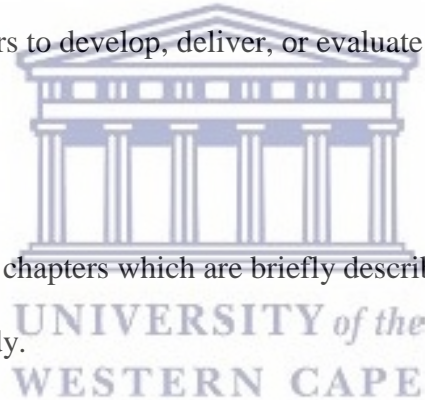
“An approach may also be referred to as a way of doing something, the action you can take or the method you can use to achieve it.” (Collins English Dictionary, 2021). In IMCI the approach refers to the facilitated directed training methodology used to improve the case management skill of health workers through in-service training, over a 11-day period which includes theory and practical application.

## **Training resources**

Refers or also referred to as the toolkit, refers to a fixed set of procedures, guidelines, teaching aids criteria, etc., established to ensure a desired or required result” (Collins English Dictionary, 2021). The training resources in IMCI training refers to all the original or revised/adapted IMCI training resources used by trainers to develop, deliver, or evaluate the IMCI training.

## **1.12 Outline of the chapters**

The current study consists of six chapters which are briefly described below to orientate the reader to the structure of the study.



### **Chapter one**

This chapter provides the conceptualisation and a general overview of this study and focuses on the introduction to the research problem, background, and significance of the study. A detailed description of the key concepts is provided. The research objectives and aim of the study are introduced.

### **Chapter two**

The literature that has been reviewed by the researcher in this study includes local and international context which relates to the implementation of the Integrated Management of Childhood Illness strategy, the training implementation, and the training resource adaptation process. The challenges which countries faced with upscaling IMCI as well as the experiences and perceptions of IMCI trainers is discussed. This chapter will also discuss the theory applied to the study.

### **Chapter three**

In this chapter, the research methodology and approach followed in conducting the study is presented. It also includes the research design, research setting, research population, sampling, inclusion criteria, data collection and data analysis. Measures taken to ensure trustworthiness will also be discussed.

### **Chapter four**

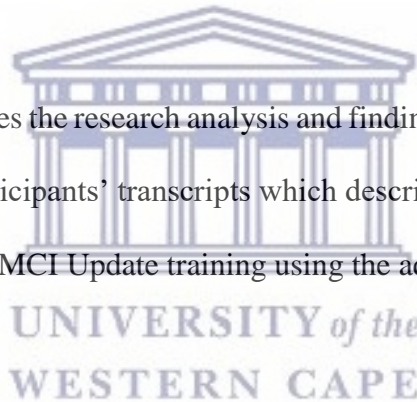
This chapter presents and discusses the research analysis and findings of the study, providing direct quotations from the research participants' transcripts which describe their overall perceptions and experiences when attending the IMCI Update training using the adapted IMCI training resources.

### **Chapter five**

In this chapter, a refined analysis, compared against national and international literature is presented, and the researcher discusses in detail the interrelated research finding themes and categories.

### **Chapter six**

In this chapter, a summary of the findings, discussions and limitations of the study, as well as its recommendations, are presented.



### **1.13 Summary**

The first chapter of this thesis conceptualised and outlined the background of the study and explained the rationale for conducting the research, with key concepts defined. This is followed by the research aim, objectives, research questions and the significance of the study. The next chapter orientates the reader to the theoretical framework and outline and discusses the literature review that was conducted for this study. The chapter concludes with the organisation of the thesis.



# CHAPTER TWO

## LITERATURE REVIEW

### 2.1 Introduction

In this chapter the researcher presents the literature review which provided the foundation for the study, by using the key concepts driving this study and sourced from Google Scholar, Google Search and the UWC Library. Further in this chapter, in order to reach the aim of the study; to evaluate the training implementation of the adapted IMCI Update training resources, as aligned to the updated 2019 IMCI Guideline, the researcher reviewed supporting literature to validate the theoretical framework used and process followed.

The IMCI Strategy is explored in terms of its training implementation approach in health care, as well as the challenges and implications within training and service implementation in the Western Cape Department of Health, South Africa. A scarcity of literature was evident when attempting to obtain international; and national literature regarding the evaluation of the training implementation of the adapted IMCI Update training resources aligned to the latest IMCI Guideline.

### 2.2 The Integrated Management of Childhood Illness Strategy

The Integrated Management of Childhood Illness (IMCI) is an evidence-based assessment and treatment strategy, which follows a syndromic approach, using an integrated clinical guideline to manage sick children under the age of five years of age. It was developed and implemented by WHO and UNICEF in the mid 1990's, with South Africa (SA) being introduced to it in 1996 and adopting the strategy two years later, in 1998 (Fick, 2017).

As mentioned in Chapter one, p 21, the NDOH is the main driver of the IMCI implementation initiative, supported by external partners that primarily fund the training and capacitation of health workers in IMCI. In South Africa the first training implementation of health workers and students in IMCI was based on the training content developed by the WHO and UNICEF, with it subsequently being adapted by the South African National Department of Health. All the IMCI training resources, apart from the most recent IMCI 2019 Guideline used in South Africa, is however dated at 2009 (Fick, 2017).

### **2.3 IMCI Strategy Implementation in South Africa**

In 2012 an initial report showed that the IMCI strategy implementation in Primary Health Care Facilities in SA looked promising, with two-thirds of the health workers trained in IMCI. However, in the Western Cape (WC) Province, it is now, years later, difficult to determine the overall impact of IMCI implementation in certain parts of SA (Pandya et al., 2017).

Anecdotally, prior to 2020, IMCI programme training reporting in the WC had not been captured to a central data base, due to the decentralisation of IMCI training and training reporting pathways. Therefore, it is difficult to accurately determine who has been previously trained in IMCI, where they are located in the health districts, and whether they have been consistently updated in IMCI to ensure effective IMCI implementation of the service platform.

In SA the Ideal Clinic Audit requirements provide several areas in the checklist which makes specific reference to elements of the IMCI service delivery components. The Ideal Clinic programme presents a compliance scoring system for facilities to achieve green status which shows that the service component is present and functioning optimally (Ideal Clinic, 2022). In a study conducted in 2017, it was found that there were no recent reviews of IMCI implementation in SA. However, in the international literature review, implementation challenges relating to human

resource constraints, inadequate budgets and suboptimal delivery of the community components was described (Fick, 2017). In the same article, Fick further tabled strengths and weaknesses in the implementation of IMCI components in SA. With direct reference to (Fick, 2017), the following IMCI components were listed, with a comment related to the strengths and weaknesses on the right side:

- (i) *“Capacity building for health workers: Low acceptance among healthcare workers, poor adherence to IMCI guidelines and poor supervision all contribute to poor implementation”.*
- (ii) *“Community IMCI implementation: Since the community components of the strategy have been historically overlooked, this component is still in its early stages and is yet to be rolled out across all districts”.*
- (iii) *“Health systems strengthening: “Poor monitoring and low priority given to the IMCI strategy reduces accountability at all levels of the system”.*

Despite reports of significant progress in reducing childhood mortality globally, anecdotal training and implementation challenges in WC emerged after 2014, when the IMCI training resources in the SA was no longer aligned to the updated 2014 IMCI Guideline. In 2021 the SA Government People of South Africa report stated that “Life expectancy at birth for 2021 was estimated at 59,3 years for males and 64,6 years for females. The infant mortality rate for 2021 is estimated at 24,1 per 1 000 live births. (SA Government, 2021). Further literature suggested that keeping the clinical guideline up to date with the “changing clinical epidemiology of disease”, was challenging, despite its contribution to the reduction of death related to certain health conditions (Simon, Daelmans, Boschi-Pinto, Aboubaker, Were, 2018). The article further emphasised that the guideline alone was not enough to reduce mortality and attention needed to be directed at the survival and thriving of children 0-18 years to meet the Sustainable Development goals. A quantitative study conducted in Limpopo Province, South Africa, it was found that IMCI implementation by Professional nurses

in a primary health care facility were experiencing difficulties in following the IMCI guideline due to several challenges. These challenges included staff barriers, management barriers, poor process and poor infrastructure, collectively resulting in poor care for children under the age of five years. (Tshivhase, et al, 2020). In 2015, a cross-sectional self-administered, Global implementation survey of IMCI was conducted to assess the extent to which Integrated Management of Childhood Illness (IMCI) has been adopted and scaled up in countries. From the 95 countries that participated in the survey, 93 were low-income and middle-income countries. The results revealed that 44 countries (46%) had implemented IMCI and despite the high implementation rate at the time, the strategy was not making an impact in these low-income and middle-income countries where health and survival of children were high priorities (Boschi-Pinto, Labadie, Dilip, Oliphant, Dalglish, Aboubaker, Agbodjan-Prince, Desta, Habimana, Butron-Riveros, Al-Raiby, Siddeeg, Kuttumuratova, Weber, Mehta, Raina, Daelmans & Diaz, 2018).

#### **2.4 IMCI training resource adaptation for implementation**

The generic IMCI training resources was developed by WHO and UNICEF in 1997 with permission granted to all countries that adopted IMCI to adapt the guidelines to their local health and community contexts, based on the following criteria to ensure that the most pressing conditions affecting children providing feasible treatment guidelines that is consistent with the national treatment guidelines (WHO, 2005). The WHO has formulated an Adaptation Guide to describe the process of adaptation by a country and to facilitate continuous evolution of the program (WHO, 1999). Adaptation of the handbook was either through a technical or pedagogical approach, but countries had to ensure that the content of the handbook remained consistent with the country's IMCI National Guideline, and that it's style and format were compatible with the faculty's



approach to teaching. (World Health Organization. Department of Child and Adolescent Health and Development, 2005).

For this study, it was important to determine whether the adapted IMCI Update training resources were aligned to the IMCI 2019 Guideline and how this was received by participants; also, to identify whether the adaptation was conducted in a structured and coordinated manner, as recommended by WHO in the Adaptation Guide. In an article published by (Gera et al, 2016), the adaptation process for IMCI was described as being flexible in terms of adapting guidelines to local epidemiological situations, with the process involving in depth comparisons of a country's guidelines.

According to the IMCI adaptation guide developed by WHO in 2002, the document provides guidance on the adaptation process for guideline charts, modules, and all the training materials, including the photo booklet and videos. The document further details the importance of incorporating the adaptations into the training materials once the technical guideline content has been finalised, and before implementation. Where translated materials were adapted, a process of proofreading must be in place before they are produced, hence a limited number of printed copies may be circulated with training implementation instructions in order to identify where additional changes may be made, before finalising the materials (WHO, 2002).

## **2.5 IMCI training implementation amongst Professional nurses**

Initially in South Africa primary health care staff were trained in IMCI, with the professional nurses and doctors as the primary implementers of the IMCI strategy. In the Western Cape Province, professional nurses are now the primary implementers of the strategy, hence they have been the priority cadre of staff for IMCI training rendered from the service platform. Initial WHO

IMCI targets aimed at achieving 60% of professional nurses working at each health facility as IMCI trained through the NDOH driven process. However, by 2006 when the external partner donor-funding dissipated, with the SA NDOH unable to sustain training, the IMCI training implementation was transferred to various provinces, becoming a decentralised training but with the NDOH still responsible for the review and revision of the clinical guideline and training resources adaptation, through their technical team (Simon et al., 2018).

The 11-day IMCI training is facilitated directed, using an instruction guide, and is structured according to the course developed by WHO/ UNICEF (WHO, 2002). Training includes theory in a classroom setting, layered or followed by practical components in the health setting, to reinforce practise and skills before competency is attained. In a quantitative descriptive survey to determine challenges facing professional nurses implementing the Integrated Management of Childhood Illness programme in rural primary health care clinics in Limpopo Province South Africa, it was concluded that professional nurses found it difficult to implement the IMCI strategy regardless of having received the IMCI training. Challenges were caused by inadequate infrastructure, a lack or shortage of IMCI drugs, training materials and human resources. Significantly, lack of Inservice training and mentoring were reported as major factors making IMCI implementation difficult (Tshivhase, et al, 2020).

## **2.6 IMCI resource adaptation following initial implementation**

IMCI has underwent through various adaptations since its initial implementation in 1996. The adaptations can be classified both as technical and pedagogical. The following sections will elaborate on the transformation within IMCI training and its implementation.

### ***2.6.1 Initial implementation***

Following the initial IMCI training implementation through NDOH with donor funding, available training budgets diminished, and when human resource constraints emerged, and the cost to scale up training became too high, the training methodology was adapted and shortened where required. (Simon et al., 2018). In Tanzania the standard 11-day IMCI training was rolled out in 1996, however challenges with upscaling training were experienced, due to the high costs for the country. During 2012 to 2015, a study was conducted in Tanzania, to evaluate an adapted IMCI training programme implemented, as an alternative to the standard IMCI course.

### ***2.6.2 Computerised adaptation***

The IMCI Computerised Adaption and Training Tool (ICATT) which was an eLearning tool, provided learners with online training access, whilst those with no access to the eLearning platform could use the Distance learning IMCI training which incorporated a blended learning approach. Tanzania was one of three countries, including Peru and Indonesia, where ICATT was piloted, as they were countries supported by the World Health Organisation (WHO) and the National Framework for Sustainable Development in South Africa NFSD (2011). This study concluded that the Distance Learning was a feasible option to support and scale up IMCI training, provided that appropriate budgets were set to support supervision and implementation (Muhe, Iriya, Bundala, Azayo, Bakari, Hussein, John, 2018). The WHO Department of Child and Adolescent Health Development (CAH) and the Novartis Foundation for Sustainable Development (NFSD) developed, tested, and introduced IMCI- ICATT between 2002 and 2010, following requests received for alternative IMCI training approaches. The main aim of the computer software was to ensure that the periodical updates of the IMCI Clinical Guideline was simplified. ICATT was structured to achieve fewer trainee and facilitator face-to-face encounters, promoted peer learning,

and included self-study periods. Contact was maintained between the trainee and facilitator through an SMS message system using their personal mobile phones. Trainees were also placed in peer groups in their assigned geographical areas to read modules and practise in small groups when not working with the facilitators, supervisors, and mentors. Follow-up visits were also conducted 4–6 weeks after training to assess clinical skills, reinforce clinical skills as well as to provide supervision on facility support. The Distance Learning course was structured over a period of 3 months. In an article published in 2015, focused on the development of ICATT-based training configurations to be pilot-demonstrated in Davao City and Puerto Princesa City, the literature search produced the following relevant outcomes scoped: “(1) preference for a shorter training courses; (2) allocation of more training days for clinical practicum; (3) preference for blended learning approach; and (4) need to develop a complementation of tools to evaluate training performance”. The results of this same study revealed that there were two ICATT- based training developed, both varied in duration, one being seven days and the other eight days. Both followed a blended learning approach, with a variation in the contact time per course and practica (Juban, Mojica, Paterno, Bermudez, Tuble, Tomanan, Bermejo & Co, 2015).

### ***2.6.3 Most recent adaptation in SA***

According to a WHO report in 2014, in South Africa, 110 Facilitators were trained on the “WHO cost effective Integrated Management of Childhood Illnesses (IMCI)” facilitation methodologies covering the IMCI computerised adaptation training tool (ICATT) and distance learning IMCI (DIMCI). Despite the IMCI Guideline having been adapted by the South African National Department of Health (Division: Child Health), training implementers continued to use the Facilitators Guide and participants case exercises dated 2009, as attention had shifted away from updating the training resources.

## **2.7 Barriers and constraints to implement and scale up IMCI in SA**

Numerous health-system constraints played a key role in limiting the implementation of IMCI, and in a study conducted in 2017 the findings showed that there had been no recent review of the IMCI implementation (Fick, 2018). Further, countries that adopted the IMCI approach had to ensure that large numbers of health workers were trained and remained updated in their knowledge and skills in IMCI. This was reported as a challenge when trying to meet training needs with systemic problems limiting its implementation from the onset, reducing its impact and ability to transform within the health system. In another qualitative study conducted in SA in 2017 on the health system factors affecting the implementation of IMCI, two relevant key messages from the study stated that: (i) IMCI implementation was inadequately monitored, supported and coordinated; (ii) and limited adaptation of the work environment and routine allocation compromised quality service delivery (Pandya, et al, 2017). Some of this study's recommendations linked to training was that post training supervision and mentoring of practitioners through appropriate duty allocation and rotation policies needed to be prioritised, based on the barrier identified that inappropriate rotation of nurses exacerbated incompetency in IMCI.

## **2.8 IMCI training coordination in WC**

In the WC, synchronisation to roll-out the 2019 IMCI guideline across the Metro and Rural Health Districts was impacted upon by the Covid-19 pandemic, resulting in the official implementation announcement, only released by the WC Provincial office in 2021, recommending Districts to coordinate and synchronise implementation within the various sub-districts. The circular included links to information on the First 1000 Days and Nurturing Care components, and also attached an example of the IMCI Update training attendance register for the training roll-out reporting, as well

as the two IMCI recording forms (Birth to 2- Months; and 2- Months to 5-Years), (WCGH Circular 45/ 2021).

### ***2.8.1 Adaptation in the WC to further cascade training***

The effectiveness of training could be determined by how well the training methodology and the designed resources supported learning and also includes the transfer of knowledge, in order to implement this on the service platform. The trainers' ability to facilitate the learning process to reach the case outcome is also useful to evaluate the training implementation approach. The following concepts and approaches were applied within the cascade approach:

### ***2.8.2 Case-based learning (CBL)***

CBL is an approach to apply real scenarios/case exercises, presented by a facilitator to students/course participants, working within a small group. In the process, the learners are able to integrate knowledge and practise, learn and self-reflect. According to an article published in the Journal of Medical Education and Curriculum Development, a CBL literature search and review was conducted, in order to evaluate how it was used. The results revealed that CBL was used across the globe in all major continents. The study concluded that CBL can assist learners to link the theory to practise, and that this can have a positive impact on patient care outcomes (McLean, 2016).

### ***2.8.3 Teaching Methods***

Various factors must be considered when designing and delivering training to individuals, as people learn and respond differently to various situations. The training methodology used, facilitation approach, training resources, as well as the training environment, may all have an impact on an individual's learning experience. In a qualitative study conducted in South West

Nigeria, to “explore lived experience of nurse educators regarding teaching methods and the challenges encountered in nursing education institutions”, it was concluded that there should be a consideration of the use of teaching methods, the nurse educator’s and student’s needs, the institutional demands and the objective of training if the outcome of skilled and competent nurses through effective training was to be achieved (Lateef & Mhlongo, 2019) .

#### ***2.8.4 Effectiveness of the pedagogical approach***

In a qualitative study conducted to investigate the way hospital staff were trained, the impact the of the training on them, and the principles of learning considered, it was found that trainers took into consideration what the training needs were, used less lecture style and more of a question-answer approach and this made the trainers feel more equipped to train. Feedback from participants after the training revealed that they felt more confident and understood the importance of continuous professional development. (Panagiotopoulos, Theodora, & Karanikola, 2019).

Research conducted in Pakistan, explored the teachers’ opinions and learners’ insights on the use of visual aids to enhance learner’s attention for reading texts and to promote the learning process, the following findings were presented: thinking was stimulated and learning improved; visual aids reduced monotony in the classroom; students engaged and understood the learning areas when they had pleasant experiences in the classroom; visual aids relevant to the content were useful for students (Shabiralyani, Hasan, Hamad & Iqbal, 2014).

### **2.9 Evidence- based research to guide the IMCI adaptation and training implementation**

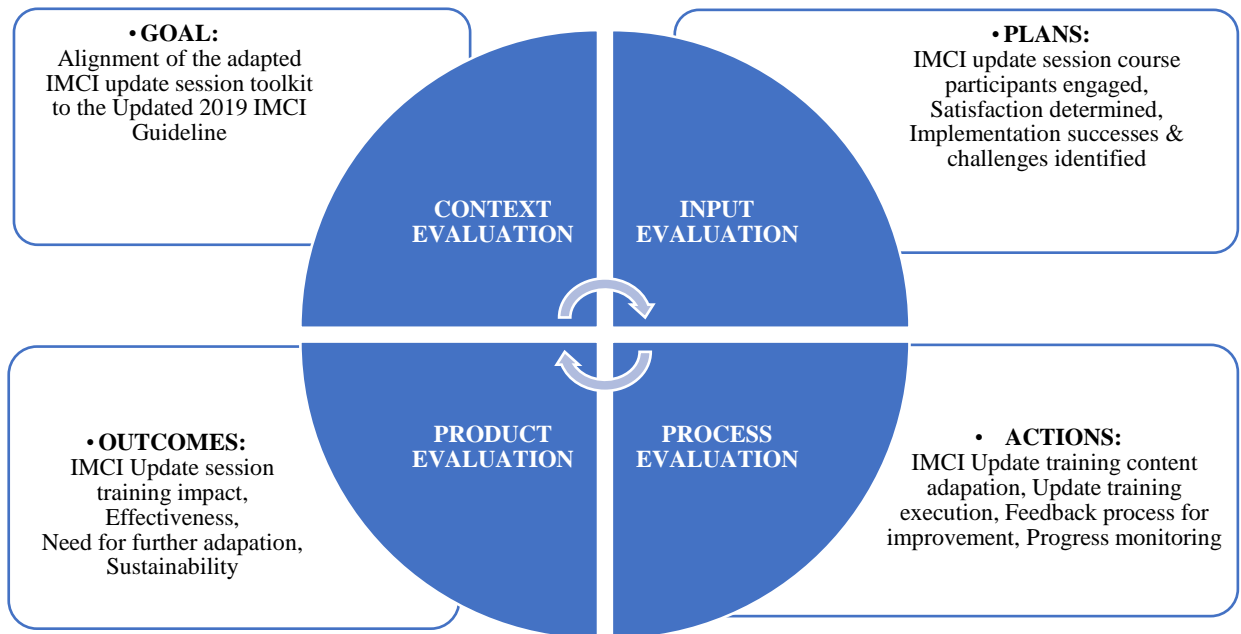
In a qualitative study conducted between 2016 and 2017 in Indonesia, where researchers explored lecturers’ and clinical instructors’ perspectives on the IMCI learning materials for diploma nursing students, it was concluded that the improvement of knowledge, skills and attitude in the application

of IMCI in the clinical setting would be influenced by its learning process. The study concluded that for the simplification of the student learning process, preparation of the learning process and effective practise was required, with a thorough review of IMCI material to be conducted by the trainer (Hayati, Soenarto, Haryanti, Prabandari, 2017). This current research therefore aimed to conduct a study to evaluate the training implementation of the adapted IMCI Update training toolkit aligned to the updated 2019 IMCI Guideline and to meet the research objectives as described in Chapter two.

### **2.10 Adopting the Stufflebeam CIPP model to guide the research study**

The Stufflebeam CIPP model was applied to guide the research study, to ensure that the aim and objectives of the study were achieved. “The model focuses on four areas of a program: the overall goals or mission (Context Evaluation); the plans and resources (Input Evaluation); the activities or components (Process Evaluation); and the outcomes or objectives (Product Evaluation)” (Stufflebeam, 2003). Through application of this model as a theoretical framework, the researcher collected information on the current IMCI Update training to provide context, to critically evaluate its implementation and to identify if any strengths or constraints were present which could be addressed for future planning and inform the adaptation of the IMCI foundation training package. All these evaluation aspects would enable the researcher to meet the aim and objectives of the study. The Theoretical framework based on the Stufflebeam CIPP Model is shown in Figure 2.1 below.





**Figure 2.1: Theoretical framework based on the Stufflebeam CIPP Model**

Table 2.1. provides a visual connection of how the CIPP Model is applied within the study

**Table 2.1. Application of Stufflebeam Framework (CIPP model) to the study**

Application of Stufflebeam Framework (CIPP model) to the study	
<b>Context Evaluation</b>	<p>Researcher identifies and focuses on the goals for the IMCI Update training i.e., Evaluation of the alignment of the adapted IMCI Update session toolkit to the updated 2019 IMCI Guideline</p> <p><b>Main Interview Question:</b> When working through the updated case exercises, were you able to reach the correct case outcome aligned to the updated 2019 IMCI Guideline? (This will seek to answer whether the updated IMCI case exercises were aligned to the updated 2019 IMCI Guideline (IMCI 2019 Chart Booklet)</p>
<b>Input Evaluation</b>	<p>Includes all the strategies implemented to reach the goal, and resources: Adapted training content, aligned to the updated 2019 IMCI Guideline, as</p>

	<p>well as the human resources available for the training implementation across various health districts.</p> <p><b>Main Interview Question:</b> How useful do you think the IMCI Update training approach with its resources was in preparing you for the implementation of the 2019 IMCI Guideline on the service level platform? (This question seeks to explore and interpret whether the training resources and training approach was effective to reach the goal)</p>
<b>Process Evaluation</b>	<p>To gain an understanding of the quality and execution: The facilitation of the IMCI Update case exercises, using the IMCI Facilitator’s Guide for the update session, as well as the application of the participant’s exercise workbook, describes this process and how stakeholders experienced it.</p> <p><b>Main Interview Question:</b> What worked well and what did not work well for you in the update training? (This question seeks to determine the quality of execution of the training).</p>
<b>Product Evaluation</b>	<p>Evaluating the participants' perceptions as to whether the goals were met, and how they perceived whether the outcomes were achieved for sustainability of the intervention. Developing an in-depth understanding of perceptions and feedback on how participants experienced the training will inform future planning</p> <p><b>Main Interview Question:</b> How appropriate and effective do you think the IMCI Update training approach with its resources was in order to apply the same adaptation approach to future IMCI training? (This will seek to answer whether the training objectives were met and to confirm sustainability of the training adaptation approach).</p>

## 2.11 Summary

In this chapter a review of the relevant literature to define the IMCI strategy with training implementation of the IMCI Guideline, was conducted. The researcher also reviewed supporting literature to validate the theoretical framework used and process followed in order to reach the aim of the study, which was to evaluate the training implementation of the adapted IMCI Update training resources, aligned to the updated 2019 IMCI Guideline. The research methodology, and the research design used in this current study, is covered extensively in Chapter three.



## CHAPTER THREE

### RESEARCH METHODOLOGY

#### 3.1 Outline

In this chapter, the researcher provides a detailed description of the research methodology used in the study, i.e., how the research was designed, in order to justify the approach which should be aligned to the research aim, objectives and research question. This chapter provides an overview of the research approach and design, the data collection and data analysis methods used and includes the research ethics and further elaborate on the use of the Stufflebeam CIPP's model in this study.

#### 3.2 Research approach and design

A qualitative research approach was used, as it focused on obtaining data through open-ended and conversational communication to determine what respondents thought of the IMCI Update training, and why they thought so. In qualitative research, participants are usually interviewed in a small group, to easily share information (Nieswiadomy & Bailey 2021). This current qualitative study adopted an explorative, descriptive research design as was relevant, as it attempted to understand more about the IMCI Update training experiences, processes and perspectives of individuals involved in the study, while applying an inductive reasoning process to draw a general conclusion from observations (Boswell & Cannon, 2020). In a descriptive design, the researcher gathered the information from a representative sample of the population, in order to describe a phenomenon (Brink et al., 2018).

### ***3.2.1 Explorative design***

According to Polit & Beck, (2017), qualitative research attempts to understand phenomena which are not clearly understood. This design was chosen to gain insight into the perceptions of both the trainers and participants of the implementation of the IMCI training update, because there were fewer or no studies to refer to in South Africa about the experiences of trainers who facilitated an IMCI Update training, nor of participants who attended an IMCI Update training. This will also suffice in future planning of training updates on how to ensure that the best training adaptation is achieved.

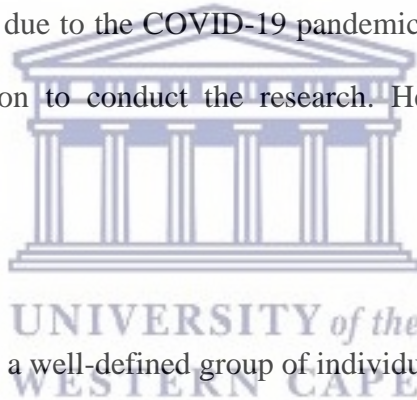
### ***3.2.2 Descriptive design***

Qualitative descriptive designs are simple, flexible, provide the opportunity to describe perceptions and experiences and allows the researcher to present the findings in a way which answers the research question (Doyle, McCabe, Keogh, Brady, & McCann, 2019). In this study the researcher explored factors which had a direct impact on the healthcare setting in terms of the details provided in a certain situation, setting or relationship through posing the when, what how where and who questions. The perceptions and experiences of the research participants guided the process for quality improvement in the health setting. For this reason, a descriptive research design was encouraged for this thesis (Chafe, 2017).

### **3.3 Research setting**

The research setting is the place or location in which the study is conducted, in real time and in the natural setting (Brink et al., 2018). Qualitative researchers usually collect their data in the natural setting (Polit & Beck, 2017). Geographically, the Western Cape is comprised of a Metro and Rural Health District. The Metro district consists of eight legislated sub-districts, with one sub structure

management office responsible for two sub-districts per region. Hence the structures are represented as four main sub-structures namely, Klipfontein Mitchell's Plain, Northern Tygerberg, Khayelitsha Eastern and Southern Western. The Rural District is comprised of five main rural districts and is further divided into various sub-districts. The five main districts are represented are Cape Winelands, Westcoast, Overberg, Central Karoo and Garden Route. In this study, the setting proposed to include a representation of both metro and rural health districts in the Western Cape Province, (Metro: Klipfontein Mitchell's Plain and Southern Western sub-structures; and for Rural: Garden Route and Cape Winelands Districts). This selection was identified, since the sub-structures within these districts requested access to updated case exercises to implement the IMCI Update training and report on their completed training. However, not all sub-districts/ sub-structures could roll out training due to the COVID-19 pandemic, and in addition only one rural health district granted permission to conduct the research. Hence only a rural district was represented in this study.



### **3.4 Research population**

The research population refers to a well-defined group of individuals or aggregation of cases who will be the main focus of the study (Polit & Beck, 2017). In this study, the population included Professional nurses who had participated in the IMCI Update from 2021 onward. These categories comprised of course participants and the course trainers. For this study, the available listing of all eligible members of the population was obtained from the Western Cape Department of Health's Provincial Clinical Training Unit, People Development Centre after the study was approved.

### **3.5 Sampling and sample**

Generally, in research it is not necessary to use the entire population, hence a sample refers to the subset of the population which may be selected and will represent the population in a particular study (Nieswiadomy & Bailey, 2021). Purposive sampling is relevant in this study as it follows selecting research participants who have knowledge or experience in the phenomenon, are available and willing to participate in the research and can express their own experiences (Palinkas et al., 2013). Further, a stratified purposive sampling method was utilised; since it first divides the research population into sub-groups from which sub-samples are drawn (2012). This method was applied to the listing of the population which the researcher obtained from PDC, and which permitted the researcher to recruit participants into the study who could provide the relevant information related to the research question and satisfied one or more constructs or operations. In this study the geographical location and representativity of a diversity of views within the WC was relevant (Ames et al., 2019). For this study, between two and four individuals who participated in the IMCI Update training from the same Health sub-structure or sub-district, was selected.

#### ***3.5.1. Sampling criteria***

It is very important for the researcher to consider the characteristics of interest in the target group (Brink et al., 2018). Inclusion and exclusion criteria were applied to this study.

##### ***3.5.1.1 Inclusion criteria***

To be included in the study, the following inclusion criteria applied:

A PN located in a metro or rural health district in the Western Cape Province and participated in the IMCI Update training during 2021 and onward.

### *3.5.1.2 Exclusion criteria*

The following exclusion criteria were applied:

- *Participants who did not attend the IMCI Update session during 2021 onwards*
- *Participants who were not on the PDC training data base*

## **3.6 Data Collection**

Data collection consists of various methods, procedures and techniques to collect information and should be carefully considered by the researcher as it aims to interrogate the research question and will be extremely important to the success of the study which will be determined by the accuracy of the data collected. Methods of data collection could include the researcher observing, questioning or measuring methods in order to answer the research question. The researcher collected data using a semi-structured interview guide during focus group discussions. Data is usually collected according to a carefully thought through plan. A pilot interview contributed to the finalisation of the data collection instrument (Brink et al., 2018). It also served to refine the skills of the researcher collecting the data. In this study, the researcher collected data by conducting focus group interviews, with small groups of participants from similar, representative demographics, using a semi-structured focus interview guide with standardised questions, and made notes to avoid bias which contributed to the trustworthiness of this study.

### ***3.6.1. Data collection instrument***

The semi-structured focus interview guide was a list of questions posed according to the topics, in order to collect the relevant information required, to determine participants' common experiences as well as to put forward recommendations for intervention improvements; this was guided by an applied Stufflebeam CIPP Model Framework that focused on the four areas of implementation of the programme to meet the aims and objectives of the study. The four areas included (i) The overall



goals or mission (Context Evaluation); (ii) The plans and resources (Input Evaluation); (iii) The activities or components (Process Evaluation) and (iv) The product or outcome of the program. Application of Stufflebeam CIPPS model allowed the researcher to collect information about the current IMCI Update training to provide context and to critically evaluate the implementation in order to identify any strengths or constraints presented which could be addressed for the future planning and inform the adaptation of the IMCI foundation training package. All these evaluation aspects were intended to assist the researcher to meet the aims and objectives of the study (Stufflebeam, 2003). When the interview questions are structured around topics, the interview can be easily conducted provided the researcher understands the subject, avoids bias and reflects on the manner of posing the questions to keep in line with the values and norms of the research context (Adosi, 2020).

### ***3.6.2 Data collection procedures***

In this study, a semi-structured interview was easier to use and more flexible for the researcher who conducted the interview. The researcher had a deep theoretical understanding of the subject. The focus group interviews lasted between 20 to 60 minutes per session and explored how participants subjectively perceived the entire IMCI Update training process, in order to determine common experiences, as well as to propose recommendations for intervention improvements. The audio was recorded and transcribed verbatim into text format. Due to the COVID-19 pandemic there were ongoing risks for participants to be in close physical proximity to each other. The study was conducted remotely using a virtual communication platform, Microsoft (MS) teams. This was particularly useful in engaging multiple stakeholders from different sub-districts in one focus group within the same district. Participants were still able to see the researcher, by activating the camera function if they preferred this, making the experience more authentic.

### ***3.6.3 Data collection process***

This process involved the manner in which the researcher prepared for and organises the data collection process in order to answer the research question. It ensures that there is an audit record of the rationale for the data collection method and demonstrates the method of data collection as well as how the results were derived (Brink et al., 2018). The application for this research project and ethics clearance was submitted to the University of Western Cape's Humanities Biomedical Research Ethics Committee (BMREC) for consideration and was approved on 22 December 2021 (Appendix D).

The researcher was also required to obtain permission from the Head of the Western Cape Department of Health in order to access and recruit the study participants for data collection. Due to the research being conducted at a public facility that included a component of health systems or service research, it required approval. A critical criterion was that relevant online research application documentation had to be submitted to the National Health Research Database (NHRED), as only research approved by a South African registered research ethics committee, registered through the National Health Research Database (NHRED), was considered. Approval was obtained from NHRED in February 2022 (Appendix E) before the next steps in the research application process within the WC Province could be processed. Communication via email was received on 08 April 2022, with an official letter received from the Health Intelligence Directorate: Strategy and Health Support (Appendix F), as the unit responsible for all health research in the Western Cape Department of Health. The letter referred the researcher to the People Development Centre's Clinical Training Manager for assistance with accessing the research sites to recruit research participants. When this was unsuccessful in establishing the communication pathways within the metro and rural health districts, the matter was referred via email to the Health Intelligence Directorate: Strategy and Health Support for further guidance. On 29 July 2022

(Appendix G), a letter was received back from the Health Intelligence Directorate: Strategy and Health Support granting permission to conduct the research study in the Garden Route District (GRD). The researcher was provided with the direct contact details for the relevant director.

Despite Central Karoo falling under the Garden Route District, a separate letter of approval was also received.

Once the communication pathway was established in GRD, the researcher for convenience, was granted further permission to use various means of communication platforms to communicate with the district office, the Sub-district trainers and where necessary, with the research participants to relay relevant research information about scheduled interview dates, reminders of scheduled interviews as well as to contact participants when they ran late for the interview sessions.

This included email, telephone calls and WhatsApp messaging for the purpose of communicating about the research interview appointments only. The appointments were also scheduled through outlook calendar and MS teams' calendar so that those with access would be reminded of the appointment. The consent forms and research information were emailed to participants and was completed, scanned and returned via email to the researcher before the interviews.

An introduction and briefing session were conducted at the commencement of every interview session and permission was granted again to ensure that participants confirmed their participation in the research. Participants were reminded of the ethical principles, and of their right to withdraw from the study at any stage without consequence. Once the information session was concluded, the session recording was activated, and the research interview questions commenced. At the interview conclusion and session end, the research recording and transcript were downloaded from the MS Teams chat box, saved to the researcher's desktop, then locked and deleted from the chat

box. The researcher proceeded to send an email to the participants informing and confirming with them the deletion.

### **3.7 Pilot study**

While the researcher awaited permission from the WCDOH Health Intelligence Directorate: Strategy and Health Support, the researcher planned, structured, conducted and reviewed a pilot interview, not for data collection and data inclusion in the study, but to reflect on the approach taken, as well as on the logical flow and structure of the interview guide (King, 2020). Hence, the pilot served as a practice for the researcher to refine data collection skills. The participant who had previously completed an IMCI Update training, but was no longer employed by WCDOH, was therefore not required to receive permission from WCDOH to conduct the pilot interview. Consent was taken from the participant in their personal capacity. According to Brink et al., (2018), a “preliminary study” could be implemented on a small scale to assist in identifying any shortcomings in the study methodology and its feasibility. The advantage of the pilot is that flaws could be identified and addressed to ensure rigor. Even though the pilot took time to arrange and conduct, it had no impact on the timeline of the research due to the fact that the researcher was still awaiting permission from WCDOH to commence with the recruitment of WCDOH staff. It did, however, provide the researcher with insight into the structure for full implementation.

### **3.8 Research ethics**

According to research ethics the dignity, rights and welfare of all research participants must be protected, and ethical principles and standards must be adhered to, to ensure that this is upheld, and that the researcher remains accountable for promoting ethical values (WHO,2022). Apart from the ethical guidelines, ethical standards in research are established by independent committees.

These research ethics committees review research proposals and must ensure that the research is beneficial, will add value to society and that where the risks are greater than the benefits, that the research proposal is declined (Brink et al., 2018). For this study, the application for the research project and ethics clearance was submitted to the University of Western Cape's Humanities Biomedical Research Ethics Committee for consideration and approval (Appendix D). The research proposal highlighted all the ethical considerations and measures taken during the research, which served to prove the greatest level of ethical attention to the project by providing the board with ethical assurance. The researcher also obtained permission from the Head of the Western Cape Department of Health, in order to access and recruit the study participants for data collection (Appendix F). Since this research was conducted at a public health facility and included a component of health systems or service research, it required approval. A critical application criterion was that an online application had to be made with the submission of all relevant documentation to the National Health Research Database (NHRED), as only research that had been approved by a South African registered research ethics committee, registered through the National Health Research Database (NHRED), would be considered. Approval had to be obtained before the research could commence (Appendix E).

### ***3.8.1 Respect for the person and informed consent***

Informed consent strives to ensure to its fullest extent that all research participants are provided with the relevant information in order to demonstrate a full understanding of the research, so that they are protected through informed consent as to whether they accept or decline the consent (Brink et al., 2018). No individual was coerced to participate in the study. The researcher electronically provided the consent form for course trainers (Appendix H) and course participants (Appendix I) with an information sheet (Appendix J), to all participants. They were

invited to ask the researcher questions if they did not understand any part of the information sheet. Informed verbal consent from the participants was again checked and obtained before the researcher commenced the interviews. Permission was also obtained to have anonymous data shared and published and where it was required to divulge certain information, the researcher only did so with participants' prior permission. The consent forms for participants were transmitted separately to ensure that their identity remained separate from their data.

### ***3.8.2 The right to freedom of choice and withdrawal***

*Risks:* Participants were informed of potential risks and benefits of the study and were advised that they had the right to refrain from answering questions during the interview or to withdraw from the study without having to provide their reason for doing so. The risk was that all human interactions and talking about self or others carried some risks. It was explained that all efforts would be taken to minimise such risks and that prompt action would be taken to assist participants who experienced any discomfort, psychological or otherwise, during the process of participation in the study. Furthermore, they were advised that where necessary, an appropriate referral would be made to a suitable professional for further assistance or intervention. *Right to withdraw:* Participation in this research was entirely voluntary. Participants could choose not to engage with the research. If participants agreed to enter into this research, they could refrain at any time without being penalised or losing any benefits. As this study used focus groups, privacy and confidentiality was dependent on the Focus Group participants maintaining confidentiality. If any participant breached this code of conduct, the subject's participation would be terminated by the investigator without regard to the participant's consent. A Focus Group Confidentiality Binding Form was signed by participants (Appendix K).

### **3.8.3 Beneficence**

This is the principle of doing no harm when conducting research (Boswell and Cannon, 2020). The researcher informed the participants of potential risks and benefits of the study and advised them that they had the right to refrain from answering questions during the interview or to withdraw from the study without having to provide their reason for withdrawal. *Justice*: is described as a principle and ethical obligation that relates to the research participant's right to privacy and to be treated fairly (Polit & Beck, 2017). The participants were informed of any potential risks and benefits of the study through the provision of information, to ensure informed consent was granted.

### **3.8.4 Confidentiality, privacy, and data collection**

Brink et al., 2018 describes the assurance of confidentiality, as the researcher's responsibility to ensure that all the participant's personal and identifiable information is meticulously managed and protected, that there are no breaches in their identity, that the data is anonymised, and their interview recordings and transcripts are safeguarded in a secure location. In this study, the researcher had an ethical obligation to the participants to ensure that the research was fair and had to take all necessary steps to protect the identity of participants and keep all private information confidential. Participants were informed that once they agreed to participate in the study their consent forms were saved separately from the focus group interviews to ensure that each participant's identity could not be linked to the interview data. They were secured under anonymous code names (e.g., participant one, participant two etc) that were issued during the interview which would be relevant in the final report but guaranteed anonymity. All interview recordings and transcripts were deleted from the MS Teams Chat box, then saved and stored on a password-protected computer, in a secure location. The transcripts were also de-identified for the data coding and analysis. Participants were reassured that when the results of the study are

published, their identity would not be linked to any data. They were also informed that their identity to their interview recording would not be revealed to their place of employment or any other organisation, and where it was required to divulge certain information, the researcher would only do so with their prior permission.

### ***3.8.5 Data Protection***

The interview was recorded using the recording function on MS Teams, where the recording was automatically generated when the session ended, and all participants logged out. The recording was safely and securely saved to the MS Teams chat box, immediately downloaded and saved by the researcher to the computer with a passcode. The researcher deleted the recording from the chat box to ensure data protection. The recordings were saved by the researcher to be kept for a minimum of 5 years according to the institution's policy. A pilot interview was conducted before the actual interview to ensure that it addressed the objectives of the study.

### ***3.8.6 POPI Act***

The researcher complied fully with the Protection of Personal Information Act (POPI Act Compliance, 2020) and ensured that all the conditions were adhered to for the lawful processing of personal information to safeguard the integrity and sensitivity of private information. "In brief, the definition of personal information as stated in the POPI Act relates to an identifiable, living, natural, existing juristic person as stated in the Act". The act provides eight conditions under which personal information may be gathered and processed. These include accountability, processing limitation, purpose specific, further processing limitation, information quality, openness, security safeguards and data subject participation." (POPI Act Compliance, 2020). A Data Privacy Notice form was signed by the research participants (Appendix L).



### ***3.8.7 Benefits of the study***

This research was not designed to help participants personally, but the results may help the investigator learn more about their experiences when using the updated IMCI training package. We hope that, in the future, other people may benefit from this study through an improved understanding of any identified successes and constraints, leading to and assisting with further improvement of its implementation.

### **3.9 Data analysis**

Qualitative research involves gathering a large amount of data in the form of text. The process for data analysis is time consuming. In order to facilitate this process, researchers use steps to analyse the data. These steps include managing and organising the data, finding patterns and using deductive reasoning, known as coding (Brink et al., 2018). In this study, the researcher conducted virtual focus group interviews with the participants, recording the audio and transcribing them verbatim. The transcripts were checked against the downloaded audio recordings to ensure accuracy of the transcripts, before proceeding to data analysis. Thematic analysis was suitable for this study due to its approach to extracting themes and patterns from data, and to permitting interpretation of phenomena. The convenience was that the researcher could apply the data in the form of the interview transcription (Javadi & Zarea, 2016). In this study, the researcher differentiated between the research participant groups, with reference made to the trainer groups and participant groups respectively, and in the analysis, triangulation was applied to increase the credibility and validity of the research findings. The data analysis excludes the pilot interview data.

According to Braun & Clarke, 2006, there are six main phases of Thematic Analysis which allows for qualitative data to be identified, analysed and reported. The phases are described as follows:

### ***3.9.1 Becoming familiar with the data***

In this first phase, it is recommended that the researcher makes sense of the data by listening to the audio recording and ensuring that the transcripts are written correctly. Repeated reading of the entire data set is time consuming but essential for the researcher to become familiar with it (Javadi & Zarea, 2016). In this study, the researcher conducted a pilot interview using a semi-structured interview guide to determine whether the interview questions were appropriate, correctly structured and was not used for data collection and analysis. The researcher documented personal notes during the interview which was used for later reflection. A process of repeated listening to the audio, repeated reading and correction of the verbatim text was followed to ensure correct grammar and spelling before the researcher shared the pilot audio interview and transcript with the research supervisor, to review and provide feedback and recommendations. This process allowed the researcher to learn from the pilot and reinforced the integrity of the research findings. Subsequent to the pilot, the researcher followed the exact same process for each interview conducted and shared the interviews with the research supervisor to review for any bias and for recommendations.



### ***3.9.2 Generating codes***

This second phase involves the formulation of thoughts or concepts which relates to the data, followed by grouping of the data (Javadi & Zarea, 2016). Through the process of listening to and reading the entire transcripts repetitively, the researcher became familiar with the content. The researcher engaged with the preliminary codes and to minimise all bias based on the fact that the researcher was the developer of the IMCI Update training resources which were the core of the research, the researcher contracted an external coder to upload the transcripts and assign codes

using the software installation of Atlas.ti22. The researcher also coded transcripts separately using the same software as the independent coder.

### ***3.9.3 Searching for themes***

The codes form themes, sub-themes while some codes are not linked to any theme. The relationship between themes and codes are considered as well as the combination of codes to form a theme. New themes may emerge or even overlap with others. The visualisation of all these components through a mapping exercise allows the researcher to refine and conclude the themes (Javadi & Zarea, 2016). Atlas.ti22. was used by the external coder and the researcher in two separate exercises to produce the code reports which were shared electronically with the researcher to interrogate and agree on identified similarities, patterns, and group categories, with identifiable themes which were present.



### ***3.9.4 Defining and naming themes***

In this phase, themes are reviewed and refined. Sub-themes were searched for to create complex themes in order of importance and relevance (Javadi & Zarea, 2016). In this current study, once the themes were categorised by the researcher and a report of the codes was formulated into a Microsoft Word document it was shared with the research supervisor for perusal. The final categories and themes were agreed.

### ***3.9.5 Producing the report***

This phase involves using the final themes to conduct the final analysis with an accurate and rational write up (Javadi & Zarea, 2016). This final process in the thematic analysis required the researcher to write up the course participants final interpretation of their perceptions of the training and implementation of the adapted IMCI Update session training resources.

### **3.10 Rigor**

Rigor in qualitative research is a way to establish trustworthiness or confidence in the methodology and in the study's findings (Nieswiadomy & Bailey, 2021, & Boswell and Cannon, 2018). Trustworthiness refers to how credible the study is and the degree of confidence in the data (Boswell and Cannon, 2018). In this study rigor was demonstrated through the credibility, transferability, dependability and confirmability of the research conducted.

#### ***3.10.1 Credibility***

This is a criterion establishing whether the result is credible and believable (Boswell and Cannon, 2020.) The pilot study conducted enhanced credibility and confirmed that the interview questions were appropriate. The time spent with participants varied, based on their availability and release from the service platform to conduct the interview. The researcher ensured credibility by completing all the interview questions, providing clarity to questions where requested, translating from English to Afrikaans and vice versa where requested, to collect enough data and manage the entire data process according to the Standard Operating Procedure (SOP), which provided step-by-step instructions on how the data should be collected. The SOP also included details on how to reduce and manage any missing data to prevent a distortion of the findings during data analysis. The same SOP was applied with each focus group to ensure that data was collected and captured consistently.

#### ***3.10.2 Dependability***

This criterion refers to how reliable the findings of the study are and interrogates how well the research procedures are documented when audited (Nieswiadomy & Bailey, 2021). The researcher ensured that quality was maintained throughout the research according to the SOP and took

responsibility for the entire data management process. In doing so, the researcher ensured that appropriate data collection took place, that the data was entered on a suitable data base and that data analysis was reliable and accurate.

### ***3.10.3 Confirmability***

This relates to whether other researchers can follow the steps taken in the study and if the findings of the study can be confirmed (Nieswiadomy & Bailey, 2021). By following the data management SOP developed by the researcher, which was the step- by-step instruction on how to collect the data, other researchers would be able to verify and validate the study's findings. In addition to the SOP, the researcher made notes to reflect on key learnings from each interview to separate assumptions and avoid all bias.

### ***3.10.4 Transferability***

In qualitative research, transferability refers to whether the results can be generalised and applied in another context (Nieswiadomy & Bailey, 2021). To establish transferability, the researcher intended to provide evidence that the study's findings could be applicable to other contexts, situations or populations. However, based on the study limited to one rural health district, the study's findings could only be applicable to this geographic setting, context, situation or population.

## **3.11 Summary**

In this chapter the researcher provided a detailed explanation of the research design and methodology used in this study. In order to understand more about the IMCI Update training experiences, processes or perspectives of individuals involved in the study, while applying an inductive reasoning process to draw a general conclusion from observations, this qualitative study

adopted an explorative, descriptive research design to delve into and check the objectives of the study.



## CHAPTER FOUR

### PRESENTATION OF FINDINGS

#### 4.1 Outline

This chapter deals with the interpretation of the analysis findings, derived through data gathered from nine semi-structured focus group interviews, conducted with IMCI trainers and participants, in order to meet the aim and objectives of the study as described in Chapter one. The demographic profile, data themes and categories stated in this chapter, will demonstrate how they are derived, and show its alignment to the study's theoretical framework, using the CIPP Model. Further detailed discussion will be presented in Chapter five.

#### 4.2 Participants' demographic profiles

Nine semi-structured research focus group interviews were conducted with a combined total of twenty participants, who were all registered/professional nurses falling into the categories of either a Trainer, or a Participant. Of this total, six were the course trainers paired into three different focus groups, and fourteen were the course participants, split into six different focus groups. The participant groups varied between a minimum of two and maximum of four within the group, based on their availability. The groups were numbered according to whichever group went first, and participants were numbered according to this flow and not representative of the number within the specific group. All participants were located in a Rural Health District, Western Cape Province, South Africa.

To differentiate between the research participant groups, reference will be made to the trainer groups and participant groups respectively. The participant group in this regard will refer to the staff members who attended the IMCI Update training session, facilitated by a trainer/ facilitator. The data analysis excludes the pilot interview data. Table 4.1. and 4.2. distinguishes and summarises both groups of the research participant’s demographic information.

**Table 4.1: Research Participant (Trainer) demographic information**

Trainer (T) Number	Target Group Categories:	Interview Group Number	Date Interviewed	Duration of interview excluding session briefing time
T1	T	Group 1	18 August 2022	23 min 06 sec
T2	T			
T3	T	Group 2	18 August 2022	16 min 44 sec
T4	T			
T19	T	Group 9	03 October 2022	51 min
T20	T			

**Legend: T=Trainer**

**Table 4.2: Research Participant (Participant) demographic information**

Participant (P) Number	Target Group Categories:	Interview Group Number	Date Interviewed	Duration of interview excluding session briefing time
P5	P	Group 3	19 August 2022	26 min
P6	P			
P7	P	Group 4	09 September 2022	24 min 45 sec
P8	P			
P9	P	Group 5	28 September 2022	28 min 34 sec
P10	P			
P11	P	Group 6	29 September 2022	30 min
P12	P			
P13	P	Group 7	30 September 2022	20 min 58 sec
P14	P			
P15	P	Group 8	30 September 2022	25 min 19 sec
P16	P			
P17	P			
P18	P			

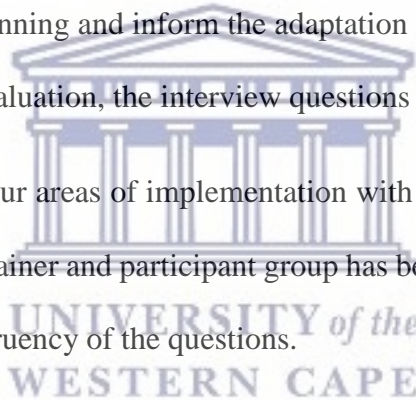
**Legend: P=Participant**



### 4.3 Data Collection Instrument

Two instruments separating the trainer from the participant group, were formulated with the same interview questions, however the questions were phrased to align with either the context of the trainer or the participant. The semi-structured Focus Group Interview Guide for Trainers (Appendix M) and semi-structured Focus Group Interview Guide for Participants (Appendix N) has reference. The Stufflebeam CIPP model was applied to guide the research study and focused on four areas of the programme implementation to meet the aim and objectives of the study. By applying this model as a theoretical framework, (see Table 4.3) the researcher was able to collect information on the current IMCI Update training to provide context, to critically evaluate the implementation of the research and to identify if any strengths or constraints were presented which could be addressed for future planning and inform the adaptation of the IMCI foundation training package. Within each area of evaluation, the interview questions were applied.

Table 4.3. below, describe the four areas of implementation with the interview questions aligned to each. Under each theme, the trainer and participant group has been separated and placed next to each other to demonstrated congruency of the questions.



**Table 4:3: Four areas of implementation aligned to the Focus Group Interview Guides**

<b>Context Evaluation:</b> (The overall goals or mission) Researcher identifies and focuses on the goals for the IMCI Update training i.e., Evaluation of the alignment of the adapted IMCI Update session toolkit to the updated 2019 IMCI Guideline.	
<b>Main Interview Question – Trainer</b>	<b>Main Interview Question - Participant</b>
When facilitating the updated case exercises, were you able to reach the correct case outcome aligned to the updated 2019 IMCI Guideline?	When working through the updated case exercises, were you able to reach the correct case outcome aligned to the updated 2019 IMCI Guideline?
<b>Input Evaluation:</b> (The plans and resources) Includes all the strategies implemented to reach the goal, and resources: Adapted training content, aligned to the Updated 2019 IMCI Guideline, as well as the human resources available for the training implementation across various health districts.	
<b>Main Interview Question – Trainer</b>	<b>Main Interview Question - Participant</b>
How effective do you think the IMCI Update training approach with its resources was to prepare health workers for the implementation of the 2019 IMCI Guideline on the service level platform?	How effective do you think the IMCI Update training approach with its resources was in preparing you for the implementation of the 2019 IMCI Guideline on the service level platform?
<b>Process Evaluation:</b> (The activities or components) Determining to gain an understanding of the quality and execution: The facilitation of the IMCI Update case exercises, using the IMCI Facilitators Guide for the update session, as well as the application of the participant’s exercise workbook describes this process and how stakeholders experienced it.	
<b>Main Interview Question – Trainer</b>	<b>Main Interview Question - Participant</b>
What worked well and what did not work well for you when facilitating the update training?	What worked well and what did not work well for you in the update training?
<b>The product or outcome of the program:</b> Determining developing an in-depth understanding of perceptions and feedback on how participants experienced the training will inform future planning. Evaluating whether the goals were met and how well the outcomes were achieved for sustainability of the intervention.	
<b>Main Interview Question – Trainer</b>	<b>Main Interview Question - Participant</b>
How appropriate and effective do you think the IMCI Update training approach with its resources was in order to apply the same adaptation approach to future IMCI training?	How appropriate and effective do you think the IMCI Update training approach with its resources was in order to apply the same adaptation approach to future IMCI training?

#### 4.4 Presentation of themes and categories of the Trainer Focus Group

In table 4.3. the focus group interview guide questions were presented side by side, to demonstrate that it represented the same research questions. The full interview guides can be viewed as appendices: (1) Trainer (Appendix M) and (2) Participant (Appendix N). Data collected from these interviews will be presented separately in this chapter, to show the emerging themes and categories. The analysis generated into main themes and categories from the Trainer Focus Groups, is listed in Table 4.4. and described in 4.4.

The Participant Focus Groups' main themes and categories are listed in Table 4.5. and described in 4.5. The chapter concludes with a summary of the analysis, and the correlation between the Trainer and Participant themes and categories. Further discussion is presented in Chapter five.

Data collected from the Trainer Focus Group interviews was analysed and generated four (4) themes and eleven (11) categories listed in Table 4.4. below

**Table 4.4: Trainer Focus Group Main Themes and Categories**

Theme	Categories
Trainers' views expressed about the Update Training resources, the case scenarios/ exercises and the outcome achieved	The ability or inability to reach the case outcome
	The session facilitator's role in fostering a safe and engaging learning environment
Trainers' satisfaction with the training implementation approach and its resources	Experience with the step-by-step case training approach
	Refreshing IMCI skills and improving confidence
	Satisfaction with the training resources
Trainers' inputs and recommendations	The need for an SOP and more training on the Integrated Clinical Child Stationery
	The impact of the group size, duration and time of the training update sessions delivered
	Training resources accessible for effective training implementation
Trainers' endorsement of the IMCI Update training approach	The access to IMCI training resources was useful and practical
	Group interaction and group discussions promoted learning
	The facilitated directed training approach commended

## 4.4 Trainer Focus Group Main Themes and Categories

### Statement of findings (Trainers)

#### *4.4.1 Theme 1: Trainers' views expressed about the Update Training resources, the case scenarios/ exercises and the outcome achieved*

For this theme, the following categories are linked: The ability or inability to reach the case outcome; and the session facilitator's role in fostering a safe and engaging learning environment.

##### **4.4.1.1 Category 1: The ability or inability to reach the case outcome**

The Trainers expressed that the case outcomes were aligned to the policy documents. There were occasions where the trainers could provide additional information about the case scenario to participants, where it was required to change the case outcome as a learning opportunity, but they could also provide guidance to participants who appeared to be struggling with navigation through the guideline to reach the case outcomes. The following excerpts have relevance:

*Trainer One: "There was one or two of the Participants that made some mistakes, and we couldn't work through the mistakes to get to the correct answer that was. But when we worked through the scenarios, we worked out the correct answers so with help we actually brought them up to speed"*

*Trainer Four: "Yes, and I was able to reach the correct outcome according to the IMCI guideline".*

*Trainer Nineteen: "Also having the Participants just going through all the cases with you mm it was a sometimes a bit difficult because people don't read, so they would skip some of the lines in the IMCI guideline, and they need just take them back. And then they realised, but they just didn't read. That's why they didn't come out at the right outcome".*

*Trainer Twenty: "Yes, we could reach the goal, but there could have been more information on the case studies, but we rectified that as we went on with the*

*different updates and then we updated it. So, some of it were especially with the HIV and TB once they were no information in the case studies where they could get. But in the case, there was some items that will lead you to that classification. So, we just updated it, but we could reach the outcome”.*

*Trainer Twenty: “It's not actually the reading, it's the time attached to the reading, because they always thinking about there's still a lot of people sitting outside, but what try to imprint it in the heads, is ...If you do it right, you won't it... You must work smart, not hard. If you do it the right way and read it the right way, then it will actually take you lesser time. But I still have to try and get that mind shift to them. But and also some of them were complaining that it was too small. The letters in IMCI guideline it's too small so. That's what I got by then”.*

#### **4.4.1.2 Category 2: The session facilitator’s role in fostering a safe and engaging learning environment**

Trainers expressed the awareness of their role as a facilitator and the factors which could enhance or impede learning for the participants. These included their ability to put participants at ease, the learning environment, as well as the ability to manage the group effectively. The following excerpts have relevance:

*Trainer Participant Nineteen: “So, it's nice. Yeah, there was coffee and tea available, and the people had a nice break. It's nice having people just in a space that's relaxed, that's not always so tense. So, that was quite good for me”.*

*Trainer Participant Twenty: They were also relating to each other, and we were like. Talking a lot on the subject and they could have helped each other where there was. Uh, where there was struggling or so, so it was actually a very nice update”.*

*Trainer Participant Twenty: “The venue, if they come here, it's people from different clinics, so sometimes they don't relate to each other and sometimes they*

*don't interact with the training session. Uh, I, don't know why, but that was a little, but they were also fine, so the reach for me is to, so for me is that everybody must participate but... ”.*

#### **4.4.2 Theme 2: Trainers' satisfaction with the training implementation approach and its resources**

Trainers shared general aspects on how they were able to conduct the training, based on the way the training was structured to achieve the outcomes; how they were able to utilise the resources optimally and whether they found it beneficial and meaningful for them as trainers, and the observed approach and response to the training from the participants.

For this theme, the following categories are linked: Experience with the step-by-step case training approach; Refreshing IMCI skills and improving confidence; and Satisfaction with the training resources.

##### **4.4.2.1 Category 1: Experience with the step-by-step case training approach**

The Trainers demonstrated an understanding of their facilitation role, to ensure that the case outcomes were reached, and that learning was facilitated through the process. There was a general expression and indication from all the trainers that the training approach was well received, that the step-by-step method to facilitate the session enhanced the training, and that the method created convenience for the trainers who needed to prepare for and execute the training. The following excerpts have relevance:

*Trainer One: “Okay, for the resources that we received, like I said in the beginning it was of good quality and it helped me to prepare the update sessions. So, it was like in chronological order”.*

*Trainer Three: “The training was written step by step”.*

*Trainer Four: “It made it easier and to have a step-by-step approach to guide you and to showing exactly the changes also in the new guideline and using a step-by-step approach with the new guideline and to guide how to use it correctly”.*

*Trainer Four: “Where the facilitator read out the scenario specifically and gave the participants a scenario with specific information and they will need to prompt you for and tell you guide you how to where to go in the guidelines. So, it's, it's a much more using your guideline and not necessarily only reading the information, but actually practically and putting it into work”.*

#### **4.4.2.2 Category 2: Refreshing IMCI skills and improving confidence**

Trainers described the reinforcement of theory with practice in two different approaches. The first one was to ensure that the practical growth measurement plotting onto the growth charts was achieved successfully within the training; with the second one, referring to the practical skill to measure growth which was reinforced within the training and post training to improve practical competence, when identified as a training gap. This aspect was not emphasised strongly between other trainer groups. However, it was considered within one focus group as a strong focus, because the trainers were both from different geographical locations. Its importance was something which emerged from the participants feedback as well. The following excerpts have relevance:

*Trainer Two: “And I think this guideline is more ... it helps more for the trainers, because our old guideline wasn't so effective like this guideline we are having now is, with all the communication. uh... all the different things that is in the guideline”.*

*Trainer Three: “I just think it was the whole process was... It gave me as a trainer a lot of confidence. So, it was like learning to ride a bike and, umm... the more I did it the better I became. So, it was a very good introduction to training for me”.*

Trainer Three: “When we finished the cases, everyone was feeling more confident, and they felt that they had...They felt more equipped to deal with an IMCI”.

Trainer Three: “After we've done the cases and we spend some time getting familiar with the new guide and then afterwards we um... When we finished the cases, everyone was feeling more confident and they felt that they had...They felt more equipped to deal with an IMCI case from the new, using the new 2019 guideline”.

Trainer Nineteen: “I did some training during that also on the integrated stationary because the people said no IMCI is not aligned to the integrated stationery. So, I had to go back and show them. But there is in your integrated stationary”.

Trainer Nineteen: “We focused a lot on the breastfeeding practical session and also the weighing and then the length or height of children. We did that. We also did the head circumference and that was quite interesting for me because one of my Participants said HC stands for Headcount. So, I needed to do a bit of just going back and tell them no it's a head circumference. And the importance of that. We did a lot of training on the not the BMI... the MUAC... and also just how to use the, YA. The Road to Health chart Booklet and the importance of a recording in the booklet. So, we did a lot of those stuff that people... ja, if you're busy in a clinic, you forget about the little things. So, we did a lot of that”.

Trainer Twenty: “So, the stuff that we received, it was very helpful because, like to go into depth with the growth monitoring, head circumference, MUAC and even the calibration of the scale that people think that it's not important, but it's actually a very important thing. And then what I came up with is that the professional nurses tend not to interpret the Road to Health booklet, so then they missed the malnutrition children. So, I zoomed into that because I think it's important”.



#### **4.4.2.3 Category 3: Satisfaction with the training resources**

The trainers found the training resources to be useful, practical, and easy to use. It provided a step-by-step sequence from planning to execution of the sessions. Trainers welcomed the resources and found them to be of high quality, making their facilitation task more effective. The following excerpts have relevance:

*Trainer Nineteen: “In my in all of my update sessions, actually everyone said shoo now they understand this concept better or they follow the algorithm better because of how the training material guided them. So yes, it was extremely, extremely effective for me”.*

#### **4.4.3 Theme 3: Trainers’ inputs and recommendations**

The Trainers were able to provide feedback as to how they experienced facilitating the update sessions and the factors which contributed to effective implementation, but more valuable were observations of what did not work well, and their recommendations to improve this.

For this theme, the following categories are linked: The need for an Standard Operating Procedure (SOP) and more training on the Integrated Clinical Child Stationery; The impact of the group size, duration and time of the training update sessions delivered; and Training resources accessible for effective training implementation.

##### **4.4.3.1 Category 1: The need for an SOP and more training on the Integrated Clinical Child Stationery**

Trainers were divided in opinion about which IMCI Stationery was relevant for the IMCI training and IMCI service implementation. Some expressed a preference for the IMCI recording forms, whilst others expressed that the Integrated Clinical Stationery (ICS) replaced the IMCI recording form for the child aged 2 Months up to 5 years. There was an identification between the trainers that there were some ICS recording gaps; that the ICS form had minimal space for writing; that

more training was required in the ICS; and that a clear Standard Operating Procedure (SOP) was needed on the correct stationery to be used in IMCI.

The following excerpt has relevance:

*Trainer One: “I just think that there must be a decision made on if we gonna use the recording forms together with the integrated stationery or are we gonna use the integrated stationery alone”*

*Trainer Twenty: “The fact that we must use the integrated stationery with the children two months to five years because the like, for instance, the danger signs on the integrated stationary are not the same than on the recording form, but I would prefer the recording form, or they must update the ICS to how the recording form looks because if you use the recording form then you can't miss anything. I think that is a very good tool. They still using it under two months, but I would prefer it to be used two months and five years or so because it's actually guiding you. You have to look at everything”.*

*Trainer Twenty: “ICS is not a part of the national IMCI package, but the Integrated stationery is what we use in the Western Cape for People from two months and older to ... if the person comes into the clinic, that is where we do our record keeping on. So previously when we didn't have the integrated stationery, we used the IMCI recording form for both naught to two months for babies and two to five years for children. So that actually let you and that was also a nice tool because you have to look at the baby as a whole, holistically, so it guided you. You could see. I must do this. I must do this. I must do this. But with the record keeping in the ICS, there it comes in the reading. It's also the ... It's also state that you must do this and this and this and this, but it's almost like you people don't follow then the algorithm of the IMCI chart booklet. But if they had the recording form they had too because that is to be effective in your record keeping on the recording form. But there is a change with this but does and what the updates and they saw out to use the algorithm that actually in the ICS, it's just the danger signs*

*that are not the same. But in the ICS is it's the same rhythm, it's just not the same space that you can write”.*

#### **4.4.3.2 Category 2: The impact of the group size, duration and time of the training update sessions delivered**

Several factors were highlighted as possible barriers for more effective training, like the timing of scheduled training, the duration of training and shortage of staff which may have an impact on the release of staff to attend training. Some trainers also expressed success with their training based on their group size and duration of training. The following excerpt has relevance:

*Trainer Participant One: “I just think that maybe we must try and make the updates for the IMCI maybe a bit longer than only the three cases, because you could actually see some of the clinicians who use the manuals, and who don’t, so I think we must just make the update session a bit longer than only the three cases that has to be worked out, but the materials that was provided for us, was of high quality”.*

*Trainer One: “I had actually two or three workers... healthcare workers that I did the up training with, so the smaller groups were actually for me more effective because the space felt more safe for them to make mistakes. So, what actually worked well for me was, was that the smaller groups I had, and the materials were actually straight forward, they could understand it very well”.*

*Trainer Four: “The only thing that I can... not complain but the amount of time, and I think one day or even four hours is even... I would like to zoom in more and not to rush through. So, time is definitely because it's quite a dense package and you don't want to skip any information that you know might be valuable or rush through the material”.*

*Trainer Nineteen: “the thing that didn't work well for me is not something to do with the material or the toolkit. It had more to do with um... I didn't manage to get big groups of people together to have it... umm, that's attending it.*

*Trainer One: So, I had to at some cases I had to take people one by one. In the one hand it was good because I could spend a quality time with them and explain everything well, but on the other side it made my work much more. I had to repeat a lot, yes, but it's not. I didn't have any problem with the toolkit”.*

*Trainer Nineteen: “I don't know how people in the other sub districts did it, but we did a 3-hour session which I after I realised now I should have made it maybe a longer session. Because I would have liked to do more of the practical's with them, but the workbook we did some of the cases and then we sent, I sent them home and they needed to complete the workbook in their own time and send it back to me within a 3–4-week period. And then I marked it, and it was, it was good to see how people because in a group they communicated with each other doing their workbook. But just to see how they did it on their own was also good. But I would definitely make the sessions longer when I'm doing it again and not just the three-hour session. Ja. And also, because people are quite pushed for time. So, if we could work through more of the cases in the session, it would be more helpful to them than them going home and having to do a lot of this. the cases at home”.*

*Trainer Twenty: “Just the time because that was nice of them for the four hours. If it must be longer then they wouldn't have done it. Yeah, because the service must also go on”.*

#### **4.4.3.3 Category 3: Training resources accessible for effective training implementation**

Trainer Participants expressed that they were happy with the printed resources provided for the update session. The session was facilitated directed, using either a PowerPoint presentation or a facilitator's guide, depending on the resources available for the on-site trainer. The presentation was saved on a PDF version to facilitate the feedback process via the trainer to the developer of the content, to ensure continuous evolution and improvement of the content which was shared with the trainers after adaptation. There was also a differentiation made between the printed resources

and the resources needed to support practical skills on the service platform which some trainers included in their updates as well. The following excerpt has relevance:

*Trainer One: “Okay, for the resources that we received, like I said in the beginning it was of good quality and it helped me to prepare the update sessions. So, it was like in chronological order. It was um ja the whole approach of IMCI as we start to work from the beginning, from the age of the child, which recording form you need to use, and the correct completion of the form, so it actually, the training materials provided helped me to prepare myself and it actually was very user friendly for the Participants as well. Because the ...what’s a opdrag? The instructions was clear, so they actually knew what they had to do”.*

*Trainer Nineteen: “I think it was very good material. And the fact that we could give them a Participants workbook was extremely good”.*

*Trainer Twenty: “I actually just took my laptop and just use the presentation like that. So, I read it to them, and we were like close together but with the projector there's a broad view, so they didn't have that broadview, but I was reading it to them, and I was repeating myself so that they can understand that so. It was fine”.*

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#### **4.4.4 Theme 4: Trainers’ endorsement of the IMCI Update training approach**

In this theme, Trainer Participants highlighted what worked well for them, and what they felt, were the factors to be considered for future IMCI Update training and the benefits thereof. The factors included the access to training resources and its importance to effectively deliver training; instructions to trainers on how to conduct the training using the resources; accessibility to staff to conduct training in venues which were conducive to learning; and the ability to manage groups. For this theme, the following categories are linked: The access to IMCI training resources were

useful and practical; group interaction and group discussions promoted learning; and the facilitated directed training approach commended.

#### **4.4.4.1 Category 1: The access to IMCI training resources was useful and practical.**

Trainers expressed that they were satisfied with the printed resources provided for the update session and that the resources created convenience for both trainer and participant with a step-by-step approach or guide leading to the next part within the case scenario or training agenda. One trainer alluded that the resources and approach could provide standardisation and uniformity for trainers. The following excerpts have relevance:

*Trainer One: Okay, for the resources that we received, like I said in the beginning it was of good quality and it helped me to prepare the update sessions. So, it was like in chronological order. It was the whole approach of IMCI as we start to work from the beginning, from the age of the child, which recording form you need to use, and the correct completion of the form, so it actually, the training materials provided helped me to prepare myself and it actually was very user friendly for the Participants as well. Because the ...what's a opdrag? The instructions was clear, so they actually knew what they had to do".*

*Trainer Four: "As we are a lot of different trainers in Western Cape and Rural, if we all follow the exact same package and the facilitators guide, and the Participant guide and we can have a definite answer or standard to how all our participants should be trained and not everybody putting in their own two cents".*

*Trainer Four: "I can remember from my previous IMCI training. It was a lot of reading and not necessarily practical application of using the IMCI guideline and this IMCI update training was very much more hands-on interactive and all the resources were available. So, there was a standardised form that you use so nobody um... if everybody's giving it the same with the same material, you can have a standardised outcome of training and for all your participants".*

*Trainer Nineteen: “What worked well for me is the fact that I do have a training room available and that all my clinics are within say about 30 minutes from where the training room is situated. So, we could get all the Trainers to come here and not do it in the clinic. We did try some of updates previously in clinics in its difficult setting with people walking in and ja so. What worked well is that we did have a training room available. I did have a projector available, and people could come here. We had a relaxed setting, so this the staff that attended to training, they weren't up in arms, just being here that it was like all of them. So, it has a way of just taking a break from the clinic. So that was nice to have them here”.*

*Trainer Nineteen: “In my training facility, I don't have all the tools I needed to do all of the practical's. So that's something I also I'm working on and getting all the scales and everything like that for the training room. But I needed to go to the facilities to do some of the practical's with the people, so that might be quite difficult actually”*

*Trainer Twenty: “What was nice is, is that you have to open with the new resources... you have to work in conjunction with the Road to Health Booklet and the IMCI guideline to classify right on the weight and so on. So, it was very good for me. But to go out to them, was I think it was a winner because they made time, even if the four hours is a little”.*

#### **4.4.4.2 Category 2: Group interaction and group discussions promoted learning**

Trainers were aware that they had to manage their groups effectively in order to promote learning and achieve the case outcomes. Some were aware of the group dynamics that could exist and were able to effectively facilitate the sessions whilst promoting engagement between participants. The case exercise structure in a step-by-step approach also created the opportunity for cases to be divided between participants, and the case discussion within a group was encouraged before the model answer was presented at the session. The following excerpts have relevance:

*Trainer Nineteen: “it was nice for just going to clinic and having the one group of people there. In our sub-district, it was actually quite nice because it was different clinics’ staff mixing together and I enjoyed that more than having the same people around them all the time. So, I just add that as what worked well is specially that it was a mixed group. It was not just one specific clinic. Yeah, I think that's about it”.*

*Trainer Twenty: “The fact that I went to them worked well for me because I could reach them as a team, and they could also discuss, and they can make plans with me there and ask questions that everybody wants to know. So that worked well for me. They ... I ... was lucky actually. They've closed for the four hours. So, it was just me with the staff that worked very well for me because they ...”.*

#### **4.4.4.3 Category 3: The facilitated directed training approach commended**

Trainers expressed that there was convenience in following the training approach, and in using the training resource with no adverse outcomes or facilitation challenges expressed, such as that they could not manage a group, nor reach the case outcomes. The following excerpts have relevance:

*Trainer One: “But otherwise, I can only say that the training that we’ve got was of good quality. We could’ve taken that to our practices and started with the updates and ja where we grew into that process”.*

*Trainer Two: “I actually think that all the training, the whole training approach was actually very good, and we could have applied it effectively”.*

*Trainer Three: “Yes, I think this is the way forward. It was a very effective and umm yeah, it made it very easy for us as trainers because it's a hands-on tool and umm, the more you go through it with the participants, the better you get to know it and you can start thinking”.*



*Trainer Nineteen: “Where there was something that wasn't correct, then we just reported it and it was updated during the time that we did the update as well. So that was nice”.*

In table 4.5. below, four (4) main themes and ten (10) categories were presented for the Participant Focus Group. The table will be followed by the statement of findings in 4.5.

**Table 4.5: Participant Focus Group Main themes and categories**

<b>Theme</b>	<b>Categories</b>
Participants’ views expressed about the Update Training resources, the case scenarios/ exercises and the outcome achieved	The ability or inability to reach the case outcome aligned to the IMCI Guideline
	Category: The session facilitator’s role in fostering a safe and engaging learning environment
Participants’ satisfaction with the training implementation approach and its resources	Experience with the step-by-step case training approach
	Refreshing and reinforcing IMCI theory and practice to improve skill and confidence
	Satisfaction with the case scenarios and training resources
Participants’ inputs and recommendations	The need for an SOP and more training on the Integrated Clinical Child Stationery
	Importance of regular scheduled IMCI updates
	The impact of the group size, duration and time of the training update sessions delivered
Participants’ endorsement of the IMCI Update training approach	Group interaction and group discussions promoted learning
	The facilitated directed training approach commended

#### **4.5 Presentation of themes and categories of the Participant Focus Group**

##### **Statement of findings**

##### ***4.5.1 Theme 1: Participants’ views expressed on the Update Training resources, the case scenarios/exercises and the outcome achieved***

For this theme, the following categories are linked: The ability or inability to reach the case outcome aligned to the IMCI Guideline; and the session facilitator’s role in fostering a safe and engaging learning environment.

#### **4.5.1.1 Category 1: The ability or inability to reach the case outcome aligned to the IMCI Guideline**

Participants expressed satisfaction that the case outcomes could be reached and that there was alignment of the training resources with the RTHB and IMCI Guideline. Thorough reading was highlighted as one of the key factors to reaching the correct case outcome, as well as becoming familiar with the new IMCI Guideline and training resources. Errors in the IMCI Guideline were detected which had a negative impact on the case outcome. The following excerpts have relevance:

*Participant Five: “There were very few corrections to be made on the IMCI Manual... so it was not nice to have a new guideline with faults”.*

*Participant Seven: “I don't think it was an error on the case exercises. It's more about the reading and look for the stuff and you not really familiarised with the book because it's a new book. So, the old IMCI you were familiar with that book. So, you know exactly where to go to. So, with the new book you still have to read through all the stuff, from top to bottom and you were so used to the old stuff that you've already know, okay this is just... I am just making an example ... It's just give another course, but you actually have to reach what the management is and what is the ..., all of that stuff.*

*So, with the case scenarios, the first one was not a challenge because you don't know what the outcome is, but it's more that you know now, okay, now it's not like the old one. You have to go and open the book and read every line until you are familiar with it”.*

*Participant Fourteen: “The book was very colourful and if I can add, there was a section for two months to five years, and we could really see the difference when we made the comparison between the book, the old one with the 2019 one. And then on the front cover, the Nutrition, Love, Protection, Healthcare and Extra Care also featured. So, our previous book was not colourful and the content also. So, it was lovely and user friendly, there highlighted block which were colourful”.*

Participant Fifteen: “We could definitely reach the outcome. As they said, it was user friendly, and it was easy to find the answers. So, the guide was correct. You could take the index/content page in the guideline and then you could navigate to where you had to be. It was, it really reached the outcome”.

Participant Sixteen: “As we went through the case studies, and read through it, sometimes a person miss/ omit a lot of things in the workplace”.

Participant Seventeen: “So, because there's different stationery that needs to be completed as the stationary in the patient files and the patient's Road to Health Booklet. So, it was quite a nice practical exercise, especially if you haven't been to the practical side in a long time or not updated. As the Participant 2 earlier mentioned, the participant did it a long time ago. I also did IMCI way back in 2006, so it was quite nice to have a refresher on it with the Road to Health Booklet”.

#### **4.5.1.2 Category 2: The session facilitator's role in fostering a safe and engaging learning environment**

Participants expressed their satisfaction and ease with the facilitated directed approach. It emerged in the process that group discussions facilitated participants learning from each other, whilst still being guided by the facilitator. The following excerpts have relevance:

Participant Thirteen: “Everything worked out well for me, the way it was presented, we were relaxed, we could ask questions if we didn't understand. So, everything was actually easy”; and “As previous participants mentioned, the facilitator made us feel relaxed. We could ask questions if we did not understand. The Facilitator moved between us”.

Participant Fourteen: “Yes, there was. The presenter told the individual where our errors were, so it allowed you to see where to improve”.

*Participant Fifteen:* “It actually worked well. As everyone said, we were generally relaxed because we knew the facilitator, so we could ask questions and if we were concerned, we could get her inputs. We also had an opportunity to do a self-evaluation following doing the case studies based on how well we did. It was generally well conducted. And there was nothing which didn’t work well”.

*Participant Sixteen:* “Yes, it was very relevant for me, the fact that the trainer who facilitated it, made it easier for us”.

#### **4.5.2 Theme 2: Participants’ satisfaction with the training implementation approach and its resources**

For this theme, the following categories are linked: Experience with the step-by-step case training approach; Refreshing and reinforcing IMCI theory and practice to improve skill and confidence; and Satisfaction with the case scenarios and training resources.

##### **4.5.2.1 Category 1: Experience with the step-by-step case training approach**

The step-by-step case training approach was welcomed by participants, as it was convenient to navigate through the case scenarios and the workbook. It also reminded them of previous missed opportunities which they were able to, through the step-by-step process identify as a problem, and refresh before returning to the service platform to apply the correct approach.

The following excerpts have relevance:

*Participant Eight:* “For me it was, it was really relevant because a lot of the things specifically told you what to do. So, you did not have to look for what you had to do and wonder what the next step was. But with the update, you knew exactly to who to refer to and what the next step was”.

*Participant Sixteen:* “The facilitator explained to us easily, step by step as we went through the case studies, and we could refer to the content page. After going to the content page, you could follow”.

*Participant Eighteen: “Which was set, led from one to the other. It was not difficult. It was not confusing for me”.*

#### **4.5.2.2 Category 2: Refreshing and reinforcing IMCI theory and practice to improve skill and confidence**

All participants provided input that they gained new IMCI knowledge in the update, and it was highlighted that by working through the case scenarios, they were able to identify their own strengths, weaknesses, and opportunities in IMCI. The general feedback was that the session was beneficial, and that ongoing updates and practical application of growth measurements could improve the classification and case management skill. Some participants reported improved confidence and feeling more equipped to do IMCI following the update session, as they were refreshed on the learning content and reminded of the IMCI basics of navigating through the IMCI Guideline. It was also expressed that group work and asking questions gave them reassurance and more confidence when the answers were provided.

The following excerpts have relevance:

*Participant Thirteen: “Yes, it is as I said it, it is user friendly, it was facilitated and at times an eye opener because there were a few things which a person overlooked or neglected to do which made you aware of what the right thing was. So, it was very effective, the whole book and the facilitation”.*

*Participant Thirteen: “The case scenarios were things which we get in our clinics, so it helped prepare us better for what we going to do. And this would also help us work through it quicker because we worked through the case scenarios already”.*

*Participant Fourteen: “It was truly, ... we could ask the facilitator, and it empowered us with things which in the past we may have neglected/ omitted, because we became so used to the patients we saw and some of the things which*

*we did out of our heads to manage, and so with the book we could use, it's really an advantage/ benefit which the update gave us".*

*Participant Sixteen: "For example, if a person worked in a particular area, like in a baby clinic there are the things like MUAC which we must do, the weight, the length. That was nice because not everyone works in the baby clinic. The plotting also. Personally, this was nice for me. So, I could apply it better if I got a child and could do it better".*

#### **4.5.2.3 Category 3: Satisfaction with the case scenarios and training resources.**

Most participants expressed satisfaction with the case scenarios and said that it was relevant to the cases seen on the service platform. However, one participant expressed that the case exercises selected for their training session was not relevant to the cases seen on the service platform where assigned, but that they could reach the case outcome.

The following excerpts have relevance:

*Participant Twelve: "It is adult training and I think the way with the scenarios give us scenario and work through each and then you can easily participate also in the training session and giving your experiences in your facilities that maybe can link to the scenarios that was presented. So, you can go about maybe you hadn't deal with a scenario in your facility the same way as how that scenario is. So, you look out for where you maybe have a goal of the part of the IMCI Booklet. So, it gets you together to go about and do ... the go through the booklet like the guideline shows you. So, I think for future trainings it will be very good to do the trainings like that".*

*Participant Thirteen: "It was very appropriate. All the materials/resources which was used, the case studies etc. was very effective, because it was at the end of the day, what was relevant to our*

*patient. The case scenarios were things which we get in our clinics, so it helped prepare us better for what we going to do. And this would also help us work through it quicker because we worked through the case scenarios already”.*

#### **4.5.3 Theme 3: Participants’ inputs and recommendations**

For this theme, the following categories are linked: The need for an SOP and more training on the Integrated Clinical Child Stationery; Importance of regular scheduled IMCI updates; and the impact of the group size, duration and time of the training update sessions delivered.

##### **4.5.3.1 Category 1: The need for an SOP and more training on the Integrated Clinical Child Stationery**

Some participants mentioned that there were previous problems experienced with the Integrated Clinical Stationery used for IMCI. Those who raised this as a problem, were unclear of the reporting pathways and whether there was an IMCI stationery SOP.

The following excerpts have relevance:

*Participant Seventeen: “The IMCI the recording form it is a nice tool because then you won't miss anything on the child. So, the practical exercise it was well executed, with the Road to Health Booklet”.*

*Participant Eighteen: “I don't know how other clinics experience this, but I have been working a long time with it and actually have a problem with it. I don't know what to actually use, because they say no more paper, you know in the files. So, we don't really use the 2 months up to 5 years form”.*

##### **4.5.3.2 Category 2: Importance of regular scheduled IMCI updates**

Participants expressed satisfaction with the update session and found the training approach to be successful, despite the time limitations. Some felt that it was important to have more frequent updates. The following excerpts have relevance:

*Participant Seven: “They must make it the scheduled training with updates. They come and give the update of the new book, which is nice, which is fine. So, now they must come back and come and check. How are we now practicing whatever they come teach us and stuff. And make it a course, like the other courses, maybe a one-week course or three days”.*

*Participant Nine: “Ja, I think it's like I said, I think it's very appropriate. And ja, it is a good we/you can use it in the future for future IMCI training or update trainings because it worked well, and it was sufficient, and it was complete”.*

*Participant Eleven: “So I think for future trainings it will be very good to do the trainings like that”.*

*Participant Seventeen: “There are some areas where there are gaps, especially where one does your audits near to the end of the month, your file audits, you pick up things, so a refresher is recommended for anyone”.*

*Participant Eighteen: “This is what I first want to ask. If it is yearly, then I do agree that we can continue like this. I feel that long periods, too many changes must be overcome. Let us rather be updates”.*

#### **4.5.3.3 Category 3: The impact of the group size, duration and time of the training update sessions delivered**

Group sizes varied and this had an impact on how many case scenarios could be covered in the time scheduled with the group. There were some participants who felt satisfied with the time spent in a session, whereas others felt that there was not enough time and that more cases needed to be covered in order to reduce homework. A major factor which determined how much time could be spent in a session was the fact that staff were still on duty during training, did not receive



replacements to attend the update session and had to consider staff shortages. The following excerpts have relevance:

*Participant Eight: “But, one thing that was a no for me was the time, the time frame when the update was done because it was in the afternoon. That was the only thing”; “Because, were pushing to help the patients through the day and it was already, I think it was 2:00 o'clock in the afternoon”; “So that was noga a bit hectic, but the session was nice”; “I think if it was done in the morning then I will remember a lot of things. Then it was fresh, I was fresh mos in the morning”.*

*Participant Eleven: “The whole session was from 8:00 o'clock until 1:00 o'clock. So, we did our scenarios and we had five-minute break sessions within different scenarios, maybe we do three scenarios and then we have a 5-minute break and then we go on. So, the whole session for the day was actually like from 8:00 o'clock to 1:00 o'clock. We did our sessions”.*

#### **4.5.4 Theme 4: Participants’ endorsement of the IMCI Update training approach**

For this theme, the following categories are linked: Group interaction and group discussions promoted learning; and the facilitated directed training approach commended.

##### **4.5.4.1 Category 1: Group interaction and group discussions promoted learning**

Participants reported good experiences of learning within a group. They highlighted that it was an opportunity to engage with each other and learn in the process, whilst still being guided by the facilitator. There were no adverse experiences reported from the group interaction and group dynamics. The following excerpts have relevance:

*Participant Five: “I think the approach was good - the smaller groups worked well; In bigger groups we miss candidates’ opinions”.*

*Participant Six: “We were a small group- the update was done at the facility... so it was more 1 to 1 approach”.*

*Participant Eight: “So we were four people here in the group. So, each one of us discussed the case. So, the things that I didn't know, somebody else knew. So, we all learn from each other. So, we've learned from each other and that was nice”.*

*Participant Eleven: “We were only like two or three uh staff members there, that was a training provided for so we couldn't easily discuss and work out the answers and learn from one another to get to the point where we can make a diagnosis and getting to give the correct treatment according to the guideline”.*

*Participant Twelve: “So, the group was not too big that you got lost in the way. So, they could give attention to if we raised...”.*

#### **4.5.4.2. Category 2: The facilitated directed training approach commended**

Participants expressed satisfaction and valued the role of the facilitator. It was highlighted that they could engage with each other, also ask questions, and were reassured by the presence and guidance from a facilitator to achieve the correct case outcomes where they struggled. Having the correct case outcome revealed to them by the facilitator was welcomed. The following excerpts have relevance:

*Participant Six: “It was effective, as we all experience the same challenges in the facility. Future training like this would be good”.*

*Participant Eight: “We must prevent deaths; therefore, we must work thoroughly. It was done well. IMCI Update was done over two hours and then it was completed”.*

*Participants Nine: “Using the case scenarios and like I said, working from steps step one through the whole scenario and then afterwards looking at what you've*

*done wrong or right. Umm ja and revising it that was good for me. You learnt a lot and it's good to see if you miss something or you misinterpret something”.*

*Participant Ten: “I can precisely say now. The cases were different, but the whole booklet and the IMCI is so well compiled/put together, that it, you must read and go through it well so that you don’t leave anything out. I feel that this IMCI is almost better than the previous one. I don’t know why I think this, but it’s good for training us to be informed”.*

*Participant Eleven: “the update training session worked well because why there was scenarios taken out of the different compartments of the booklet. So, it worked well because when it covers all the different sections of the booklet so you can and also what works well is that in the session, we weren’t a big group”.*

*Participant Thirteen: “Yes, it is as I said it, it is user friendly, it was facilitated and at times an eye opener because there were a few things which a person overlooked or neglected to do which made you aware of what the right thing was. So, it was very effective, the who book and the facilitation”.*

*Participant Fifteen: “So, very effective and the approach is good. And it can be recommended for future studies or training development in the same manner”.*

*Participant Eighteen: “I can also say everything worked. It worked well because I am actually done with IMCI from 2002 when I did IMCI. I can’t say that there is something that didn’t work well. What was lovely was, maybe I can elaborate, was the TB section, how you screen the child... it was with how you do the new MUAC etc. It was actually lovely to update this again. So, it was good for me. It was well set out/created”.*

## 4.6 Summary

In this chapter the data analysis findings were presented. The Trainer Focus Group Main themes and categories was presented in 4.4., where it was discussed under four (4) themes and ten (10) categories. The Participant Focus Group main themes and categories was presented in 4.5.

The aim of the study was to evaluate the training implementation of the adapted IMCI update training resources, aligned to the updated IMCI Guideline. Though the data for the Trainer and Participant groups were collected, coded, and analysed separately, below is a brief summary overview of the common trends and findings which emerged.

The IMCI Update sessions conducted in various sub-districts within the same health district, were scheduled and facilitated by IMCI trainers, using the IMCI update training resources presented to course participants. The resources were found to be user-friendly and were convenient for the trainer and participant in its application. Where trainers did not have access to a projector to facilitate the session using the PowerPoint provided, the session was conducted using the Facilitator's Guide. The facilitator and participants expressed that they could still reach the case outcomes in the absence of a projector, and that the facilitation session was merely adapted to reach the training objectives with the resources provided.

Group work and case discussions encouraged interaction between the facilitator and the participants, created the opportunity to pose questions and promoted learning through this process. The variation in group sizes and session duration were factors which provided benefits and constraints, highlighted by trainer and participant focus groups. Staff shortages and insufficient time for the update sessions were the main constraints highlighted.

Case exercise outcomes were reached. However poor reading skills and the omission of information was highlighted as a few of the barriers to effectively navigate some cases to reach the correct case outcome at the first attempt. This emerged as a significant factor in trainer and participant focus groups. In some cases which was facilitated by the trainer, information was deliberately omitted to stimulate thinking and required probing for answers. However, some participants struggled with this. Where trainers identified the need for additional practical skill reinforcement in growth measurements, this was conducted as an additional activity as part of the update session, to reinforce competency. This was done at the discretion and capacity of the relevant trainer.

The preference of some trainers and participants to use the IMCI recording forms and the uncertainty about the mandate for the Integrated Clinical Stationery, left a few trainers and participants unsure and inexperienced in the application of the ICS. With that realisation a recommendation was made for training on the stationery, and for a clear SOP on its application within IMCI.

The adapted IMCI Update training resources appeared to be aligned to the updated IMCI Guideline and effective training implementation was reported with the training approach endorsed, despite the recommendation of further development of case exercises and clarification of the provincial stationery used in IMCI recordings.

In Chapter five, the discussion of the findings of this study will be presented with a further discussion of the correlation between the Trainer and Participant Groups.

## CHAPTER FIVE

### DISCUSSION OF THE FINDINGS

#### 5.1 Outline

The aim of the study was to evaluate the training implementation of the adapted IMCI update training resources, aligned to the updated 2019 IMCI Guideline, with the specific objectives: (i) To explore and interpret whether the adapted IMCI Update session toolkit is aligned to the updated 2019 IMCI Guideline; (ii) To develop an in-depth understanding of whether all the strategies implemented to reach the goal, and resources available for the IMCI training implementation, were appropriate and useful; (iii) To gain an understanding of the quality and execution of the facilitation of the IMCI update case exercises, IMCI Facilitators Guide for the update session, as well as the application of the participants' exercise workbook described in this process, and how stakeholders experienced it; and (iv) To explore and describe perceptions and feedback on how participants experienced the training in order to inform future planning.

The following chapter, presented by the researcher, provides an overview of the main themes with the discussion of the research study findings within the categories. To enhance the reliability, credibility and validity of the study, the theoretical triangulation of the themes and categories are presented in Table 5.1, demonstrating that the study findings were accurately reflected between the data set, supporting the conclusion derived from the convergence of multiple health professional perspectives. According to an article published in 2019, on the Triangulation in research, triangulation is described as a method which brings observations or theories together in the research study, to help explain the phenomena and ensure unbiased, valid, and trustworthy findings (Noble & Heale, 2019).

## 5.2 Overview of the main themes

Thematic analysis allowed the researcher to make sense of the research questions being explored, as well as analysing patterns that could be identified across any data set, through the answers or responses provided in the focus group interviews. The discussion of the four main themes generated through the data set interpretation, follows.

### *5.2.1 Theme 1: Research study participants (Trainers/Participants) views expressed about the Update Training resources, the case scenarios/exercises and the outcome achieved*

Using the research study participants' post training reflections was a way to measure their satisfaction as users, and to identify gaps in the training which prevented the achievement of the outcome. The experience of the trainer who delivered the training, and the participant who received the training are the "users" in this regard. Training is delivered to ensure that staff have the relevant knowledge and skills to implement what they have learnt. Hence, collecting feedback from different staff members with various skill sets, on different aspects of the training, was valuable to determine whether they were satisfied with the case outcomes, and to determine if the quality of cases presented were aligned to the strategies and latest policies. More importantly it determined common experiences which were triangulated to explain the phenomena.

From this feedback was derived which considered successes and recommendations to improve the evolution and strengthening of the training resources which would ultimately improve the user's experience.

### ***5.2.2 Theme 2: Trainers'/ Participants' satisfaction with the training implementation approach and its resources***

The effectiveness of training was reflected through how well the training methodology and the designed resources supported learning, and also included the transfer of knowledge in order to implement this on the service platform. Both these aspects were reflected upon through the successful reach of the case outcome and the participants' satisfaction with this, based on their experience in the service platform and their own expectation. It was also evaluated based on the trainers' ability to facilitate the process to reach the case outcome and to ensure that learning was imparted in the process.

### ***5.2.3 Theme 3: Trainers'/ Participants' inputs and recommendations***

The main purpose of requesting inputs and recommendations, was to provide the participants with the opportunity to use their voices based on their own experience in the training and what was relevant to consider for successful service implementation, and to encourage objective feedback on the content and training approach through the user's experience. It also aimed at validating their contribution of information shared.



### ***5.2.4 Theme 4: Trainers'/ Participants' endorsement of the IMCI Update training approach***

Determining the effectiveness of the training was an important measure of the overall performance of the training programme and provided an indication of how likely participants would be to recommend the approach for future training. Recommendation of the training approach creates the opportunity to expand the training with its current resources to more staff, allowing them to strengthen their skills as trainer and participant to better implement the strategy on the service platform. Table 5.1. below, provides a triangulation of the themes and categories relevant for each



of the research study participant groups, demonstrating their congruence to each other and where any difference emerged within the categories.

In the table below, all 4 themes were common between the Trainer and Participant Group. Similarly, the categories also aligned and were congruent, except for the Participant category 2.2., which focused on “Refreshing and reinforcing IMCI theory and practise to improve skill and confidence, whereas the Trainer Category 2.2. only focused on “Refreshing IMCI skills and improving confidence”. The two themes differed only in the sense that the participant group highlighted more reinforcement of IMCI theory and practice.

**Table 5.1: Triangulating the themes and categories**

THEMES	CATEGORIES	
	TRAINER	PARTICIPANT
1. Trainers’/ Participants’ views expressed about the Update Training resources, the case scenarios/exercises and the outcome achieved	1.1.The ability or inability to reach the case outcome aligned to the IMCI Guideline	1.1 The ability or inability to reach the case outcome aligned to the IMCI Guideline
	1.2.The session facilitator’s role in fostering a safe and engaging learning environment	1.2.The session facilitator’s role in fostering a safe and engaging learning environment
2. Trainers’/Participants’ satisfaction with the training implementation approach and its resources	2.1.Experience with the step-by-step case training approach	2.1.Experience with the step-by-step case training approach
	2.2 Refreshing IMCI skills and improving confidence	2.2 Refreshing and reinforcing IMCI theory and practice to improve skill and confidence
	2.3 Satisfaction with the case scenarios and training resources	2.3 Satisfaction with the case scenarios and training resources
3. Trainers’/ Participants’ inputs and recommendations	3.1.The need for an SOP and more training on the Integrated Clinical Child Stationery	3.1.The need for an SOP and more training on the Integrated Clinical Child Stationery
	3.2.Training resources accessible for effective training implementation	3.2.Importance of regular scheduled IMCI updates

	3.3.The impact of the group size, duration and time of the training update sessions delivered	3.3 The impact of the group size, duration and time of the training update sessions delivered
4. Trainers’/ Participants’ endorsement of the IMCI Update training approach	4.1.Group interaction and group discussions promoted learning	4.1 Group interaction and group discussions promoted learning
	4.2.The facilitated directed training approach commended	4.2.The facilitated directed training approach commended

**Discussion of the findings following triangulation of the themes and categories**

Based on meeting the objectives the research study findings are discussed according to the themes and categories and are presented with available evidence from various literature sources. Based on the triangulated themes and categories the findings of this study is presented below.

**5.3 Theme 1: Trainers’/Participants’ views expressed on the Update Training resources, the case scenarios/exercises and the outcome achieved**

For Theme 1, the following two categories were relevant for the Trainers and Participants focus Groups: *The ability or inability to reach the case outcome aligned to the IMCI Guideline; and the session facilitator’s role in fostering a safe and engaging learning environment conducive for learning.*



**5.3.1 Category 1 (Trainers’/Participants’ Group): The ability or inability to reach the case outcome aligned to the IMCI Guideline**

With the adaptation of the IMCI Update case exercise workbook and accompanying training resources, the content was redesigned to align with the IMCI 2019 Guideline and RTHB, to ensure that the themes were consistent throughout, and that it reinforced the visualisation of the strategy, and focused on the “child as whole instead of on a single disease or condition”. The cases selected from the outdated NDOH exercise module were adapted with the above consideration in mind and to ensure that IMCI Implementers make the linkages between the policy documents and the

workbook to stimulate their own thinking of where gaps may have previously existed in case management and record keeping, as well as to reinforce correct practise through the integrated approach built into the workbook.

The factors which were important for reaching the IMCI Update case outcomes included: the ability to read the scenarios and its instructions; the correct navigation through the IMCI Guideline; the experience of staff rendering IMCI on the service platform; the ability of the facilitator to present the case scenario effectively within a group, as well as the available resources to work through the activities.

The majority of Trainers/Participants reported that they were able to reach the case outcomes and that they found the resources useful, and easy to follow. One participant was of the opinion that more relevant case exercises aligned to the cases seen in their health setting could have been presented in their session, however for the cases which were presented this particular group was able to reach the case outcome. The same participant added that they did not have access to project a PowerPoint presentation, however they could still follow the navigation process as read out and guided by the facilitator.

The facilitators expressed that the resources to facilitate the update session were useful, visual, easy to follow in presenting the cases step-by-step, and allowed them to adequately prepare for their training sessions. They also reported that they managed the varied group sizes, but some expressed that more time was needed to cover more case exercises.

*The following codes emerged from the data analysis under category 1: (a) IMCI; (b) Road to Health Booklet and IMCI Guide; and (c) Case Outcome*

*(a) IMCI*

In 2018, the WHO released a report on the Survive and Thrive strategy: Transforming care for every small and sick newborn, with the key findings that some countries made little progress to meet the Sustainable Development Goal 3 target to end preventable neonatal death and reducing the neonatal mortality rate to 12 deaths or less per 1000 live births by 2030 (WHO, 2019). In South Africa, the WCDOH's guidelines have been developed and adapted to include priority conditions affecting children from birth to five years based on the WHO list, and to ensure that the strategy focuses on the "child as whole, instead of on a single disease or condition", (Western Cape Government, 2018).

The adapted case exercises for the IMCI Update sessions conducted from 2020 onwards were based on the priority conditions adapted from existing NDOH cases and formed part of a selection of cases which the IMCI trainer/ facilitator could choose from within the geographical area based on the health priority context most needing to be addressed through training.

Trainers and Participants expressed the awareness of the vulnerability of children under the age of 5 years, with malnutrition, pneumonia, and diarrhoea especially, being some of the main illnesses contributing to disability and death within this age group in the WC. There was also an awareness of the WCDOH strategies to reduce death in this vulnerable age group, and that it was linked to the bigger global strategies.

Trainers and Participants expressed the value of the IMCI strategy to improve health outcomes for children under the age of 5 years, however, it was also highlighted that the previous IMCI guideline was outdated, the 2019 Guideline still had errors, that training updates/ refreshers were required more frequently, and that prior to attending the last update many training gaps existed particularly

with the IMCI stationery and the correct growth measurements to reach the correct growth classifications.

***(b) Road to Health Booklet and IMCI Guide***

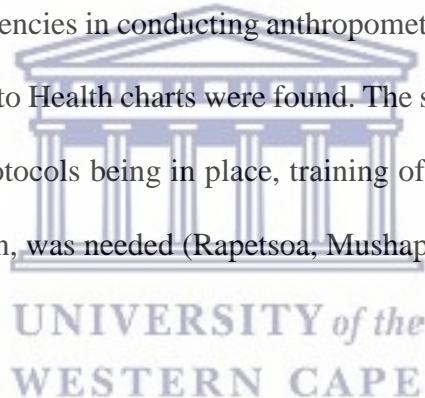
The SANDOH has designed the Road to Health Booklet (RTHB), as a patient hand-held record, aimed at tracking the infant and child's healthcare needs, their health status, growth and development, immunisation, special and extra care needs, and provides an information source for caregivers. It serves as an interdisciplinary tool between healthcare stakeholders for the appropriate response to the needs of the child. The key components within the RTHB focus on five aspects for children to thrive including: (i) enough healthy food; (ii) plenty of love from their parents such as playing and talking; (iii) protection from disease and injury; (iv) health care when they are ill; and (v) extra care and support if they need it (Western Cape Government, 2022).

The IMCI 2019 Guideline, adapted by the SANDOH, and implemented in WCDOH, is an integrated approach focused on the infant, aimed at reducing death, illness, and disability, and promotes improved growth and development whilst including the preventative and curative components to address the healthcare and wellness needs of the child as a whole, and includes key tips for the caregiver on feeding, immunisation, and warning signs of disease and conditions to look out for in the child (Department of Health, Knowledge Hub, 2019).

The SANDOH, IMCI 2019 Guideline was redesigned to align more closely with the SANDOH RTHB themes, where the elements of care for all children focuses on nutrition, love, protection, healthcare, and extra care, thus collectively and jointly striving within the policy documents to improve the survival and thriving of children (Western Cape Government, 2022).

Trainers and Participants expressed that they were pleased to see the update training resources integrated with the Road to Health Booklet (RTHB) and its alignment to the themes throughout the IMCI guideline. Documentation of the RTHB components within the workbook provided a reminder of missed recording opportunities aligned to IMCI. Growth monitoring and promotion (GMP) strengthened within the case exercises were welcomed by participants to improve correct growth classifications within IMCI, and the active and practical plotting of the growth measurements onto the relevant growth charts within the workbook followed by the interpretation and classifying exercises were well received, encouraged discussion about previous errors made, and was an eye opener for the majority of participants.

In a descriptive, observation quantitative study, conducted in 2019 at a Primary Health Care Clinic in Mopani District, SA, inconsistencies in conducting anthropometric measurements as well as the recording of weight on the Road to Health charts were found. The study concluded that despite the IMCI strategy and its related protocols being in place, training of health workers on the Road to Health Booklet charts completion, was needed (Rapetsoa, Mushaphi, Lunicbase, & Ayuk, 2020).



***(c) Case Outcome***

Case-based learning (CBL) is an approach presented by a facilitator to students/course participants working in small groups to apply real scenarios/case exercises, allowing them to problem solve or to find solutions to the case presented to them. In the process the learners are able to integrate knowledge and practise, learn and self-reflect. For facilitators, CBL creates the opportunity for learners to engage within the group and to learn from each other (Stufflebeam, 2003).

According to an article published in the Journal of Medical Education and Curriculum Development, a CBL literature search and review was conducted, in order to evaluate how it was used. The results revealed that CBL was used across the world. The study concluded that CBL can

assist learners link the theory to practise, and that this can have a positive impact on patient care outcomes (McLean, 2016).

### ***5.3.2 Category 2 (Trainers'/ Participants' Group): The session facilitator's role in fostering a safe and engaging learning environment***

Participants expressed satisfaction and ease in the session through the role of the facilitator, who is key to creating a safe learning environment, promoting engagement between participants, and in providing structure to the session, which allowed the group to reach the session outcomes. The Trainers reported that they facilitated the sessions in different locations and adapted to the setting in order to reach their training goals. They also managed groups consisting of staff members from different settings who may not have known each other.

*The following codes emerged from the data analysis under category 2:*

*(a) Facilitate Facilitator's role; and (b) Putting participants at ease*

#### ***(a) Facilitate/Facilitator's role:***

The word facilitate is a verb, which means to make something easier or to help cause something. (Britannica, 2022). On the other hand, a facilitator is a noun, someone who helps a person or organisation do something more easily or finds the answer to a problem by discussing things and suggesting ways of doing things (Cambridge, 2022). In a BMC Medical Education article published in 2020, the role of the facilitator includes the following activities: "Setting clear goals at the start of the session; Facilitating the session and ensuring it runs on time; Maintaining the flow of content, ensuring a logical sequence of learning, and provision of stimulating material and questions; Questioning students to check their understanding; Encouraging students to ask questions throughout the session; and Clarifying areas that may cause misunderstanding or confusion for students", (Burgess, van Diggele, Roberts, & Mellis, 2020). In this current study,

the facilitators described their role with confidence, as they felt comfortable with the case exercises, the group sizes with some reporting that they encouraged the group to discover answers and solutions on their own, whilst in other instances they had to probe participants for answers or stimulate more interactive engagement during the session.

Some of the recommendations which emerged from a CBL research revealed that there were various considerations to implementing CBL more effectively. These included: If the training consists of various components or modules within a course the facilitator should start with only a few cases initially, and increase this over a longer period of time; Set the number and nature of cases presented according to the number of participants in the venue, and according to the size and layout of the venue; Encourage and create the opportunity for group work to reach the case outcomes; Create diversity within groups to promote engagement and learning from each other; The facilitator must be familiar with and competent in managing group dynamics and be able to navigate through the stages of forming, storming, norming, performing and adjourning, according to Tuckman who described this concept in 1965 (Jones, 2019); To ensure that learners are progressing and not struggling the facilitator may walk around and engage them regarding the content to better facilitate learning where needed; The facilitator can allow the group to navigate the issues with minimal interruption in order for them to reach the case outcome, and can then provide guidance to the group as a whole when they are ready to engage; The facilitator can assess learning by asking the group or individuals to present their answers to various questions posed, and to use this as the opportunity to guide the group further (Nkosi, Pillay & Nokes, 2013).

***(b) Putting participants at ease***

From the focus group interviews for the trainers and participants, it was clear that the facilitation of the sessions was highlighted as one of the factors contributing to the success of the sessions.



The facilitators' ability to manage the group, their ability to put participants at ease during the session, their promoting group interaction in order to stimulate thinking and learning, as well as the guided approach used to reach the case outcome, were all significant elements within the training. Trainers were aware of their guiding role within the training whilst Participants relied on the facilitator to take them through the learning process, in an easy and non-threatening manner; and welcomed this approach.

#### **5.4 Theme 2: Trainers'/ Participants' satisfaction with the training implementation approach and its resources**

Various factors must be considered when designing and delivering training to individuals, as people learn differently and respond differently to various situations. The training methodology used, facilitation approach, training resources, as well as the training environment may all have an impact on an individual's learning experience.

In a qualitative study conducted in South West Nigeria, to “explore lived experience of nurse educators regarding teaching methods and the challenges encountered in nursing education institutions”, it was concluded that there should be a consideration of the use of teaching methods, the nurse educator's and student's needs, the institutional demands and the objective of training if the outcome of skilled and competent nurses through effective training was to be achieved (Lateef & Mhlongo, 2019) .

In a different qualitative study conducted to investigate the way hospital staff were trained, the impact the training had on them, and the principles of learning considered, it was found that trainers took into consideration what the training needs were, used less lecture style and more of a question-answer approach which made the trainers feel more equipped to train. Feedback from participants

after the training revealed that they felt more confident and understood the importance of continuous professional development. (Panagiotopoulos, et al., 2019).

#### ***5.4.1 Category 1: Satisfaction with the case scenarios and step-by-step case training approach***

Participants commented that they welcomed the step-by-step case training approach where they were guided by the facilitator from one aspect of the scenario to the next in sequential order to reach the case outcome. They welcomed this method as it enabled them to detect where aspects were previously overlooked or missed, which had an impact on the case outcome and/or classification in IMCI. Trainers also provided feedback that they appreciated the step-by-step facilitation approach as it gave structure and created ease for the trainers.

*The following codes emerged from the data analysis under category 2:*

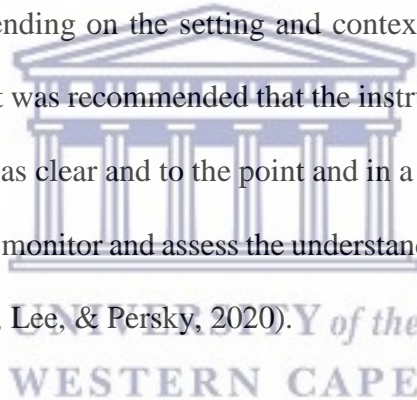
##### ***(a) Step-by-step***

This code is defined as the gradual progress from one stage to the next (Collins English Dictionary, 2022). Training approach, case study and method all have reference under this code.

In the IMCI Update training, the resources were designed to create ease for the facilitator during the session to present the scenarios in an instructional step-by-step process which took participants from one question to the next, allowing them to engage with the content, stimulated and promoted thinking in order to reach the correct case outcome. The method was aimed at allowing the participants to navigate through the case, working out the scenario, whilst following the instruction and the IMCI Guideline. The facilitator's role was to guide the process without providing the answers immediately, but to still ensure that the activity was correctly executed. The Trainers commented that the training resources was easy for them to follow, as it provided a sequential step-by-step process to conduct the training. The participants also concurred that they received the training in a step-by-step approach which created ease for them to work through the case scenarios.

The training resources were comprised of the participants workbook (Appendix C); a facilitator printed guide (Appendix A) as well as a PowerPoint presentation (Appendix B). The trainers could use either resource to facilitate with, based on the need within the session. The facilitation process included visual stimulation of learning through the PowerPoint and colourful workbook, the reading of case scenarios for auditory stimulation and the provision of written instructions with practical writing in the workbook, thereby creating a versatile approach for different types of learners and their learning styles. During the activities, the facilitator engaged with the participants in a group and also provided individual attention where needed.

According to Dunham, Lee, & Persky, (2020), on “The Psychology of Following Instructions and Its Implications”, it was found that there were various factors which could influence the way instructions were followed, depending on the setting and context. To increase the likelihood of students following instructions, it was recommended that the instructor provide verbal and written instruction; that the instruction was clear and to the point and in a language or manner understood by students; the instructor should monitor and assess the understanding in the process and reinforce learning in the process (Dunham, Lee, & Persky, 2020).



#### ***5.4.2 Category 2 (Trainers’/ Participants’ Group): Refreshing IMCI skills and improving confidence***

The refreshing of skills during and after the IMCI Update training with improved implementation on the service platform was highlighted by some Trainers’ as important.

*The following codes emerged from the data analysis under category 2*

##### ***(a) Reinforcing theory with practice***

GMP strengthened within the case exercises were welcomed by participants to improve correct growth classifications within IMCI, and the active and practical plotting of the growth

measurements onto the relevant growth charts within the workbook, followed by the interpretation and classifying exercises, were well received, encouraged discussion about previous errors made, and was an epiphany for the majority of participants. Trainers identified the need to reinforce theory with practise within the update session and post training when growth measurement training gaps were identified. There was consensus between trainers and participants that growth classifications were very important for correct IMCI classification and management, and that the practical skill reinforcement with plotting of growth charts were needed for different cadres of staff involved with GMP activities in order to bridge the training gaps observed by them.

In a descriptive, observation quantitative study, conducted at a Primary Health Care Clinic in Mopani District, SA, during 2019, inconsistencies in conducting anthropometric measurements as well as the recording of weight on the Road to Health charts were found. The study concluded that despite the IMCI strategy and its related protocols being in place, training of health workers on the Road to Health Booklet charts completion, was needed (Rapetsoa et al., 2020).

**(b) Update improved confidence**

The above code can be separated into two definitions to describe the term.

The word improve is defined as doing something better than previously done; and improved being the adjective (Britannica Dictionary, 2022). Confidence is defined as: “a feeling or belief that you can do something well or succeed at something”, (Britannica Dictionary 2022)

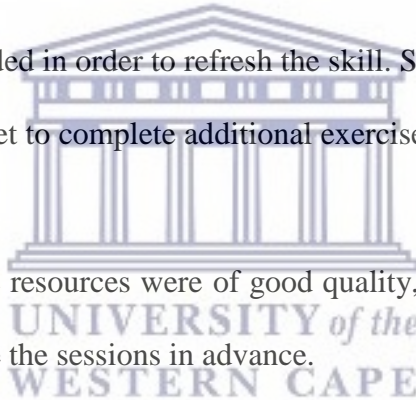
Trainers and participants acknowledged that the training was a refresher and reminded them of the correct practises. Feeling more equipped made some feel more confident to do IMCI.

### ***5.4.3 Category 3 (Trainers'/ Participants' Group): Satisfaction with the case scenarios and training resources***

Trainers and Participants all welcomed the provision of training resources which included a printed IMCI update participants' workbook for the case scenarios to be completed in the session, and as a take home resource for further exposure and learning; as well as either the PowerPoint presentation and or the facilitators' guide which was printed.

The resources created ease for everyone during the update session. Participants expressed that their experience in the IMCI update session was good, based on being able to navigate correctly through the cases and reaching the correct case outcome. All participants agreed that the printed resources provided for the IMCI Update session were well received were easy to follow. It was also expressed that the plotting of growth measurement values directly onto the growth charts in the workbook was practical and needed in order to refresh the skill. Some also felt that the workbook was useful as a take-home booklet to complete additional exercises or as a refresher resource just to recap.

There was one comment that the resources were of good quality, colourful, and created ease for the facilitator who had to prepare the sessions in advance.



## **5.5 Theme 3: Trainers'/ Participants' inputs and recommendations**

### ***5.5.1 Category 1 (Trainers'/ Participants' Group): The need for an SOP and more training on the Integrated Clinical Stationery***

Trainers were divided in opinion on which IMCI Stationery was relevant for the IMCI training and IMCI service implementation. Some expressed a preference for the IMCI recording forms, whilst others expressed that they preferred the Integrated Clinical Stationery (ICS) replaced the IMCI recording form for the child aged 2 Months up to 5 years.

During 2012 to 2017, the Integrated Clinical Stationery (ICS) was developed and piloted in the WC Primary Health Care facilities. In 2019 the adoption of the ICS for Primary Healthcare Facilities in the WC, was communicated via Circular 83/ 2019, dated 14/06/ 2019. The aim of the circular was to inform all WCDOH employees of the adoption of the circular and announced that the ICS was the official facility-retained clinical record for PHC facility-based services, and that it was to be phased in across WCDOH. The pace and manner of the phase in would be determined by the district manager. The ICS replaced a number of existing stationery items, but it did not replace the child Road to Health Booklet and the IMCI stationery for children under the age of 2 months old (WCGH Circular 83/ 2019).

*The following codes emerged from the data analysis under this category*

*(a) Preference for the IMCI Recording Form; AND (b) Challenges reported using the Integrated Clinical Child Stationery in IMCI*

**(a) Preference for the IMCI Recording Form**

The preference of some Trainers and Participants for using the IMCI recording forms, and the uncertainty about the mandate of the Integrated Clinical stationery, left some trainers and participants unsure and inexperienced in the application of the ICS with the realisation and recommendation made for training on the stationery and a clear SOP on its application within IMCI.

## **(b) Challenges reported using the Integrated Clinical Child Stationery in IMCI**

There was an identification between the trainers, that there were some ICS recording gaps; that the ICS form had minimal space for writing; that more training was required in the ICS; and that a clear Standard Operating Procedure (SOP) was needed on the correct stationery to be used in IMCI.

### ***5.5.2 Category 2 (Trainers' Group): Training resources accessible for effective training implementation***

*The following code emerged from the data analysis under this category: (a) Onsite training resources available*

Aligned to the code, the workbook/participants workbook, PowerPoint presentation/ presentation slides and facilitator's guide has reference. Facilitators welcomed the PowerPoint presentation as it created ease with facilitating the case exercises; however, two Trainers expressed that the Portable Document Format (PDF) version of the presentation created a problem when they needed to refer back to a specific slide, with the PDF not enabling them to quickly track an individual page without having to scroll until they located the relevant page. One facilitator reported that they were unable to make changes to the PDF, but was aware that it was in draft, and that there was a process to follow for reporting inputs to the developer. They confirmed that the developer shared the updated version with them afterward make the changes. One participant acknowledged the ability to convert the PDF back to PowerPoint, hence they could make adaptations as needed, and were able to navigate more easily through the slides. This participant was also aware of the input reporting process to follow and confirmed providing inputs to the developer. The value of making changes on the spot by the facilitator was to adapt content to reach a different outcome based on the discussions within the group.

In a study conducted in Pakistan during 2015 to explore teachers' opinions and learners' insights on the use of visual aids in enhancing the learner's attention to reading text and the learning process, the following findings were presented: thinking was stimulated and learning improved; visual aids reduced monotony in the classroom; students engaged with and understood the learning areas when they had pleasant experiences in the classroom; visual aids relevant to the content were useful for students (Shabiralyani, Hasan, Hamad & Iqbal, 2014).

Category 2 (Participants' Group): Importance of regular scheduled IMCI updates, Participants expressed satisfaction with the update session and found the training approach successful despite the time limitations. Some felt that it was important to have more frequent updates. All participants provided input that they gained new IMCI knowledge in the update, and it was highlighted that by working through the case scenarios they were able to identify their own strengths, weaknesses, and opportunities in IMCI. The general feedback was that the session was beneficial, and that ongoing updates and the practical application of growth measurements could improve classification and case management skill.

### ***5.5.3 Category 3 (Trainers'/ Participants' Group): The impact of group size, duration and time of the training update sessions delivered***

*The following codes emerged from the data analysis under this category: (a) Update session time determination; (b) Group size limitation*

#### ***(a) Update session time determination***

The duration and time of the training update session was highlighted by some Trainers and Participants as too short but considered the factors of staff shortages and group sizes which had a direct impact on the time spent in the update sessions.



A participant also recommended that the IMCI update sessions could be a scheduled training, conducted as are other courses which run over three to five days, and would allow the workbook content to be covered in the training instead of becoming homework, which still requires follow-up afterwards.

The value and importance of regular scheduled IMCI updates, was also expressed by participants. One of the trainer's expressed that the IMCI Updates should be scheduled as training, similar to other courses with planning consideration of appropriate course duration to ensure that enough time is spent in the IMCI Update session. The participant also felt that following update sessions, onsite training implementation support and IMCI implementation monitoring is required.

***(b) Group size limitation***

Group sizes varied and this had an impact on how many case scenarios could be covered in the time scheduled with the group. There were some Trainers who were satisfied with the time spent in a session, whereas others felt that there was not enough time and that more cases needed to be covered, in order to reduce homework. A major factor which determined how much time could be spent in a session was that staff were still on duty during training, did not receive replacements to attend the update session and had to consider staff shortages.

Participants reported good experiences of learning within a group. They highlighted that it was an opportunity to engage with each other, and learn in the process, whilst still being guided by the facilitator. There were no adverse experiences reported from the group interaction and group dynamics.

In this category the following code(s) was/ were applied: Participants engaged in a group; Smaller groups preferred and worked.

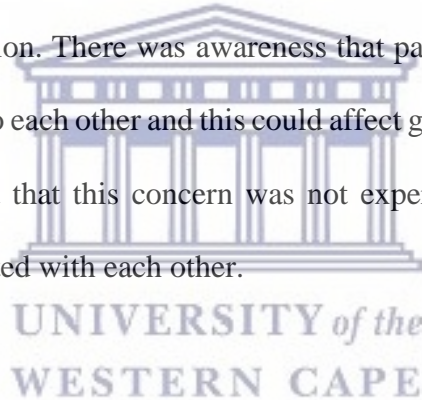
## **5.6 Theme 4: Trainers'/ Participants' endorsement of the IMCI Update training approach**

### ***5.6.1 Category 1(Trainers'/ Participants' Group): Group interaction and group discussions promoted learning***

The group interaction and group discussions promoted learning which participants favoured. The group size varied between two and four participants, how one participant commented being alone in the session.

*The following codes emerged from the data analysis under this category: (a) Smaller groups preferred and worked; and (b) Participants engaged in a group*

A participant commented that the group engaged with the case, but the facilitator guided them. A Trainer provided insight into the group dynamics where participants from various facilities joined at one venue for the update session. There was awareness that participants were strangers which could result in their not relating to each other and this could affect group dynamics and interactions. However, the Trainer expressed that this concern was not experienced in the session and that participants engaged and interacted with each other.



### ***5.6.2 Category 2 (Trainers'/ Participants' Group): The facilitated directed training approach commended***

*The following codes emerged from the data analysis under this category: (a) Resources and clear steps provided for the trainer was helpful; and (b) Training approach worked*

The facilitated directed training approach was commended by participants, and they expressed the value of being able to ask questions and of being guided to achieve the correct case outcomes where they struggled. A participant explained that even where the case was presented with some information written in the case, the participants needed to navigate through the guideline, ask the facilitator for additional information related to the case where required, in order to reach the case

outcome. This process reminded the participant to follow the steps as it was mentioned that in the past it was easy to omit or miss details. The participant concluded by saying that the IMCI Update session was of benefit.

It was also expressed that the facilitated directed training approach allowed the facilitator to zoom in on specific areas which the participants struggled with, to ensure that the correct outcomes were reached. Once the model answers were presented after the cases were completed by the participants, there was an opportunity to engage around this. The manner in which the outcome was formulated and presented further reinforced learning. Participants were reassured by this process and facilitators also expressed that it was a way to assess learning and zoom in on areas needing more attention. In 2018, a quantitative descriptive survey was conducted to identify the challenges professional nurses faced when implementing the Integrated Management of Childhood Illness programme in rural primary health care clinics in the Limpopo Province, South Africa. It was concluded that there were several factors which made it difficult for IMCI trained professional nurses to implement the IMCI strategy. Of these, some of the main training-related barriers reported by most of the respondents included a lack of in-service training, supportive supervision and follow-up after IMCI training (Tshivhase, et al, 2020).

## **5.7 Summary**

The findings of the data analysis were discussed in this chapter, based on the evaluation of the training implementation of the adapted IMCI update training resources, aligned to the updated 2019 IMCI Guideline. The discussion of the findings revealed that the adapted IMCI Update session toolkit was aligned to the updated 2019 IMCI Guideline; the resources available for the IMCI training implementation were appropriate and useful, and in the process an in-depth

understanding of the quality and execution of the facilitation process, as well as exploration and description of perceptions of the participants training experience, was gathered to inform future training. The limitations, recommendations and conclusion of this study is discussed in Chapter six.



## CHAPTER SIX

### SUMMARY OF FINDINGS, LIMITATIONS, RECOMMENDATIONS

#### AND CONCLUSION

##### 6.1 Outline

The findings of the study were presented in Chapter five, with this final chapter providing the summary of the findings and limitations of the study, followed by the researcher's recommendations.

##### 6.2 Summary of main findings

Nine semi-structured focus group interviews were conducted with IMCI trainers and participants, in order to meet the aim and objectives of the study. The nine focus groups comprised of a total of twenty participants, all of whom were registered/professional nurses falling into the category of either a Trainer, or a Participant. Of this total six were the course trainers paired into three different focus groups, and fourteen were the course participants, split into six different focus groups. The participant groups varied between a minimum of two and maximum of four within the group, based on their availability. The groups were numbered according to whichever group went first, with participants numbered according to this flow and not representative of the number within the specific group. All participants were located in a Rural Health District, Western Cape Province, South Africa.

To differentiate between the research participant groups, reference was made to the trainer groups and participant groups respectively.

As was also covered in Chapter five, four themes aligned to the theoretical framework of the study with its main findings are summarised below to show congruence/difference.

***6.2.1 Theme 1: The research study participants' (Trainers and Participants) views expressed on the Update Training resources, the case scenarios/exercises and the outcome achieved.***

Collecting feedback from different research study participants with various skill sets, on different aspects of the training, was valuable in determining whether they were satisfied with the case outcomes, and if the quality of cases presented was aligned to the strategies and latest policies.

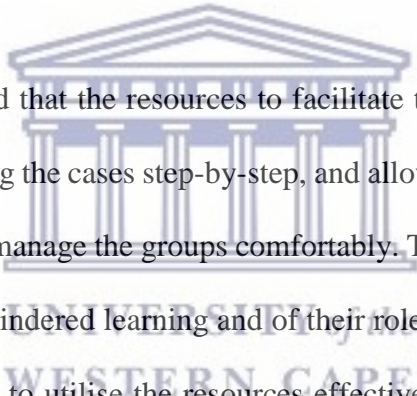
The majority of research study participants reported that they were able to reach the case outcomes and that they found the resources useful, easy to follow, and that it was aligned to the relevant guideline and policy documents as discussed in Chapter four. One participant was of the opinion that more relevant case exercises could have been presented in their session that were more closely aligned to the cases seen in their health setting. Nonetheless the group were able to reach the case outcomes for the cases presented.

Case based learning applies real scenarios/case exercises that encourage all within a group to engage with the issue, in order to learn from each other and problem solve whilst being guided by the trainer. The feedback received on this approach was positive, with a general sense that using real case scenarios would connect theory to practise more closely and improve health workers IMCI case management skills. Both trainers and participants highlighted that proper reading of the case scenarios, the guideline and tracking/navigation within the guideline algorithm were very important to reach the correct case outcome. There was awareness of the factors which may influence reading based on the individual's ability to read with understanding, the attention within the training session and the time spent by allowing enough time to read the case scenarios carefully.

The facilitated directed training approach, reading the case scenario and including group work, as well as the presentation of the model answers afterwards, were commended as it ensured that learning was enhanced and that no one was left behind in reaching the correct case outcome aligned to the IMCI Guideline.

### ***6.2.2 Theme 2: Trainers'/ Participants' satisfaction with the training implementation approach and its resources***

The effectiveness of the facilitated directed training was reflected through how well the training methodology and the designed resources supported learning attained its stated aims, and whether the transfer of knowledge in the update session was sufficiently achieved, in order to implement the updated IMCI guideline on the service platform.



The trainers/facilitators expressed that the resources to facilitate the update session were useful, visual, easy to follow in presenting the cases step-by-step, and allowed them to adequately prepare for their training sessions and to manage the groups comfortably. Trainers/ facilitators were aware of the factors which could have hindered learning and of their role in facilitating the process with confidence based on their ability to utilise the resources effectively, building a rapport with the participants, and being able to navigate through the stages of group forming, storming, norming, performing and adjourning according to Tuckman's model.

Participants relied on the facilitators to take them through the learning process in an easy and non-threatening manner; and welcomed this approach. The ability to identify previous errors or gaps in their case management was highlighted through the Case based learning (CBL) and facilitated

directed training approach, which was significant with valuable feedback received from the research study participants.

The visual stimulation of learning through the PowerPoint presentation/ PDF version and colourful workbook, reading of case scenarios for auditory stimulation and the provision of written instructions with practical writing in the workbook for the kinaesthetic learner, created a versatile approach for different learner types who related to the various aspects of the resources provided.

The research study participants acknowledged that the training was a refresher and reminded them of training gaps and the correct practises which could be improved on the service platform. Feeling more equipped made some feel more confident to do IMCI.

### ***6.2.3 Theme 3: Trainers'/ Participants' inputs and recommendations***

The subjective and objective inputs and recommendations from the research study participants afforded them the opportunity to use their voices to provide feedback on the training resources/content, training approach and its relevance to what needed to be achieved in the training and for improved implementation on the service platform.

Some research study participants were divided in their opinion on which IMCI Stationery was relevant for the IMCI training and IMCI service implementation. All research study participants provided input that they gained new IMCI knowledge in the update, and it was highlighted that by working through the case scenarios they were able to identify their own strengths, weaknesses, and opportunities in IMCI. The general feedback was that the session was beneficial, and that ongoing updates and practical application of growth measurements could improve their classification and case management skill.



The duration and time of the training update session was highlighted by some research study participants as too short, but they considered the factors of staff shortages and group sizes which had a direct impact on the time spent in the update sessions.

Group sizes varied and this had an impact on how many case scenarios could be covered in the time scheduled with the group. There were some trainers who felt satisfied with the time spent in a session, whereas others felt that the time was not sufficient, with more case scenarios needing to be covered in order to reduce homework for the participants. Two trainers also felt that a follow-up session with the participants on the service platform was required to provide service implementation support and reinforce learning with training monitoring and evaluation.

#### ***6.2.4 Theme 4: Trainers'/ Participants' endorsement of the IMCI Update training approach***

The overall experience of all users and implementers of the IMCI Update training provided an indication of how likely participants were to recommend the approach for future training. This endorsement would create the opportunity to expand the training with its current resources to more staff, allowing them to strengthen their skills as trainer and participant, and to better implement the strategy on the service platform.

The facilitated directed training approach was commended by participants who expressed the value of being able to ask questions and, where they struggled, of being guided to achieve the correct case outcomes. Similarly, the trainers welcomed the facilitated directed training approach which allowed them to zoom into specific areas where the participants struggled, to ensure that the correct outcomes were reached.

The research study participants were satisfied with the quality of the training resources provided, and commended the facilitated directed training approach, endorsing this for future training to be conducted in a similar manner.

In Table 6.1. below, the main themes and categories for trainer and participant groups have been triangulated showing congruency, as well as its alignment to the theoretical framework of the study, which demonstrated that the researcher has met the aim and objectives of this study.

**Table 6.1. Triangulated Main Themes and Categories aligned to the Theoretical Framework of the study demonstrating that the aim and objectives of the study was reached**



APPLICATION OF STUFFLEBEAM FRAMEWORK (CIPP MODEL) TO THE STUDY	THEMES	CATEGORIES		CONCLUDING STATEMENTS
		TRAINER	PARTICIPANT	
<p><b><u>CONTEXT EVALUATION</u></b></p> <p>To identify and focus on the goals for the IMCI update training i.e., Evaluation of the alignment of the adapted IMCI update session toolkit to the updated 2019 IMCI Guideline</p>	<p>1. Trainers'/ Participants' views expressed about the Update Training resources, the case scenarios/ exercises and the outcome achieved</p>	<p>1.1. The ability or inability to reach the case outcome aligned to the IMCI Guideline</p>	<p>1.1. The ability or inability to reach the case outcome aligned to the IMCI Guideline</p>	<p><b><u>GOAL</u></b></p> <p>Alignment of the adapted IMCI Update session toolkit to the Updated 2019 IMCI Guideline was achieved</p>
		<p>1.2. The session facilitator's role in fostering a safe and engaging learning environment</p>	<p>1.2. The session facilitator's role in fostering a safe and engaging learning environment</p>	
<p><b><u>INPUT EVALUATION</u></b></p> <p>To determine the inclusion of all the strategies implemented to reach the goal, and resources: Adapted training content, aligned to the updated 2019 IMCI Guideline, as well as the human resources available for the training implementation across various health districts.</p>	<p>2. Trainers'/ Participants' satisfaction with the training implementation approach and its resources</p>	<p>2.1. Experience with the step-by-step case training approach</p>	<p>2.1. Experience with the step-by-step case training approach</p>	<p><b><u>PLANS</u></b></p> <p>The IMCI update session course participants were engaged, satisfaction was determined, and implementation successes &amp; challenges identified</p>
		<p>2.2. Refreshing IMCI skills and improving confidence</p>	<p>2.2. Refreshing and reinforcing IMCI theory and practice to improve skill and confidence</p>	
		<p>2.3. Satisfaction with the case scenarios and training resources</p>	<p>2.3. Satisfaction with the case scenarios and training resources</p>	
<p><b><u>PROCESS EVALUATION</u></b></p> <p>To gain and understanding of the quality and execution: The facilitation of the IMCI update case</p>	<p>4. Trainers'/ Participants' inputs and recommendations</p>	<p>4.1. The need for an SOP and more training on the Integrated Clinical Child Stationery</p>	<p>4.1 The need for an SOP and more training on the Integrated Clinical Child Stationery</p>	<p><b><u>ACTIONS</u></b></p> <p>The IMCI Update training resources content was effective to ensure successful execution of the training.</p>
		<p>4.2. Training resources accessible for</p>	<p>4.2 Importance of regular scheduled IMCI updates</p>	

<p>exercises, using the IMCI Facilitators Guide for the update session, as well as the application of the participant's exercise workbook describes this process and how stakeholders experienced it.</p>		<p>effective training implementation</p> <p>4.3. The impact of the group size, duration and time of the training update sessions delivered</p>	<p>4.3 The impact of the group size, duration and time of the training update sessions delivered</p>	<p>The feedback process and progress monitoring implemented through the update training</p>
<p><b><u>PRODUCT EVALUATION</u></b></p> <p>To evaluate the perceptions of the participants whether the goals were met and how well they perceived whether the outcomes were achieved for sustainability of the intervention. Developing an in-depth understanding of perceptions and feedback on how participants experienced the training will inform future planning</p>	<p>5. Trainers'/ Participants' endorsement of the IMCI Update training approach</p>	<p>5.1. Group interaction and group discussions promoted learning</p> <p>5.2. The facilitated directed training approach commended</p>	<p>5.1. Group interaction and group discussions promoted learning</p> <p>5.2 The facilitated directed training approach commended</p>	<p><b><u>OUTCOMES</u></b></p> <p>The IMCI Update training resources, with its training approach, was effective, well received and endorsed for future IMCI training using the facilitated directed training approach</p> <p>The need for further adaptation of the IMCI case exercises in the 11-day IMCI training is recommended to ensure sustainability of IMCI training</p>



### **6.3 Limitations of the study**

This explorative, descriptive qualitative research study attempted to understand more about the IMCI Update training experiences, processes or perspectives of individuals involved in the study, while applying an inductive reasoning process to draw a general conclusion from observations. The information was intended to be gathered from a representative sample of the population, in order to describe a phenomenon. The proposed geographical research setting in the Western Cape Province, South Africa, included sub-districts/sub-structures represented by the Metro and Rural Health Districts. In this study the geographical location and a diversity of views within the WC were relevant to achieve the study objectives. For this study, through the WCDOH Health Intelligence Directorate, permission for the study was only received from one Rural Health District comprised of various sub-districts, thereby limiting the study to one geographical health district only.

A total of twenty (20) research participants consented to participate in the study and they were comprised of six (6) Trainers and Fourteen (14) Participants, based on the available listing of eligible members of the population, which was obtained from the Western Cape Department of Health's Provincial Clinical Training Unit: People Development Centre. The research participants met the criteria of being located in a rural health district in WC Province and having participated in the IMCI Update training during 2021 onward. Permission was also granted from the health district office to engage with the research participants in order to recruit them into the study.

Stratified Purposive sampling was relevant in this study as it followed the selection of research participants who had knowledge or experience of the phenomenon, who were available and willing to participate in the research and who could express their own experiences and opinions. For this

study between two and four individuals who had participated in the IMCI Update training were selected from the same health district. The sampling method allowed the researcher to choose members of the population, based on the list of names obtained through the training data base, hence the selection process was simpler, despite the fact that permission was only granted within one health district. Recruitment into the study was based solely on the total number of eligible research participants on the data base list who consented.

Considering that the study was limited to a rural health district, the views do not represent the experiences of metro health district staff. It is concluded that these findings, being limited to one rural health district is specifically applicable to this study context alone and cannot be generalised beyond the context of the study nor represent the metro health district context.

#### **6.4 Recommendations for future training, content development and practice**

- In order to address the training gaps identified within the IMCI service platform IMCI Update training should be scheduled more frequently based on the need within the geographical health setting.
- In order for the growth classifications and the rehabilitative support and nutritional interventions to be appropriately activated GMP within IMCI must be strengthened in the WC Province.

Specific skill training on growth measurements, growth plotting on the relevant growth charts, growth interpretation and classifications with appropriate care plans, must be reinforced on the service platform, and be guided by a structured training package provided by the provincial training and policy implementation components, to ensure training standardisation of the GMP Policy with more effective implementation thereof.

- To ensure that all staff responsible for GMP are skilled and competent, a refresher training on the GMP Policy in WC is recommended across the health and community health sector.
- In order to support IMCI didactic training the IMCI update training resources implemented by the WCDOH PDC could be expanded and operationalised where relevant, and where IMCI is included in the curriculum across various health and education platforms.
- In consultation with the WCDOH Service Priority and policy implementation unit the IMCI Update training should become a structured programme, designed from the WCDOH provincial training platform. It must be delivered with standardised training content and specific learning outcomes, to ensure standardisation, reliability, and transferability of content.
- Close and continued collaboration with the NDOH is advised to ensure continuous evolution and improvement of IMCI training resources to reach its finalisation which is conducive and relevant for all provinces to implement generically.
- In order to refresh staff and ensure that there is standardisation and uniformity to improve the quality of IMCI service implementation with its relevant stationary a clear and revised SOP on the IMCI stationery must be disseminated from the WCDOH Service Priority and Policy Implementation Unit, with appropriate training aligned to this which reaches the desired case outcomes.,
- To ensure that training gaps are identified and addressed within the geographical setting and context to improve service delivery and reduce adverse outcomes, a clear and structured communication pathway must be established within the health sub-district/sub-structure, providing service implementers with the opportunity to report feedback related to training, and the training needs emerging through IMCI service implementation,

- From the geographical setting, service audits must inform training and be utilised as an opportunity to strengthen case-based learning on the service level, bringing theory closer to practical application for service level staff.
- IMCI trainers must be closely supported within the assigned geographical area to effectively deliver training in a manner which is conducive for learning, and where the appropriate resources are available from the service platform to achieve the best learning outcomes aimed ultimately at improving service delivery.
- Training reporting pathways from the service platform to the sub-structure/sub-district office must be filtered to the WCDOH provincial training unit in order to feed into the NDOH system. This aims to ensure that future IMCI training implementation is documented and supported from all healthcare levels and appropriate training resources are provided for effective and evidence-based training to be delivered.

#### **6.5 Recommendations for future research**

- The limitation of the study conducted solely in one WCDOH rural health district provides the opportunity to expand the research to the metro health district once all stakeholders have been updated in IMCI.
- Further research should be conducted on the experiences of IMCI trainers utilising various IMCI training methodologies and available evidence-based training content within the health service and health education curriculums.
- A quantitative study should be conducted to evaluate the knowledge, skills and competencies of health workers who monitor child growth, as well as their exposure to IMCI and competency within this area. Within the nursing and medical undergraduate



training programmes, competency in GMP should also be evaluated as part of a quantitative study.

- A quantitative and qualitative research study should be conducted to determine how well IMCI is implemented on the WCDOH service platform.
- Further qualitative studies in the WCDOH, are also recommended to evaluate the efficacy of the current IMCI facilitated directed, face-to-face training approach and factors to consider for effective online learning in our country's context.

## **6.6 Conclusion**

This research study attempted to understand more about the IMCI Update training experiences, processes and perspectives of individuals involved in the study while applying an inductive reasoning process to draw a general conclusion from observations. The explorative, descriptive research design allowed the research to delve into and check the objectives of the study. The researcher made recommendations based on the findings of the study, which could inform the WCDOH health policy makers, as well as provincial and district training coordination, to enhance IMCI training and service implementation.

The proposed recommendations are aimed at identifying, addressing and resolving some of the challenges which trainers and staff members face in IMCI training and service implementation. The researcher anticipates that if implemented it would be helpful and valuable for improved IMCI on the service platform, and the IMCI training related communication pathway strengthened between the WCDOH and NDOH could ensure that the training content is continually improved.

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Appendix A: **IMCI Update Session Facilitators Guide**

UNIVERSITY of the  
WESTERN CAPE



Western Cape  
Government

Health

INTEGRATED MANAGEMENT OF  
CHILDHOOD ILLNESS (IMCI)

# FACILITATOR'S UPDATE CASE EXERCISES



UNIVERSITY *of the*  
WESTERN CAPE

DIRECTORATE: PEOPLE DEVELOPMENT | PEOPLE DEVELOPMENT CENTRE

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UPDATE SESSION PROGRAMME



**Western Cape Government**  
Health

PEOPLE DEVELOPMENT CENTRE  
DIRECTORATE: PEOPLE DEVELOPMENT

**INTEGRATED MANAGEMENT OF CHILDHOOD ILLNESS:  
UPDATE AND INFORMATION SESSION**

PROGRAMME

TOPICS	DURATION
1. Opening and Welcome	
2. Introduction to the IMCI Update training approach	
3. Resource requirements for this update session	
4. National Department of Health Update: Summary of changes	
5. Update session sequence	
6. IMCI Update case exercises	
7. IMCI Update training feedback	
8. Attendance register completion	
9. Closure	

**THANK YOU FOR ATTENDING!**

## 1. Update Session Programme



**Western Cape Government**  
Health

PEOPLE DEVELOPMENT CENTRE  
DIRECTORATE: PEOPLE DEVELOPMENT

**INTEGRATED MANAGEMENT OF CHILDHOOD ILLNESS:  
UPDATE AND INFORMATION SESSION  
PROGRAMME**

**TOPICS**

1. Opening and Welcome
2. Introduction to the IMCI Update training approach
3. Resource requirements for this update session
4. National Department of Health Update: Summary of changes
5. Update session sequence
6. IMCI Update case exercises
7. IMCI Update training feedback
8. Attendance register completion
9. Closure

**THANK YOU FOR ATTENDING!**

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## 2. Introduction to the IMCI Update training approach

- The IMCI case management process is presented on a series of charts that show the sequence of steps and provide information for performing them.
- **The charts describe the following steps:**
  1. Assess the child or young infant
  2. Classify the illness
  3. Identify treatment
  4. Treat the child
  5. Counsel the mother
  6. Give follow-up care

### 3. Resource requirements for this update session

---

- Participants must have the following resources available during the update session:
  - IMCI Chart Booklet (2019 version)
  - IMCI Recording forms (Birth to 2 months & 2 months up to 5 years)
  - Integrated Clinical Child Stationery (The facilitator will ensure that the foundation teaching for completion of the IMCI recording form (2 months up to 5 years) is reinforced and must ensure that all relevant data will be used to complete the ICS)
  - Road to Health Booklet



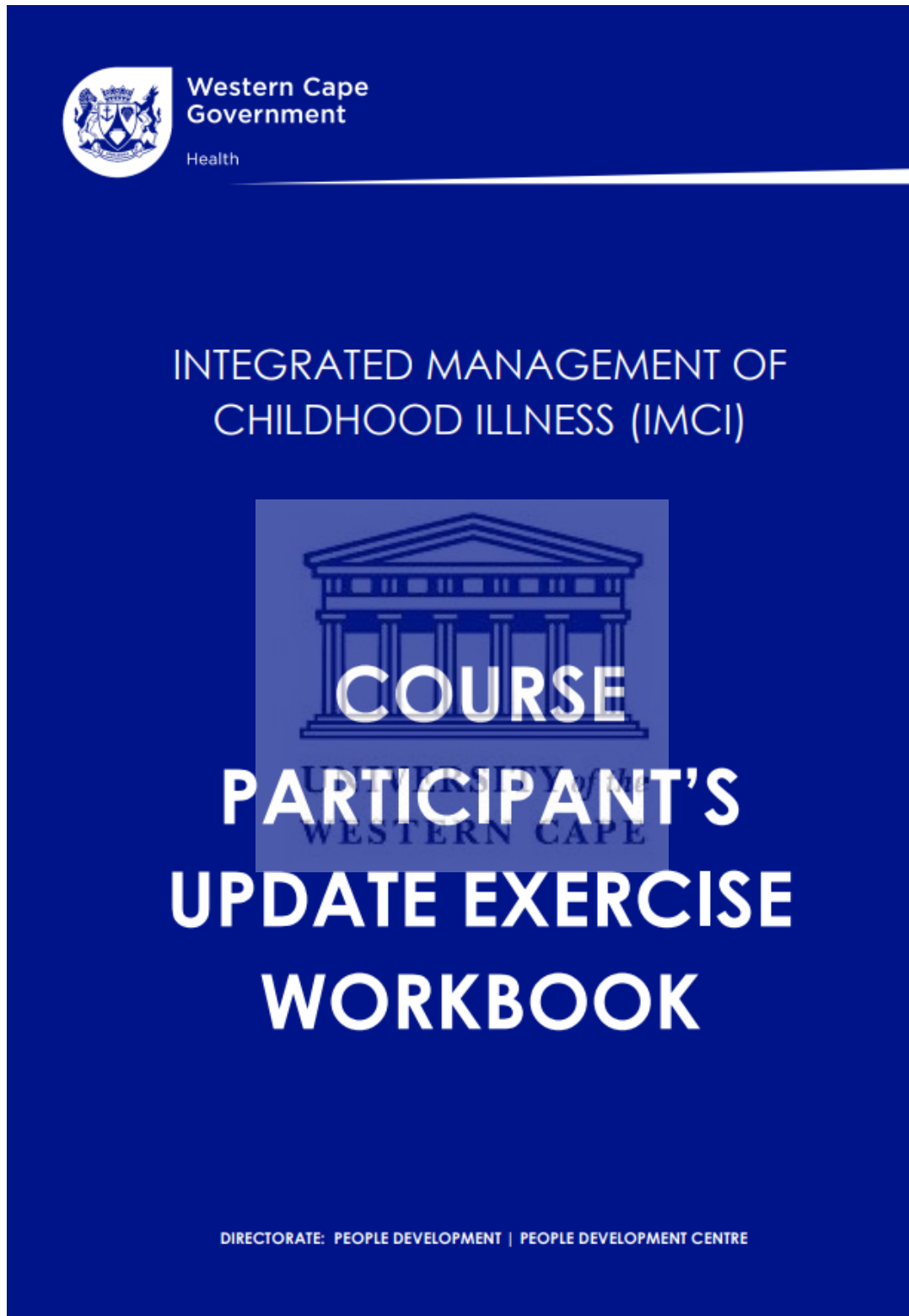
© Western Cape Government 2012 | People Development Centre: IMCI update Case Exercises- 2021-Draft 01-24-NOV-2021-IP

7

---

### Resource requirements for this update session

- Each participant must work through all the case exercises within the session and complete their own recording forms
- The facilitator will ensure the correct and accurate completion of case exercises
- The attendance register must be completed and verified by the facilitator
- A certificate of completion will be issued once an attendance register is received.





## 6. IMCI Update case exercises

In this section, the facilitator will guide participants through various case exercises related to:

- Assess, Classify & Identify Treatment for the Child (age 2 Months up to 5 Years)
- Immunizations
- Additional scenarios: Identify treatment and treat the child exercises
- Assess, Classify & Identify Treatment for the Young Infant (Birth up to 2 months)

### Case Exercise Instructions for participants:

1. Read the case studies describing signs and symptoms in sick children.
2. Use the Recording Form to record the child's signs
3. Participants must look at the Chart Booklet for help classifying signs.
4. Use the growth charts to plot growth, interpret the growth curve and classify

### 6.1. Assess, Classify & Identify Treatment for the Child (age 2 Months up to 5 Years)

#### Exercise A: Selina

Facilitator will present the case

<p><b>Case: Selina</b></p> <p>Selina is 15 months old. She weighs 8.5 kg. Her temperature is 38.5 °C. The health worker asked, "What are the child's problems?" The mother said, "Selina has been <b>coughing for 4 days</b>, and she is not eating well." This is Selina's <b>initial visit</b> for this problem.</p> <p>The health worker checked Selina for general danger signs. She asked, "Is Selina able to drink or breastfeed?" The mother said, "No. <b>Selina does not want to breastfeed.</b>" The health worker gave Selina some water. She was <b>too weak to lift her head</b>. She was <b>not able to drink from a cup</b>.</p> <p>Next, she asked the mother, "Is she vomiting?" The mother said, "No." Then she asked, "Has she had convulsions during this illness?" The mother said, "No."</p> <p>The health worker looked to see if Selina was lethargic or unconscious. When the health worker and the mother were talking, Selina watched them and looked around the room. She was not lethargic or unconscious.</p>
---

Perform the following exercise by completing the information on your own recording form (Facilitator will allow participants time to complete this section):

- a) Write Selina's name, age, weight and temperature in the spaces provided on the top line of the form.
- b) Write Selina's problem on the line after the question "Ask: What are the child's problems?"
- c) Indicate whether this is the initial or follow up visit for this problem.
- d) Does Selina have a general danger sign? If yes, mark her general danger sign in the box with the statement, "CHECK FOR GENERAL DANGER SIGNS."

**b) Use the growth charts to plot growth, interpret the growth curve and classify**

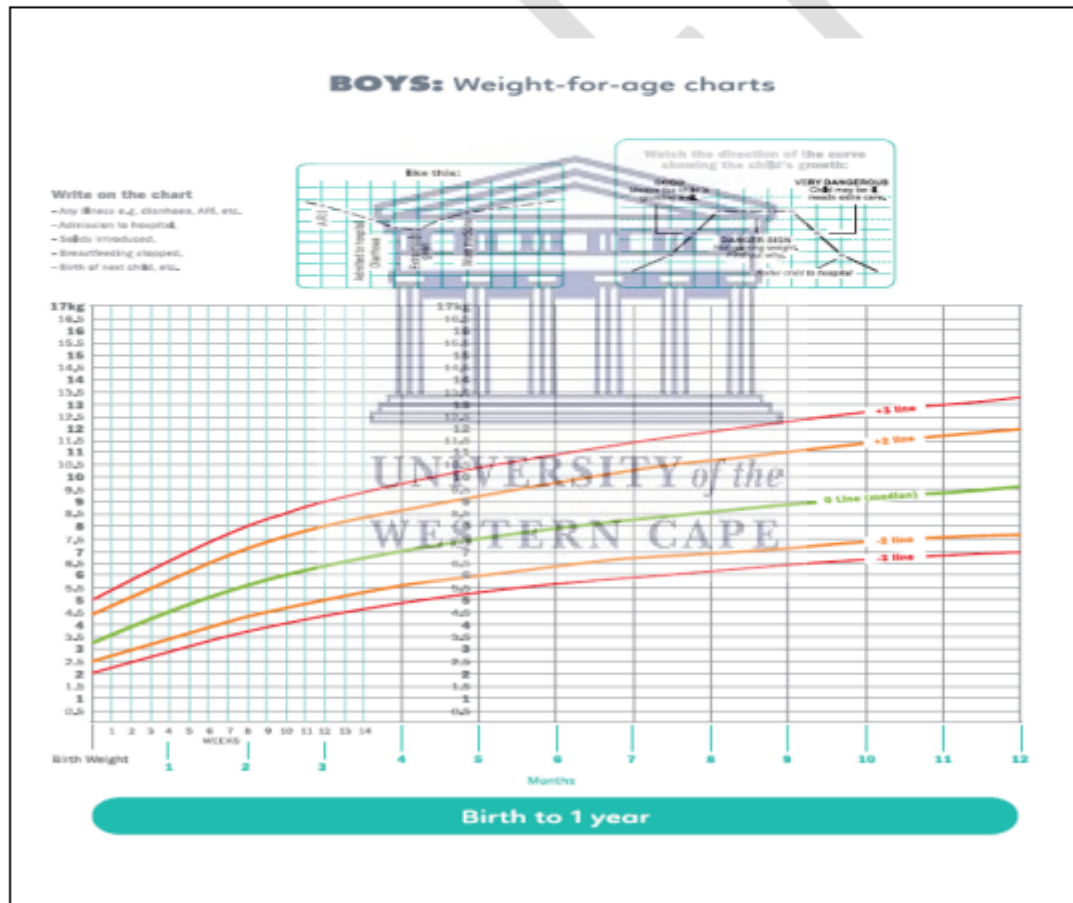
Plot Siphos weight on the Weight for Age, as well as Weight for length/ height and length/height for age on the chart according to the Road to Health Booklet using the following information:

At age 10 months, he weighs 8,2 kg. His last recorded weight at age 9 months was 8,5 kg and at 6 months he weighed 8 kg.

<p><b>Weight for length:</b></p> <ul style="list-style-type: none"> <li>•at 8kg; 67cm</li> <li>•at 8,5kg; 72 cm</li> <li>•at 8,2kg; 73 cm</li> </ul>	<p><b>Length for age:</b></p> <ul style="list-style-type: none"> <li>•at 6 months 67cm</li> <li>•at 9 months 72 cm</li> <li>•at 10 months 73 cm</li> </ul>
--	--

Interpret the lines and classify the weight after they have plotted the weight and connected the dots.


**Weight for Age**



- c) Record the child's mid-upper arm circumference and complete the nutritional assessment on the relevant chart.

Record the child's mid upper arm circumference and complete the nutritional assessment on the chart. Refer to the classification tables on the chart. Complete the assessment and interpretation.

### Mid Upper Arm Circumference Chart



## Mid-upper arm circumference (MUAC)

MUAC is used to identify signs of **malnutrition**. MUAC should be measured at all clinic visits, and by community health workers during home visits, from 6 months until the child is 5 years old.

Record the MUAC and classify as follows:

- MUAC less than 11.5 cm indicates **SEVERE ACUTE MALNUTRITION (REFER URGENTLY)**
- MUAC between 11.5 cm and 12.5 cm indicates **MODERATE ACUTE MALNUTRITION (Manage as in IMCI guidelines)**
- MUAC 12.5 cm or more indicates **NAM (NO ACUTE MALNUTRITION)**

Date	MUAC (cm)	Assessment (Circle one)	Action taken	Healthcare worker name
		<span style="color: red;">●</span> <span style="color: yellow;">●</span> <span style="color: green;">●</span>		
		<span style="color: red;">●</span> <span style="color: yellow;">●</span> <span style="color: green;">●</span>		
		<span style="color: red;">●</span> <span style="color: yellow;">●</span> <span style="color: green;">●</span>		
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		<span style="color: red;">●</span> <span style="color: yellow;">●</span> <span style="color: green;">●</span>		

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10

Dear Participant

Congratulations on completing your IMCI Update Exercise Workbook.

The aim was to provide you with the opportunity to apply case exercises which would allow you to navigate through the Updated Chart Booklet in order to become familiar with the new look and updated content.

The session also provided you with the opportunity to pose questions to your facilitator and identify areas where you perhaps required more guidance with. Should you require additional case exercises, you may request this from your facilitator.

Your comments and inputs regarding the training approach and update exercise content are welcomed and greatly appreciated. You may submit this to your facilitator in order for us to review and amend content, keeping it updated and relevant.

Kindly complete your attendance register, as your facilitator will submit this to the relevant People Management Unit and People Development Centre, for data capturing and for the generating of your certificate.

People Development wishes to thank you for your participation in this training. Wish you well.

Kind regards

Thanya Petersen

Programme Coordinator: Clinical Training (Child Health, Nutrition, EPI and IMCI)

People Development Centre

Directorate: People Development

Western Cape Government



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WESTERN CAPE

Lady Michaelis Building, Timour Hall Road, Plumstead

Tel : 021 7635320

Fax: 086 772 5446

Email: [Thanya.Petersen@westerncape.gov.za](mailto:Thanya.Petersen@westerncape.gov.za)

Website: [www.westerncape.gov.za](http://www.westerncape.gov.za)



Western Cape  
Government  
FOR YOU Health

Appendix D: University of Western Cape's Humanities Biomedical Research Ethics  
Committee (BMREC) Letter of approval



UNIVERSITY of the  
WESTERN CAPE



22 December 2021

Ms T Petersen  
School of Nursing  
Faculty of Community and Health Sciences

**Ethics Reference Number:** BM21/10/46

**Project Title:** Training implementation evaluation of the updated 2019  
Integrated Management of Childhood Illness (IMCI)  
Guideline using the CIPP model

**Approval Period:** 22 December 2021 – 22 December 2024

I hereby certify that the Biomedical Science Research Ethics Committee of the University of the Western Cape approved the scientific methodology and ethics of the above mentioned research project and the requested amendment to the project.

Any further amendments, extension or other modifications to the protocol must be submitted to the Ethics Committee for approval.

**Please remember to submit a progress report annually by 30 November for the duration of the project.**

For permission to conduct research using student and/or staff data or to distribute research surveys/questionnaires please apply via:  
<https://sites.google.com/uwc.ac.za/permissionresearch/home>

*The permission letter must then be submitted to BMREC for record keeping purposes.*



The Committee must be informed of any serious adverse event and/or termination of the study.

Ms Patricia Josias  
Research Ethics Committee Officer  
University of the Western Cape

NHREC Registration Number: BMREC-130416-050

FROM HOPE TO ACTION THROUGH KNOWLEDGE.

## Appendix E: National Health Research Database (NHRED) Approval

	The National Health Research Database	<a href="#">Log off</a>	<a href="#">My Account (4176838@myuwc.ac.za)</a>	<a href="#">Help &amp; Support</a>
<a href="#">Home</a>	<a href="#">Submit New Proposal</a>	<a href="#">Manage Proposals</a>	<a href="#">Manage Researchers</a>	<a href="#">About</a>
<b>Proposal Details:</b> WC_202202_034				
	WESTERN CAPE HEALTH RESEARCH COMMITTEE			
<b>APPLICATION DETAILS</b>				
<b>TITLE OF RESEARCH PROJECT</b>	TRAINING IMPLEMENTATION EVALUATION OF THE OF THE UPDATED 2019 INTEGRATED MANAGEMENT OF CHILDHOOD ILLNESS (IMCI) GUIDELINE USING THE CIPP MODEL			
<b>TYPE OF STUDY</b>	Academic			
<b>STATUS OF APPLICATION</b>	Approved			
<b>STATUS OF PROJECT</b>	On-Going			
<b>PROPOSAL SUBMISSION DATE</b>	2022/02/19			

# Appendix F: Health Intelligence Directorate: Strategy and Health Support Approval Letter



**STRATEGY & HEALTH SUPPORT**  
Health.Research@westerncape.gov.za  
tel: +27 21 483 0844; fax: +27 21 483 6058  
5<sup>th</sup> Floor, Nartan Rose House,, 8 Riebeeck Street, Cape Town, 8001  
[www.capegateway.gov.za](http://www.capegateway.gov.za)

REFERENCE: WC\_202202\_034  
ENQUIRIES: Dr Sabela Petros

**Private Bag X 17  
Bellville  
7535  
South Africa**

For attention: Mrs Thanya Petersen

**Re: TRAINING IMPLEMENTATION EVALUATION OF THE OF THE UPDATED 2019 INTEGRATED MANAGEMENT OF CHILDHOOD ILLNESS (IMCI) GUIDELINE USING THE CIPP MODEL**

Thank you for submitting your proposal to undertake the above-mentioned study. We are pleased to inform you that the department has granted you approval for your research. Please contact the following people to assist you with any further enquiries in accessing the following sites:

**Clinical Training Manager                      Eirien Joubert                      021 763 5330**

Kindly ensure that the following are adhered to:

1. Arrangements can be made with managers, providing that normal activities at requested facilities are not interrupted and the constraints caused by the Covid-19 epidemic above are respected and adhered to.
2. Researchers, in accessing provincial health facilities, are expressing consent to provide the department with an electronic copy of the final feedback (**Annexure 9**) within six months of completion of research. This can be submitted to the provincial Research Co-ordinator ([Health.Research@westerncape.gov.za](mailto:Health.Research@westerncape.gov.za)).
3. In the event where the research project goes beyond the estimated completion date which was submitted, researchers are expected to complete and submit a progress report (**Annexure 8**) and an updated ethics clearance letter to the provincial Research Co-ordinator ([Health.Research@westerncape.gov.za](mailto:Health.Research@westerncape.gov.za)).
4. The reference number above should be quoted in all future correspondence.

Yours sincerely

A handwritten signature in black ink, appearing to read 'V. Zweigenthal'.

**PROF. V ZWEGENTHAL  
DIRECTORATE: HEALTH INTELLIGENCE  
DATE: 8 April 2022  
CC**

# Appendix G: Garden Route District Research Data Collection Approval Letter



**STRATEGY & HEALTH SUPPORT**  
Health.Research@westerncape.gov.za  
tel: +27 21 483 0866; fax: +27 21 483 6058  
5<sup>th</sup> Floor, Norton Rose House, 8 Riebeeck Street, Cape Town, 8001  
[www.capegateway.gov.za](http://www.capegateway.gov.za)

REFERENCE: WC\_202202\_034  
ENQUIRIES: Dr Sabela Petros

**Private Bag X 17  
Bellville  
7535  
South Africa**

For attention: Mrs Thanya Petersen

**Re: TRAINING IMPLEMENTATION EVALUATION OF THE OF THE UPDATED 2019 INTEGRATED MANAGEMENT OF CHILDHOOD ILLNESS (IMCI) GUIDELINE USING THE CIPP MODEL**

Thank you for submitting your proposal to undertake the above-mentioned study. We are pleased to inform you that the department has granted you approval for your research. Please contact the following people to assist you with any further enquiries in accessing the following sites:

<b>Garden Route District Offices</b>	<b>Mr Eugene Engle</b>	<b>044 803 2700</b>
	<b>Mr Clint Du Plessis</b>	<b>044 803 2738</b>

Kindly ensure that the following are adhered to:

1. Arrangements can be made with managers, providing that normal activities at requested facilities are not interrupted and the constraints caused by the Covid-19 epidemic above are respected and adhered to.
2. Researchers, in accessing provincial health facilities, are expressing consent to provide the department with an electronic copy of the final feedback (**Annexure 9**) within six months of completion of research. This can be submitted to the provincial Research Co-ordinator ([Health.Research@westerncape.gov.za](mailto:Health.Research@westerncape.gov.za)).
3. In the event where the research project goes beyond the *estimated completion date* which was submitted, researchers are expected to complete and submit a progress report (**Annexure 8**) and an updated ethics clearance letter to the provincial Research Co-ordinator ([Health.Research@westerncape.gov.za](mailto:Health.Research@westerncape.gov.za)).
4. The reference number above should be quoted in all future correspondence.

Yours sincerely

**PROF. V ZWEIFENTHAL**  
**DIRECTORATE: HEALTH INTELLIGENCE**  
**DATE: 29 July 2022**  
**CC**



## Appendix H: Consent form for course Trainer



### UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa  
Tel: +27 21-959 2278  
E-mail: 4176838@myuwc.ac.za

#### CONSENT FORM FOR COURSE TRAINER

**Title of Research Project: Training implementation evaluation of the of the updated 2019 Integrated Management of Childhood Illness (IMCI) Guideline using the CIPP model**

The study has been described to me in language that I understand. My questions about the study have been answered. I understand what my participation will involve, and I agree to participate of my own choice and free will. I understand that my identity will not be disclosed to anyone by the researchers. I understand that I may withdraw from the study at any time without giving a reason and without fear of negative consequences or loss of benefits.

I hereby agree to be audiotaped/ voice recorded/ videotaped during my participation in this study.

Participant's name.....

Participant's signature.....

Date.....

UNIVERSITY of the  
WESTERN CAPE

Biomedical Research Ethics Committee (BMREC)  
University of the Western Cape  
Private Bag X17  
Bellville  
7535  
Tel: 021 959 4111  
E-mail: [research-ethics@uwc.ac.za](mailto:research-ethics@uwc.ac.za)

## Appendix I: Consent form for course Participant



### UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa  
Tel: +27 21-959 2278  
E-mail: 4176838@myuwc.ac.za

#### CONSENT FORM FOR COURSE PARTICIPANT

**Title of Research Project: Training implementation evaluation of the of the updated 2019 Integrated Management of Childhood Illness (IMCI) Guideline using the CIPP model**

The study has been described to me in language that I understand. My questions about the study have been answered. I understand what my participation will involve, and I agree to participate of my own choice and free will. I understand that my identity will not be disclosed to anyone by the researchers. I understand that I may withdraw from the study at any time without giving a reason and without fear of negative consequences or loss of benefits.

I hereby agree to be audiotaped/ voice recorded/ videotaped during my participation in this study.

Participant's name.....

Participant's signature.....

Date.....

Biomedical Research Ethics Committee (BMREC)

University of the Western Cape

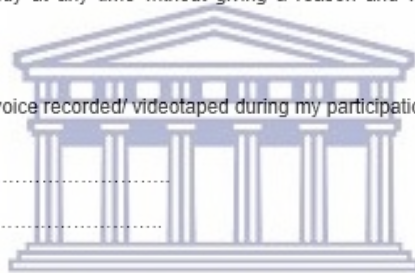
Private Bag X17

Bellville

7535

Tel: 021 959 4111

E-mail: [research-ethics@uwc.ac.za](mailto:research-ethics@uwc.ac.za)



UNIVERSITY of the  
WESTERN CAPE

## Appendix J: Information sheet for course participants (trainers and participants)



UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa  
Tel: +27 21-959 2278  
E-mail: 4176838@myuwc.ac.za

### INFORMATION SHEET FOR COURSE TRAINERS

**Project Title:** Training implementation evaluation of the of the updated 2019 Integrated Management of Childhood Illness (IMCI) Guideline using the CIPP model

#### **What is this study about?**

This is a research project being conducted by Thanya Petersen at the University of the Western Cape. We are inviting you to participate in this research project because you are a Health Worker, located in a metro or rural health district in the Western Cape Province and facilitated an IMCI Update training during 2021 onward.

The purpose of this research project is: To explore and interpret whether the adapted IMCI update session toolkit is aligned to the updated 2019 IMCI Guideline.

- To develop an in-depth understanding of whether all the strategies implemented to reach the goal, and resources available for the IMCI training implementation was appropriate and useful
- To gain an understanding of the quality and execution of the facilitation of the IMCI update case exercises, IMCI Facilitators Guide for the update session, as well as the application of the participant's exercise workbook described in this process and how stakeholders experienced it.
- To explore and describe perceptions and feedback on how participants experienced the training in order to inform future planning.

#### **What will I be asked to do if I agree to participate?**

You will be asked to participate in a small focus group interview with a small group, of between one and five individuals, from the same Health Sub-Structure or Sub-District, who were also involved with the training implementation of the IMCI Update session. The focus group interview will be in English as the designated language of engagement, and conducted virtually, via Microsoft (MS) Teams, as this is the preferred virtual communication platform approved by the Western Cape Department of Health and is available to departmental staff. Each participant will be asked the same questions which will be recorded during the interview session, using the audio recording function on MS Teams. The interview will last between 45 to 60 minutes.

The interview will commence with the researcher welcoming and invite participants to introduce themselves. The focus group interview process will be explained, and participants will be reminded of the ethical considerations applied during the research. Interview questions will include a range of different types of questions which will either require a yes or no response, or an exploratory question requiring a bit more information. Some of the examples are when facilitating the updated case exercises, were you able to reach the correct case outcome aligned to the updated 2019 IMCI Guideline? How effective do you think the IMCI update training approach with its resources was, to prepare health workers for the implementation of the 2019 IMCI Guideline on the service



## UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa  
Tel: +27 21-959 2278  
E-mail: 4176838@myuwc.ac.za

### INFORMATION SHEET FOR COURSE PARTICIPANTS

**Project Title: Training implementation evaluation of the of the updated 2019 Integrated Management of Childhood Illness (IMCI) Guideline using the CIPP model**

#### **What is this study about?**

This is a research project being conducted by Thanya Petersen at the University of the Western Cape. We are inviting you to participate in this research project because you are a Health Worker, located in a metro or rural health district in the Western Cape Province and facilitated an IMCI Update training during 2021 onward.

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The interview will commence with the researcher welcoming and invite participants to introduce themselves. The focus group interview process will be explained, and participants will be reminded

## Appendix K: Focus Group Confidentiality Binding Form



### UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

Tel: +27 21-959 2278

E-mail: 4176838@myuwc.ac.za

#### FOCUS GROUP CONFIDENTIALITY BINDING FORM

Title of Research Project: Training implementation evaluation of the of the updated 2019 Integrated Management of Childhood Illness (IMCI) Guideline using the CIPP model

The study has been described to me in language that I understand. My questions about the study have been answered. I understand what my participation will involve and I agree to participate of my own choice and free will. I understand that my identity will not be disclosed to anyone by the researchers. I understand that I may withdraw from the study at any time without giving a reason and without fear of negative consequences or loss of benefits. I understand that confidentiality is dependent on participants' in the Focus Group maintaining confidentiality.

I hereby agree to uphold the confidentiality of the discussions in the focus group by not disclosing the identity of other participants or any aspects of their contributions to members outside of the group.

Participant's name.....

Participant's signature.....

Date.....

UNIVERSITY of the  
WESTERN CAPE

Biomedical Research Ethics Committee (BMREC)

University of the Western Cape

Private Bag X17

Bellville

7535

Tel: 021 959 4111

E-mail: [research-ethics@uwc.ac.za](mailto:research-ethics@uwc.ac.za)

## Appendix L: Data Privacy Notice form



### UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa  
Tel: +27 21-959 2278  
E-mail: 4176838@myuwc.ac.za

**Project Title: Evaluating the training implementation of the updated 2019 Integrated Management of Childhood Illness (IMCI) Guideline**

#### Information Sheet/Privacy Notice

In terms of the requirements of the Protection of Personal Information Act (Act 4 of 2013), personal information will be collected and processed:

#### **What type of personal information will be collected?**

Information collected will include your name, surname, the date when consent was given, which Health facility or institution you are from, and in which Health Sub- Structure or Sub-District you are working in and the date of the interview.

All identifiable personal data will be anonymised or de-identified in order to remove direct or indirect identification, meaning that the personal information provided will not be linked to your interview, nor will your personal information be included in the research report.

#### **Who at UWC is responsible for collecting and storing my personal information?**

The researcher will comply fully to the Protection of Personal Information Act (POPIA) and ensure that all the conditions for the lawful processing of personal information to safeguard the integrity and sensitivity of private information is adhered to.

The researcher will undertake to protect your identity and the nature of your contribution.

#### **Who will have access to my personal information outside of UWC?**

The researcher and research supervisor will only have access to your personal information which will not be shared outside of UWC.

To ensure your anonymity, this consent form will be saved separately from the interview session, to ensure that your identity is not linked to the interview.

Your identity will also not be revealed to your place of employment or any other organisation, and where it is required to divulge certain anonymous information, this will only be done so with your prior permission.

As this study will use focus groups, therefore the extent to which your identity will remain confidential is dependent on participants in the Focus Group maintaining confidentiality. Where only a single participant will be interviewed, the focus group binding form will not apply and an individual consent will be obtained.

#### **How long will my personal information be stored?**

UWC will be required to retain all research data for a period of 5 years.



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### How will my personal information be processed?

To ensure your confidentiality, after the interview session, the recording will be saved to the researcher's personal laptop and using password-protected computer files.

The session recording will be deleted from the MS Teams platform immediately after the session, to ensure that the interview remains confidentially and protected.

Only the researcher and supervisor will have access to the interview recording.  
If we write a report or article about this research project, your identity will be protected.

- I hereby give consent for my personal information to be collected, stored, processed and shared as described above
- I do not give consent for my personal information to be collected, stored, processed and shared as described above.



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Name & Surname: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

## Appendix M: Semi-structured Focus Group Interview Guide for Trainers



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### SEMI STRUCTURED FOCUS GROUP INTERVIEW GUIDE FOR COURSE TRAINERS

#### Title of Research Project:

*Training implementation evaluation of the of the updated 2019 Integrated Management of Childhood Illness (IMCI) Guideline using the CIPP model*

Introduction to the Focus Group
<ol style="list-style-type: none"><li>1. The researcher will welcome participants and invite them to introduce themselves.</li><li>2. The focus group interview process will be explained, and participants will be reminded of the ethical criterions applied during the research.</li></ol>
Main Interview Questions
<p><b>Context Evaluation:</b></p> <ol style="list-style-type: none"><li>1. When facilitating the updated case exercises, were you able to reach the correct case outcome aligned to the updated 2019 IMCI Guideline?</li></ol>
<p><b>Input Evaluation:</b></p> <ol style="list-style-type: none"><li>2. How effective do you think the IMCI update training approach with its resources was, to prepare health workers for the implementation of the 2019 IMCI Guideline on the service level platform?</li></ol>
<p><b>Process Evaluation:</b></p> <ol style="list-style-type: none"><li>3. What worked well and what did not work well for you when facilitating the update training?</li></ol>
<p><b>Product or Outcome:</b></p> <ol style="list-style-type: none"><li>4. How appropriate and effective do you think the IMCI update training approach with its resources was in order to apply the same adaptation approach to future IMCI training?</li></ol>



## Appendix N: Semi-structured Focus Group Interview Guide for Participants



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### SEMI STRUCTURED FOCUS GROUP INTERVIEW GUIDE FOR COURSE PARTICIPANTS

#### Title of Research Project:

*Training implementation evaluation of the updated 2019 Integrated Management of Childhood Illness (IMCI) Guideline using the CIPP model*

Introduction to the Focus Group
<p>3. The researcher will welcome participants and invite them to introduce themselves.</p> <p>4. The focus group interview process will be explained, and participants will be reminded of the ethical criterions applied during the research.</p>
Main Interview Questions
<p><b>Context Evaluation:</b></p> <p>5. When working through the updated case exercises, were you able to reach the correct case outcome aligned to the updated 2019 IMCI Guideline?</p> <p><b>Input Evaluation:</b></p> <p>6. How effective do you think the IMCI update training approach with its resources was, to prepare you for the implementation of the 2019 IMCI Guideline on the service level platform?</p> <p><b>Process Evaluation:</b></p> <p>7. What worked well and what did not work well for you in the update training?</p> <p><b>Product or Outcome:</b></p> <p>8. How appropriate and effective do you think the IMCI update training approach with its resources was in order to apply the same adaptation approach to future IMCI training?</p>

Appendix O: **Editors verification letter**

Mirna Lawrence  
Language editor & proofreader

**DATE:** 20 December 2022

I, Ms Mirna Lawrence, hereby declare that I edited the Master's in Education document of Ms Thanya Petersen titled *Training Implementation Evaluation of the Updates 2019 Integrated Management of Childhood Illness (IMCI) Guideline Using the CIPP Model*.

The document has been edited within ethical and professional limits for syntax, grammar, spelling, punctuation, word usage, sentence structure and flow, consistency of argument, sequencing of figures and tables, and referencing.

The editor's revisions, comments and suggestions and overall quality of the final product do not detract from the content being the author's sole responsibility and work in its entirety.

The language editor does not accept responsibility for any changes made to this documents after the issuing of this declaration.

  
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