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Faculty of Health Sciences  
School of Healthcare Sciences  
Department of Nursing Science

**A RAPID-CYCLE EVALUATION AND ADJUSTMENT OF PAEDIATRIC  
TONSILLECTOMY PRIMARY CAREGIVER EDUCATION: APPLYING  
THE CONSOLIDATED FRAMEWORK FOR IMPLEMENTATION  
RESEARCH**

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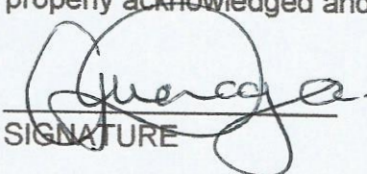
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## ABSTRACT

### Introduction and background

Tonsillectomies are frequently performed on paediatric patients. The children are discharged from the hospital after four to six hours of observation for complications. Parents and other caregivers are responsible for the home care of the children. They require extensive preparation on how to prevent and identify complications.

### Aim of the study

The aim of the study was to evaluate and adjust the paediatric tonsillectomy primary caregiver education in a designated private day hospital according to the contextual and interventional facilitators and barriers of the Consolidated Framework for Implementation Research.

### Research design

A rapid-cycle evaluation and adjustment of the primary caregiver education (process and material) was done through a qualitative research approach in implementation science. The Consolidated Framework for Implementation Research applied through the identification of contextual and interventional facilitators and barriers that stood out during data analysis. The facilitators and barriers indicated areas that needed evaluation and adjustment.

### Methodology

During the first round, the quality of current primary caregiver education was evaluated and adjusted according to the output of the analysis. Thereafter the adjusted processes and material were used for a 4-week period and followed by another round of analysis. The final adjustment of the primary caregiver education was done after the second round of data collection and analysis. This final process of data collection took 3 weeks to complete.

### Significance of the study

The researcher evaluated and adjusted the paediatric tonsillectomy primary caregiver education used at the designated hospital.

## Abstract

### Keywords

Health education, Consolidated Framework for Implementation Research, Rapid cycle evaluation and adjustment, Pediatric tonsillectomy.

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# CHAPTER 1

## INTRODUCTION AND BACKGROUND

### 1.1 INTRODUCTION

Tonsillectomies are done to remove patients' tonsils under general anaesthesia (Mitchell, R.B., Archer, S.M., Ishman, S.L., Rosenfeld, R.M., Coles, S., Finestone, S.A., Friedman, N.R., Giordano, T., Hildrew, D.M., Kim, T.W., Lloyd, R.M., Parikh, S.R., Shulman, S.T., Waler, D.L., Walsh, S.A., Nnacheta 2019:53). It is one of the most frequently performed surgical procedures on paediatric patients (Wozney, L., Chorney, J., Huguet, A., Soo Song, J., Boss, E.F., Hong, P. (2017:1). for chronic recurrent infections of the palatine tonsils (Doganer, Y.C., Rohrer, J.E., Aydogan, U., Thurston, M.J., Saglam. K. 2015:1). The procedure is performed as day surgery and patients are discharged after four to six hours of observation for complications (Dwyer-Hemmings, 2018:1). Possible complications are throat pain, nausea, vomiting, delayed feeding and bleeding (Doganer et al., 2015:1; Spector, Z., Saint-Victor, S., Kay, D, J., Mandell, D, L. 2016:1,2). Primary caregiver education should focus on the prevention, identification and management of complications and should be provided before and repeated after surgery (Mitchell et al., 2019:23).

Health education should continuously be evaluated to ensure that it is applicable and of value to patients and families. The aim of the study was to evaluate and adjust the paediatric tonsillectomy primary caregiver education in a designated private day hospital according to the contextual and interventional facilitators and barriers of the Consolidated Framework for Implementation Research (CFIR). Common facilitators and barriers of tonsillectomy health education have been identified as increased economic costs, traditional or cultural practices and human and physical resources (Nemetchek, B., Khowaja, A., Kavuma, A., Kabajaasi, O., Owili, A., O., Ansermino, J., M., Fowler-Kerry, S., Jacob, S., Kenya-Mugisha, N., Kabakyenga, J., Wiens, M., O. 2019:9; Aduagna, M., B., Nabbouh, F., Shehata, S., Ghahari, S. 2020:11).

## Chapter 1: Introduction and background

A qualitative study in implementation research was used to do a rapid-cycle evaluation and adjustment of the applicable primary caregiver education.

## 1.2 BACKGROUND AND LITERATURE REVIEW

Performing tonsillectomies at day hospitals as an alternative to inpatient surgery contributes to lower healthcare costs (Wong, K., Levi, J, R. 2016:1) and allows children to recover in their home environment (Amoils, M., Chang, K. W., Saynina, O., Wise, P.H., Honkanen, A. 2016:2). The period after discharge is an uncertain time for the parents and caregivers of children post-tonsillectomy (Waniga, H.M., Gerke, T., Shoemaker, A., Bourgoine, D., Earanond, P. 2016:1). Careful patient selection and good communication with parents regarding postoperative care and potential complications are required when the decision is made to perform tonsillectomies at day hospitals (Parah & Khan, 2019:1,2). The parents and other caregivers are responsible for the home care (Yang et al., 2016:2). However, many parents and caregivers lack the necessary knowledge and skills and may feel helpless as a result of not knowing how to aid in the children's post-operative needs (Wozney et al., 2017:1). They require extensive education to guide them on how to prevent and identify complications (Arsenault et al., 2016:2). A study done by Yang, J.Y., Lee, H., Zhang, Y., Lee, J.U., Park, J.H., Yun, E.K. (2016:2) revealed that sufficient education on pain management enables parents and caregivers to keep the children's level of pain under control.

With quality material for primary caregiver education, the re-admission rate to hospitals due to complications is reduced (Johnson, R.F., Chang, A., Mitchell, R.B. 2018:2). Possible complications are nausea, vomiting, dehydration, oedema and uncontrolled pain (Mitchell et al., 2019:5). The most common reasons why children are re-admitted are uncontrolled pain, dehydration and haemorrhage (Johnson et al., 2018:2).

The educational material that is provided to parents should be accurate, accessible and easy to implement (Vishnevetsky, J., Burrows Walters, C., Tan, K.S. 2018:1). The education should be provided by reputable sources. Without proper education by doctors and nurses, parents may resort to the Internet for information. Online information is often not reviewed and validated (Arsenault, M., Blouin, M.J., Guiton, M. J. 2016:1).

Primary caregiver education needs to be continuously evaluated to ensure that people find the content easy to read and understand (Eltorai, A.F.M., Sharma, P., Wang, J., Daniels, A.H. 2014:1,2). Even people who have not finished high school education should be able to use patient

education material (Kumar, G., Howard, S.K., Kou, A., Kim, T.E., Butwick, A.J., Mariano, E.R 2016:2027; Arian, M., Ramezani, M., Tabatabaeichehr, M., Kamali, A. 2016:20).

The paediatric tonsillectomy primary caregiver education should be thoroughly explained to parents (Waniga et al., 2016:1) and they should be given ample time to ask questions about issues that they feel uncertain about (Markus, 2014:8). The primary caregiver education should be done in a venue with no disturbances (Sibiya, 2019:20).

### **1.3 PROBLEM STATEMENT**

The parents, and when they are not available, the caregivers of children who had tonsillectomies in day hospitals often lack the required knowledge and skills to manage the children's post-operative care at home (Wozney et al., 2017:1). The children are discharged after four to six hours postoperatively (Wong et al., 2016:4). At home, the parents/caregivers are responsible to prevent, identify and manage complications. Without quality primary caregiver education material available, they may resort to non-reliable sources (Wozney et al., 2017:1).

The researcher identified that although the designated day hospital has material and processes for paediatric tonsillectomy primary caregiver education in place, regular evaluation and adjustment was not done. A barrier the researcher should aim to prove during the data collection phase is that failing to keep up with a rapidly evolving healthcare environment results in primary caregiver education becoming outdated (Schneeweiss, S., Shrank, W., Ruhl, M., Maclure, M. 2015:1).

The researcher selected a set of materials and processes used for the patients of one specific physician based on the number of tonsillectomies performed by him. The focus of the research will be to implement a rapid cycle evaluation and adjustment of the processes and material that he wanted to be used by the nurses for his patients and their parents/caregivers.

## 1.4 RESEARCH QUESTION, AIM AND OBJECTIVES

**The research question for the study is:** How should the current paediatric tonsillectomy primary caregiver education be adjusted to benefit from facilitators and to overcome barriers identified by the CFIR?

**The aim of the study was** to evaluate and adjust the current paediatric tonsillectomy primary caregiver education in a designated private day hospital according to the contextual and interventional facilitators and barriers to overcome identified by the CFIR.

**The objectives of the study were to:**

1. Explore and describe the CFIR contextual facilitators and barriers that influence the paediatric tonsillectomy primary caregiver education used in the designated private day hospital.
2. Explore and describe the CFIR interventional facilitators and barriers that influence the paediatric tonsillectomy primary caregiver education used in the designated private day hospital.
3. Use the findings gathered during research applicable to objectives one and two, to adjust the paediatric tonsillectomy primary caregiver education.

## 1.5 DEFINITION OF KEY TERMS / CONCEPTS

**Tonsillectomy** refers to a surgical procedure in which the tonsils are removed. It is a common procedure that is performed by ear, nose and throat surgeons (Parah, S.R., Khan, M.M. 2019:1). In this study, the researcher referred to tonsillectomies as the surgical procedure that is performed on children younger than 12 years to remove their tonsils.

**Consolidated Framework for Implementation Research (CFIR)** refers to a framework that was developed to consolidate constructs identified in 19 published implementation theories (Breimaier, H.E., Heckermannn, B., Halfens, R.J.G., Lohrmann, C. 2015:2; Kirk, M.A., Kelly, C., Yankey, N., Birken, S.A., Abadie, B., Damschroder, L. 2016 2). The consolidated framework is composed out of five major domains that guide the systematic assessment of implementation contexts and identify factors that might influence intervention implementation and effectiveness (Keith, R.E., Crosson, J.C., O'Malley, A.S., Crompt, D., Taylor, E.F. 2017:2). In the study, the

researcher referred to the framework as a tool to guide the evaluation and adjustment of paediatric tonsillectomy primary caregiver education.

**Rapid cycle evaluation** refers to the approach of continuous and rapid assessment of a process. During this process of assessment, continuous feedback is provided to improve quality improvement practices (Shrank, 2013: 807). The researcher referred to the concept of rapid cycle evaluation during the evaluation, adjustment and revaluation of paediatric tonsillectomy primary caregiver education.

**Primary caregiver education** refers to information that is provided to patients and their families to enable them to play an active role in self-care. Primary caregiver education is among the priorities and standards of nursing care and it is an essential component of promoting and restoring healthcare (Arian, M., Ramezani, M., Tabatabaeichehr, M., Kamali, A. 2016:2). In this study, the researcher referred to primary caregiver education as a concept that needs constant evaluation, adjustment and re-evaluation due to medical advances in tonsillectomy procedures.

**Contextual facilitators and barriers** refer to the setting and physical environment of the study and include geographical aspects such as transport. It refers to a broader physical environment, resources available and relationships with others (Pfadenhauer, L.M., Gerhardus, A., Mozygemba, K., Bakke Lysdahl, K., Booth, A., Hofmann, B., Wahlster, P., Polus, S., Burns, J., Brereton, L., Rehfuss, E. 2017:2,8). In this study, the researcher used the CFIR contextual facilitators and barriers to evaluate and adjust patient education.

**Intervention facilitators and barriers** refer to elements that influence the health education process such as the timing, duration and the type of education provided. Technology and infrastructure are also part of intervention facilitators (Pfadenhauer et al., 2017:8). In this study, the researcher used the CFIR intervention facilitators and barriers to evaluate and adjust patient education.

**Facilitators** refer to adequate assistance, support and identification of an intervention. In this study facilitators will refer to the training process and the ability to motivate primary caregivers and patients to carry out an intervention (Rodgers, L, H., Hernando, S, P., Fernandez, S, N., Sanchez, A., Martoz, C., Morenzo, M., Grandes, G. 2021:351).

**Barriers** refer to time restraints and ineffective implementation of the intervention. This study, will refer to the term barrier as the indication that represents lack of skill, knowledge and experience. (Rodgers, L, H., Hernando, S, P., Fernandez, S, N., Sanchez, A., Martoz, C., Morenzo, M., Grandes, G. 2021:351).

**Caregivers** refer to any person including the parent or guardian, who factually cares for the child. The term is used throughout the study to describe all relevant adults that provide care to the children post-tonsillectomy when the parents are not available.

## 1.6 CONTEXT OR SETTING

This study was conducted in a designated day hospital in the Gauteng Province of South Africa that specialises in ambulatory procedures with no overnight stay facilities. The hospital is equipped with 32 beds of which 10 beds are reserved for paediatric patients. Ten registered nurses, two enrolled nurses and four enrolled nursing auxiliaries provide the nursing care. In January and February 2019, 50 tonsillectomies were performed on children. The registered nurses are responsible for the primary caregiver education to parents, and when parents are not available, other caregivers of children after the tonsillectomies and before discharge. The health education that was evaluated and adjusted during the study was developed by one of the physicians. Only primary caregivers of paediatric patients who underwent the tonsillectomy procedure performed by this specific physician were included in the study. The health education focused on necessity information related to complications, ways to relieve the pain and the different types of food that should be included and excluded (Refer to Addendum C for a copy of the patient education material).

## 1.7 ASSUMPTIONS

Pragmatism was applied as a qualitative study in implementation science, the research was conducted with a hybrid inductive/deductive data analysis approach (Cohan, D.C., Crabtree, B.F., Damschroder, L., Hamilton, A.B., Heuttin-Roberts, S., Leeman, J., Padgett, D.K., Palinkas, L., Rabin, B., Reisinger, H.S. 2018:4). In implementation science, data analysis was done through open coding (inductive analysis) and according to a theoretical framework (deductive analysis) (Skillman, M., Cross-Barnet, C., Singer, R., F., Rotondo, C.R., Moiduddin, A. 2019:284).

The researcher supported the ontology of pragmatism as it allowed her to be more flexible in her data collection and analysis. In pragmatism, the research question is more important than the methods that are applied (Creamer, 2018:46). In this study, the researcher answered the research question that relates to the contextual and interventional factors that influence paediatric tonsillectomy primary caregiver education and the adjustments required to address the identified barriers and use the facilitators to improve the primary caregiver education. She used a theoretical framework to explore and describe the factors that hindered or facilitated paediatric tonsillectomy primary caregiver education and a hybrid approach of inductive and deductive reasoning in the analysis of the data a pragmatism epistemology was appropriate. The epistemology of pragmatism challenges researchers to produce “something that will be both practical and useful” (Creamer, 2018:46). The findings of the study might encourage the nurses responsible for primary caregiver education to improve health education. In chapters four and five the researcher discusses the importance of regular evaluation and adjustment of health education based on feedback from interviews with primary caregivers and nurse participants.

The methodological assumption of pragmatism allows researchers to use deductive and inductive analytical approaches (Creamer, 2018:46). The researcher used inductive and deductive reasoning in the analysis of the data. The axiological assumption is concerned with linking research to practice (Creamer, 2018:46) that corresponds with the emphasis on implementation research. Pragmatism allows the researcher to be more flexible during the data collection process however values are an important part of interpreting results, therefore the researcher should adopt both objective and subjective views during the data collection process.

## **1.8 DELINEATION**

The study is delineated to a designated hospital (a day hospital in the Gauteng Province), one specific surgical procedure (tonsillectomies) and the primary caregiver health education is limited to a specific group of parents/caregivers (of children who have had tonsillectomies) and the registered nurses responsible for the patient education. Primary caregiver health education from one specific physician was evaluated and adjusted.

## 1.9 SIGNIFICANCE /CONTRIBUTION

The researcher used the CFIR to conduct a rapid-cycle evaluation for adjustment of the paediatric tonsillectomy primary caregiver education in a day hospital to improve the material and the processes that nurses use to enable parents/caregivers to do the required home care. The contextual and interventional factors that influence the implementation of primary caregiver education were explored and described. A rapid-cycle evaluation provided feedback to support the improvement of an intervention (in this study it referred to the paediatric tonsillectomy primary caregiver education) during implementation to maximize its effectiveness (Keith et al., 2017:2).

When interventions are planned, the practical situation of the people responsible for the implementation is not always considered (Keith et al., 2017:2). The findings of this study provided information about the contextual and interventional factors that influence paediatric tonsillectomy primary caregiver education in a designated day hospital. The information was applied as a guideline to develop a more comprehensive piece of health education that allowed primary caregivers to prevent, identify and manage possible complications at home.

## 1.10 THEORETICAL FRAMEWORK

The use of frameworks in implementation research “increases the efficiency of research and the generalizability and interpretability of research findings” (Keith et al., 2017:2). In this study, the CFIR is used. Damschroder and co-workers (2013:4) developed the framework from 19 theories in intervention and implementation research. They studied the implementation science process with the goal of integrating previously published theories into one consolidated framework, to act as a guide or platform for future implementation research (Kirk et al., 2016:2). The framework focuses on the contextual and interventional factors that influence the intervention (in this study the intervention refers to primary caregiver health education). The CFIR consists of five domains and in each domain, applicable constructs are listed. The researcher used all five domains limited the constructs to the ones that applied to her study (see addendums E and F). In chapters four and five of the study the researcher collected and analysed the data (see addendum H) according to the selected constructs (Refer to the guides for data collection).

Domain 1 refers to intervention characteristics and includes the constructs intervention source, evidence strength and quality, relative advantage, adaptability, trial ability, complexity, design quality and packaging, and cost. Domain 2 refers to the outer setting and the constructs are

patient needs and resources, cosmopolitanism, peer pressure, and external policies and incentives. The 3<sup>rd</sup> domain focuses on the inner setting with the construct's structural characteristics of the organization, networks and communications, culture and implementation climate. The 4<sup>th</sup> domain emphasizes the importance of the individual's characteristics such as knowledge and beliefs about the intervention, self-efficacy, individual stage of change, and individual identification with the organization. The 5<sup>th</sup> domain refers to the process of intervention and the constructs are planning, engaging, executing and reflecting and evaluating (See addendums E and F) (Damschroder, L.J., Lowery, J.C. (2013 :6-11).

In chapters four and five the CFIR was used in data collection and analysis. In rapid-cycle evaluation, it ensures that data gets collected and analysed quickly as the analysis starts after the first interview and observation. Implementation researchers prefer to use hybrid inductive/deductive reasoning and to do data collection with a framework and probing questions. Data analysis in this study will be done with the framework and open coding. Multiple smaller rounds of data collection and analysis are preferred to provide findings that could be used in subsequent rounds of data collection and analysis. In rapid-cycle evaluation, researchers cannot wait until all interviews are completed and themes have been formulated before data analysis commences (Skillman et al., 2019:283). They however do make use of inductive and open coding to analyse the data that does not fit in the framework (Skillman et al., 2019:284).

## 1.11 SUMMARY

This chapter focussed on a description of the problem statement, aim and objectives of the study. In the next chapter a literature review to describe the knowledge base relating to paediatric tonsillectomy caregiver education is presented.

## **Chapter 2**

### **Literature Study**

#### **2.1 INTRODUCTION**

The problem statement in chapter one indicates the gap in the knowledge base of primary caregiver education and this chapter covers a description of the knowledge base. The following chapters will address the research that will be done to fill the gap in the knowledge base and at the end of the dissertation, the findings that the study contributes will be integrated in existing literature (the knowledge base).

#### **2.2 METHODOLOGY OF THE LITERATURE SEARCH**

An extensive literature search was done to identify research reports (articles) and other related literature such as policy documents and guidelines to describe the existing knowledge base of health education and specific primary caregiver education regarding tonsillectomy aftercare.

In this study health education and primary caregiver education regarding tonsillectomy aftercare are the studied concepts. It is important to synthesise the available literature in an area of specialization in order to explore the current knowledge base (Christmals & Gross, 2017:8).

The researcher used the following steps in the search for literature and the description of the review: 1) the topic was defined (health education and primary caregiver health education regarding tonsillectomy aftercare); 2) literature was searched and re-searched through the use of search engines and by hand searching; 3) the literature was critically reviewed; 4) themes in the literature were identified and the review was described in a logical manner with the use of the themes as headings (Gregory & Denniss, 2018:895, 896).

The search engines of PubMed, Clinical Key, CINAHL and Google Scholar were used. The key words referred to were parents/caregivers or primary caregivers, tonsillectomy or paediatric tonsillectomy, day hospital or ambulatory care and health education or educational guideline. Specific inclusion criteria were stated. The publication date should have been January 2015 to January 2020. Only peer reviewed journals published in English were searched. The study population of the research reports (articles) referred to parents and caregivers of children with tonsillectomies.

A total of 71907 articles were identified using the pre-selected key words, after removing the duplicates 58511 titles and abstracts were reviewed in preliminary screening, of these articles, 11612 were excluded based on inclusion criteria. 1784 full text studies were reviewed in secondary screening and 98 of those articles met complete the selected inclusion criteria. Refer to Diagram 2.1 for more information.

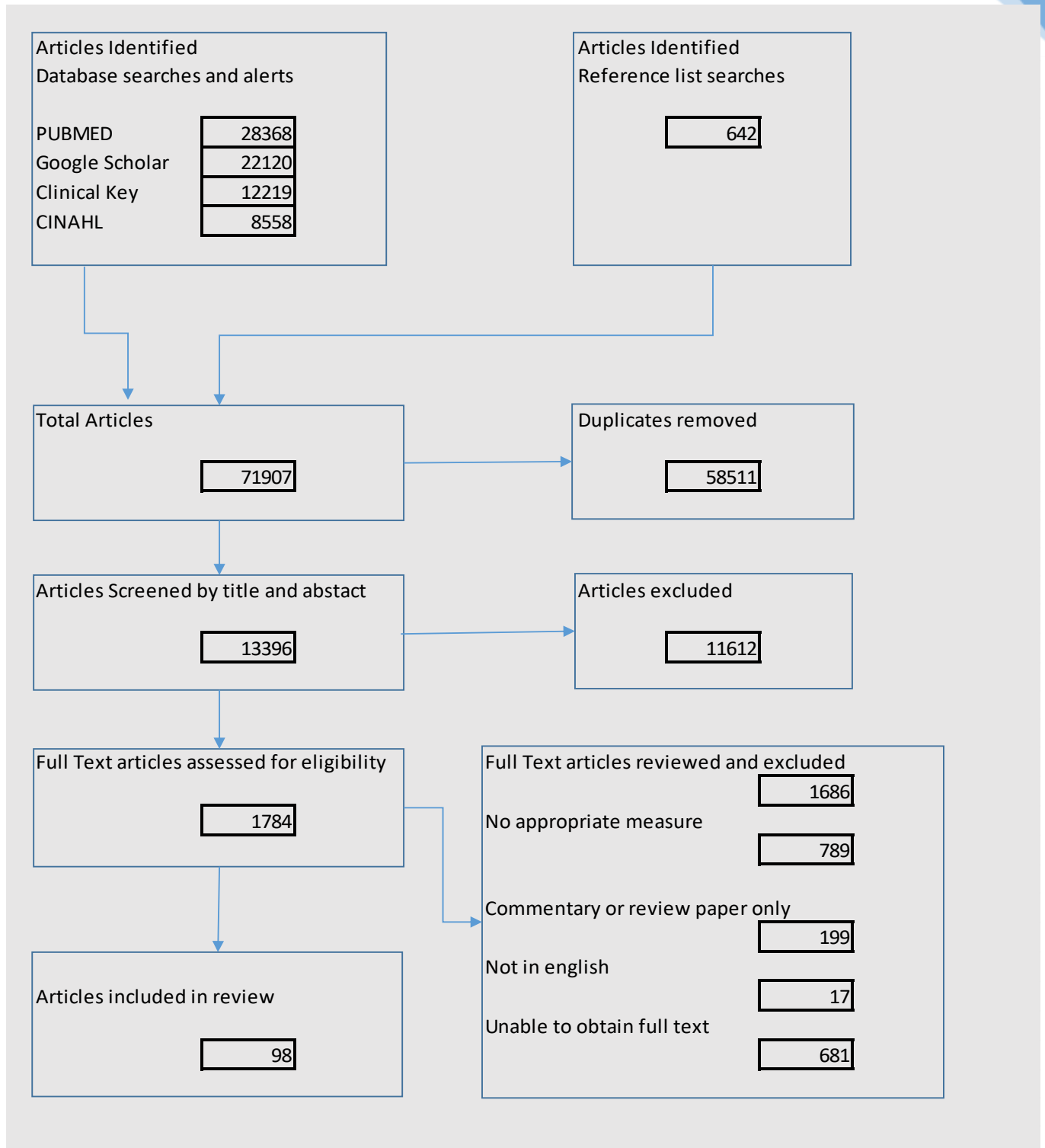


Diagram 2.1 Articles used in the literature search

## **2.3 DATA ANALYSIS**

In literature review articles are searched, read and analysed to synthesize and create new knowledge (Gregory et al. 2018:896; Toracco 2016:420)

Convincing academic arguments are developed and described under headings (Callahan 2014:273) that represent the themes the researcher identified during the reading and re-reading of the articles (Zorn, T. & Campbell, N. 2006:176). The researcher focused on first gaining a better understanding of the content related to the articles and thereafter through reading and re-reading identified the recurrent themes in the articles. The themes were used as headings in the description of the findings that will reflect in the literature review.

In this literature study the word caregiver will refer to any and all persons that is legally responsible for the primary care of paediatric patients. This will include parents, legal guardians and primary caregivers.

## **2.4 FINDINGS OF THE LITERATURE REVIEW**

The literature review reflects on eight recurrent themes that was identified through an extensive process of literature collection and analysis. The themes were focussed on facilitators and barriers of paediatric tonsillectomy surgery.

### **2.4.1 Theme 1: The involvement of caregivers in post-tonsillectomy care**

Primary caregivers require information to increase their knowledge and enable their involvement in post-tonsillectomy care (Albrecht, L., Scott, S, D., Hartling, L. 2017:1,2). During the pre- and postoperative period important instructions need to be given to primary caregivers regarding children's post-tonsillectomy care (Kampouroglou, G., Velonaki, V, S., Pavlopoulou, I, D., Fildissis, G., Tsoumakas, K. 2019: 326,327). Paediatric surgical experiences can be extremely stressful events for not only children but also for primary caregivers. It is important that their fears and concerns are acknowledged and that they are motivated to play an active role in the wellbeing of children. In the preparation of children preoperatively, the role of primary caregivers cannot be

overstated. Optimal healthcare is provided when healthcare personnel involves them in the decision making process to create a positive healthcare experience (Panella, 2016: 12,13,18).

By allowing primary caregivers to actively take part in the explanation of procedures, through play techniques, children's anxiety may be reduced. Caregivers have been identified as main learning and modelling sources for children and significantly influence their developmental and educational processes. (Capurso, M., Ragni, B. 2016:138).

The involvement of a practice that allows children to express themselves through play can decrease surgery related anxiety. In addition to providing caregivers with opportunities to enhance the wellbeing of the child, play can help them engage with and understand children's thoughts, feelings, needs and experiences. Playful interactions between them preoperatively encourages primary caregivers to fully engage with children in an effort to decrease their anxiety (Ward, T., Goldingay, S., Parson, J. 2017:2).

In the majority of cases parents are the primary caregivers of children and they have the responsibility to create healthy living circumstances for their children. During early childhood development the role of the primary caregiver is vital for positive child development (Norton, J, L., Raciti, M, M. 2017:18,19). The importance of other caregivers, who are generally filled by family, friends and employed caregivers is often overlooked or unrecognised (Pauley et al. 2018:60). Their involvement in the provision of healthcare to children is an important aspect that should be recognised (Tonsaker, T., Law, S., Ormel, I., Nease, C., Bartlett. 2017:479). The role of grandparents has increased in dual career families. With both parents fully employed, grandparents are often considered essential in the care of their grandchildren. (Pulgaron, E, R., Marchante, A, N., Agosto, Y., Lebron, C, N., Delamater, A, M. 2016:260). However, grandparents only play a supporting role in the provision of care and are limited by their own health constraints (Sumo, J., Wilbur, J., Julion, W., Buchholz, S., Schoeny, M. 2018:1239).

Grandparents often feel that they have an obligation to provide insight and advice to parents with young children. Intergenerational caregiving refers to parents providing support to children when they are young and in return adult children will care for their parents when they become older (Hammersmith, A, M., Lin, I. 2019: 339,340). The family effect often takes over during a period of reduced health of a loved one. Family members become anxious and worried and therefore feel the need to provide health related assistance to parents (Verstraete, J., Ramma, L., Jelsma, J. 2018:2). Studies indicate that when family members were given the opportunity to take part in

improving children's healthcare status, they were committed to make valuable contributions (Sauers- Ford et al. 2015: 123).

#### **2.4.2 Theme 2: Primary Caregivers' perspectives on the use of post-tonsillectomy emergency care**

Primary caregivers experience the Emergency Department as the most appropriate health care entity for its immediate reaction time, experienced staff and state of the art resources. First time parents with young infants regularly visit the Emergency Department for reassurance because they are often more worried, stressed and less confident than older parents who have more than one child (Ogilvie, S., Hopgood, K., Higginson, I., Ives, A., Smith, J, E. 2016:1,2,9). The most common paediatric emergency room diagnosis is upper respiratory infection, fever and otitis media all of these diagnosis are well within the scope of primary health care. Studies indicate that the highest paediatric users of emergency departments are in the 0 years to 3 years' age range (Davis, T., Meyer, A., Beste, J., Batish, S. 2018:551).

Primary caregivers often struggle to obtain proper healthcare for their children because of limited transportation and rising financial costs. They visit the Emergency Departments with expectations of non-judgmental environments that are attentive to their children's healthcare needs (Pickner, W, J., Ziegler, K, M., Hanson, J, D., Payne, N, R., Zook, H, G., Kharbanda, A, B., Weber, T, L., Russo, J, N., Puumala, S, F. 2018:945). However, preferences and expectations of primary caregivers is often not met in high stress Emergency Departments. These unmet expectations have a negative impact on patient satisfaction and results in them not returning for follow up appointments (Curran, J., Cassidy, C., Chiasson, D., MacPhee, S., Bishop, A. 2017:63).

In an effort to improve healthcare outcomes and meet expectations of care, home based primary care programs are implemented. These programs provide primary caregivers with the opportunity to interact with healthcare providers over the phone, through emails or in person. This results in a decrease in Emergency Department visits. (Shafir, A., Garrigues, S, K., Schenker, Y., Leffe, B., Neil, J., Ritchie, C. 2016:1622,1623).

### **2.4.3 Theme 3: The impact of a tonsillectomy procedure on a paediatric patient's quality of life**

Tonsillectomies are common surgical procedures with an ever increasing evidence base for its positive surgical use and improvements in quality of life. There are several indications for tonsillectomies that negatively affect the quality of life of paediatric patients and their families. The main indications are: obstructive sleep apnoea, recurrent streptococcal throat infections, recurrent middle ear infections and hearing loss (Torretta, S., Rosazza, C., Pace, M, E., Lofrida, E., Paola, M 2017:1).

Recurring throat infections and sleep disordered breathing negatively affects paediatric patient's quality of life with decreased school attendance and multiple hospital visits (Kao et al. 2017:2399). Recurring throat infection is described as more than seven episodes of sore throat in the preceding year.

The condition 'tonsillitis' is often used synonymously with sore throat or streptococcal throat infections without proper diagnosis and testing. These symptoms may or may not have a tonsillar origin and it is possible that many cases have alternative explanations. Based on the symptoms presented the tonsillectomy procedure is subsequently performed to improve the paediatric patient's quality of life. Most patients that undergo the tonsillectomy procedure experience improvements in quality of life within the first postsurgical year. Much more so than compared to the paediatric patients that have not received the surgery. Unfortunately, however, these benefits do not always persist over time (Morad, A., Sathe, N, A., Francis, D, O., McPeeters, L., Chinnadurai, S. 2017:2,7,10).

Initial indications for a tonsillectomy procedure were primarily infection due to lack of antibiotics and life threatening complications (Greig, S. 2017:1065). Obstructive sleep-disordered breathing and obstructive sleep apnoea has replaced recurrent throat infections as the primary indicators for tonsillectomies. Enlargement of tonsils and adenoids that cause significant airway obstruction is the most common cause of obstructive airway disorder in paediatric patients (Turkoglu, S., Somuk, B, T., Sapmaz, E., Bilgic, A. 2019: 232). Obstructive sleep apnoea is associated with significant long and short term health and quality of life concerns. Paediatric patients that suffer from obstructive sleep disordered breathing and apnoea often present with the following: a decrease in IQ, longer and more frequent sleeping patterns, emotional liability, decreased attention span, small stature and decreased bladder control at night (Chinnadurai, S. 2019). Most

paediatric studies indicate that there are correlations between intellectual function and obstructive sleep apnoea (Waters, K, A., Chawla, J., Harris, M, A., Heussler, H., Black, R, J., Cheng, A, T., Lushington, K. 2020:2). Studies also indicate that the tonsillectomy procedure could improve the risk of upper airway obstruction in paediatric patients and lead to improved sleeping patterns, increased weight gain, improved behavior, neurocognitive disorders and ultimately improved quality of life (Yan, Y., Song, Y., Liu, Y., Su, J., Cui, L., Wang, J., Geng, J., Liu, X., Shi, Y., Quan, S., Hang, A., Zuo, L. 2019:1).

In recent years, partial tonsillectomy has gained popularity as an alternative treatment option to total tonsillectomy and caregivers are often advised to pick this treatment option for its increased positive outcomes (Wong et al. 2017:192). The partial tonsillectomy procedure effectively increases paediatric patient quality of life. This is due to faster recovery time, decreased pain and a decreased risk of postoperative bleeding (Mukhatiyar, P., Nandalike, K., Cohen, H, W., Sin, S., Gangar, M., Bent, J, P., Arens, R. 2016:26). A partial tonsillectomy appears to be as effective as a total tonsillectomy for long term management of children suffering from obstructive sleep apnoea that is caused by an increased size of tonsils and adenoid tissue (Babademez, M, A., Gul, F., Muz, E., Muderris, T., Kale, H. (2016. 2016:754).

During the development of the 2019 American Academy of Otolaryngology head and neck surgery clinical practice guidelines, researchers considered adding a statement that explains the partial tonsillectomy process, in particular its increased utilization and positive outcomes. However, due to a lack of concrete comparisons of risks versus benefits this information was not included (Parikh, S, R., Archer, S., Ishman, S, L., Mitchell, R, B.2019:1).

#### **2.4.4 Theme 4: Complications after a tonsillectomy procedure**

The paediatric tonsillectomy procedure is associated with significant morbidity and in severe cases, mortality. Common complications that the tonsillectomy procedure is associated with include postoperative bleeding, respiratory depression, uncontrolled levels of pain and decreased oral intake (Hansen, J., Shah, R, D., Benzon, H, A. 2016:23). Although Obstructive sleep apnoea is identified as the leading indication for tonsillectomy surgery, it is also recognised as a risk factor for postoperative complications (Gehrke, T., Scherzad, A., Hagen, R., Hackenberg, S. 2019:1572). Literature suggest that a number of factors increase the risk of postoperative complications. These complications lead to an increase in consultations, and ultimately,

rehospitalisation. The relevant factors are patient age, bleeding tendencies, comorbidities such as cerebral palsy, down's syndrome, major heart disease and the surgical technique used during the procedure (Morris, S., Hassin, E., Borschmann, M. 2017:46). However, the number of paediatric patients that require readmission to treat post-operative complications remains insignificant (Tumin, D., Raman, V, T., Tobias, J, D. 2018:821).

Complications have been divided into two stages, “early” complications which include primary bleeding and respiratory compromise and “late” complications that include dehydration and secondary bleeding (Lawlor, C, M., Riley, C, A., Carter, J, M., Rodriguez, K, H. 2018:399). A tonsillectomy is classified as a traumatic surgical procedure with several associated risks. Therefore, understanding the normal postoperative healing process is imperative for successful identification of complications. Swelling of the uvula, tonsillar pillars and the tongue several hours after the surgery is normal and rarely leads to upper airway obstruction. Twenty-four hours after the surgery fibrin clots form around the tonsillar fossa. These fibrin clots typically separate from the tonsillar fossa after five to seven days' post operatively leaving a thin layer of stroma and lining of epithelium in the peripheral fossa. During this phase of recovery, the vascular bed is exposed and the risk of bleeding is increased. By day twelve and seventeen of recovery the tonsillar fossa is covered and significantly thicker making the risk of bleeding much less (Wall, J, J., Tay, K. 2018:415).

When comparing a tonsillectomy procedure to other common childhood surgeries it is described as a procedure that is persistently painful. Pain is at its highest during the first few days after surgery and decreases as the healing process progresses (Martin et al. 2019:1107). Pain management following a tonsillectomy procedure is a difficult and controversial problem. With obstructive sleep apnoea as the most common indication for tonsillectomy surgery the risk for respiratory complications arise with the use of narcotics. Paediatric patients that is diagnosed with obstructive sleep apnoea experience intermitted episodes of hypoxia. These children present with an increased sensitivity towards opioids because of its ability to suppress normal breathing function resulting in hypoxemia. The tonsillectomy procedure does not alleviate the symptoms from obstructive sleep apnoea immediately therefore caution when using narcotics with this group is necessary (Carr, M, M., Schaefer, E, W., Schubart, J, R. 2019:1).

The most concerning complication after a tonsillectomy procedure remains bleeding. This is due to decreased circulating blood volumes and delayed shock in paediatric patients (Bannister, M., Thompson, C. 2017:29). Post-operative bleeding is defined as primary and secondary bleeding. Primary bleeding occurs within the first twenty-four hours after the surgery and is often

experienced as more intense. Secondary bleeding occurs after the first twenty-four hours and is experienced more frequently (McKoen, M., Kirsh, E., Kawai, K., Roberson, D., Watters, K. 2018:2765).

Risk factors for post-tonsillectomy bleeding is divided into pre-operative, peri-operative and post-operative. Pre-operative factors include gender, age, history of bleeding tendency and the use of anticoagulants. Peri-operative factors include the anaesthetic agents used intraoperatively, the surgical technique and the experience of the operating physician. Post-operative factors include analgesic control, antibiotic treatment and the duration of the surgery (Hinton-Bayre, A. D., Noonan, K., Ling, S., Vijayasekaran, S. 2017: 36). Post-operative bleeding after a tonsillectomy is a common surgical complication that is associated with a concerning amount of risks (Ordemann, A. G., Hartzog, A. J., Seals, S., Spankovich, C., Stringer, S. P. 2018:238). Readmission for observation is often recommended, however, surgical intervention is rarely needed to control bleeding (Elsayed, M., Alhasani, W., Sudarshan, P., Leong, L., Hurley, M., Daniel, M. 2019:4,5).

There are various surgical techniques that can be used to perform a paediatric tonsillectomy. Each of these techniques have a different impact on post-operative mortality rates, even though none of these techniques have been described as the golden standard. Currently the most commonly used surgical procedure is cold dissection extracapsular tonsillectomy. Hot techniques such as mono-polar cauterization has been introduced in an attempt to decrease post-operative complications (Jotic, A., Vujovic, K. S., Milovanovic, J., Vujovic, A., Radin, Z., Milic, N., Vuckovic, S., Medic, B., Prostran, M. 2019:356). The advantages of hot techniques offer reduced bleeding during the surgical procedure, decreased surgical time and the risks associated are practically insignificant. However, research has shown that haemorrhagic rates cannot be linked to the surgical technique alone (Motta, S., Testa, D., Ferrillo, B., Massimilla, E. A., Varriale, R., Barrella, T., Motta, G., Motta, G. 2017:562). Advancements in surgical techniques can help reduce post-operative complications, but a significant amount of paediatric patients still require additional care in the form of emergency department visits and rehospitalisation (Rohlfing, M. L., Wistermayer, P. R., Bungo, T. M., Mims, W., Kirse, D. J. 2016:358).

### 2.4.5 Theme 5: The Benefits and risks associated with same day surgery

Since the establishment of same day surgery in the late 1900 the health care environment has experienced significant changes and developments. With advances in technological developments and improved healthcare costs day care surgery has become the norm in modern day medicine (Pivot, D., Hoch, G., Astruc, K., Lepelletier, D., Lefebvre, A., Lucet, J., Beaussier, M., Philippe, H., Vons, C., Triboulet, J., Grandbastien, B., Aho Glele, L, S. 2018:196). Same day surgery or ambulatory surgery as it is also known is described as surgical procedures that is performed in independent healthcare facilities that specialize in surgical and diagnostic procedures that is performed without overnight stay (Mitchell, J, M. 2019:291). The growing trend of performing surgical procedures in ambulatory settings offer significant benefits to the patients and their families. The medical practitioner and the facility in which they practice also reap benefits. However, the primary goal of ambulatory surgery should always be to improve patient care and satisfaction (Nordin, A, B., Shah, S, R., Kenney, B, D.2018:75).

There is a common misconception that quality improvement practices in ambulatory settings are insignificant given that surgeons elect to only perform minor surgery in these settings (Molina, G., Neville, B, A., Lipsitz, S, R., Gibbons, L., Childers, A, K., Gawande, A, A., Berry, W, R., Haynes, A, B. (2016). 2016:332). When comparing inpatients procedures with same day surgery the risk of complications is relatively low but it's not trivial (Munnich, E., Parente, S, T. 2017:147). The risk of adverse events in ambulatory surgery is therefore a reality and needs to be actively prevented. The success of ambulatory surgery does not only depend on being prepared for each case with adequate staffing and state of the art equipment but also on careful patient selection (Butz 2019:289). Careful patient selection may decrease incidents but may also alter the stages of a patient's clinical pathway (pre, intra and postoperative). All of which may very well lead to delays of surgical procedures and in severe cases cancellation (Theissen, A., Slim, K., Deleuze, A., Beaussier, M.2019:41). Selection of patients for ambulatory surgery is based on the type of surgical procedure and the comorbidities that patients may present with (Nilsson, U., Jaensson, M., Dahlberg, K., Hugelius.2019:518). The most common surgical procedures that is performed in ambulatory settings include: ear nose and throat procedures, ophthalmic surgery, gastric procedures such as gastroscopy's and colonoscopies and epidural injections. (Butterfield, J. 2018).

Surgery that is performed in ambulatory settings provides patients with several advantages. When patients recover in the comfort of their own homes, they experience therapeutic environments

that is free of noise and nosocomial infections with contained medical expenditures (Ead, H. 2016:83). As ambulatory surgery evolves into increasingly complex surgical procedures, enhanced recovery programs are crucial. These programs are designed for the purpose of improving quality care and is vital for the standardisation of health care, decreased healthcare expenditure and rapid recovery time (Afonso, A, M., Hanae, K, T., McCormick, P, J., Twersky, R, S.2019: 225,226,227). An example of such a program is the single visit surgery program. This program consists of a same day preoperative assessment followed by the scheduled procedure and is concluded with a telephonic assessment, post-operatively (Olson, J, K., Darning, L, A., King, D, R., Rager, T, M., Gartner, S., Huibregtse, N., Moss, R, L., Besner, G, E.2017:81). Studies indicate that this program may provide patient's family with several advantages such as decreased traveling time, decreased time away from work and an overall convenience without sacrificing patient care (Criss, C, N., Brown, J., Gish, J, S., Gadepalli, S, K., Hirschl, R, B.2018:756). The success of ambulatory surgery is dependent on the ability of healthcare organisations to foresee and prevent adverse events that might lead to rehospitalisation in acute hospitals (Albaladejo, P., Aubrun, F., Samama, C., Jouffroy, L., Beaussier, M., Benhamou, D., Romegoux, P., Skaare, K., Bosson, Ecoffey, C 2017:308).

Although ambulatory surgery has multiple benefits for both patients and day care facilities it has been associated with several postoperative complications. These complications relate to anaesthesia, analgesia, patient mobilisation and rehabilitation to the home environments (De Souza Neto, E, P., Martinez, J, L., Dekoven, K., Ruest, P., Girard, M 2019:71). Patients that is discharged after ambulatory surgeries often struggle in coping with complications they experience at home. Several complications such as uncontrolled pain, nausea and vomiting, bleeding at surgical site, hoarseness of the throat and an increased gag reflex can be observed in these patients (Aydogdu, O., Dal Yilmaz, U. 2019:2). Bleeding and uncontrolled pain associated with nausea and vomiting remains the most common complications after ambulatory surgery (Schug, S, A., Chandrasena, C. 2015:12). When post-operative pain is not managed adequately it may contribute to behavioral changes that can have long term effects on the emotional and cognitive wellbeing of a patients (Cai, Y., Lopata, L., Roh, A., Huang, M., Monteleone, M, A., Wang, S., Sun, L. 2017:100) 2016:156). Postoperative nausea and vomiting can lead to prolonged stay, rehospitalisation and a delay in normal activities such as eating, drinking and mobilisation (Stjernberg, M, I., Rustoen, T., Raeder, J. 2018:3). In an effort to improve the effects of postoperative complications after ambulatory surgery, centers are implementing surgery-specific

regimens in which prescribed medication and health information is readily available on discharge (Walter- Larsen, S., Aagaard, G, B., Molin Friis, S., Petersen, T., Moller-Sonnergaard, J., Romsing, J. (2016). 2016:152).

During the discharge process patients move from highly supported and well-resourced environments to their home setting. At home their families become their link to the healthcare system in the event of complications. Therefore, proper discharge information should be provided to patients and their families to ensure clear understanding of postoperative instructions (Ead. 2016:254). Studies indicate that telephonic follow up consultations after surgery reduced unnecessary consultations and emergency room visits. These follow up calls provided patients and their families with opportunities to acquire additional information and support (Xin, Y., Li, X., Cheng, J., Yi, C., Mao, H. 2018:265).

#### **2.4.6 Theme 6: Preoperative assessment and preparation before ambulatory surgery**

With increasing volumes of ambulatory procedures, appropriate preoperative assessment and preparation of patients is critical to provide efficient, cost effective and safe patient care. With appropriate patient selection and optimisation, ambulatory surgery is safe for most patients (Obianuju, O., Gerlach, R, M., Sweiter, B. 2019:195).

The idea of undergoing surgery may frighten patients and trigger episodes of anxiety. Preoperative anxiety is often caused by anticipation of pain, separation from family, loss of independence, fear of surgical procedure, anaesthesia or death (Pereira, L., Figueiredo-Braga, M., Carvalho, I, P.2015:733). Studies indicate that when patients are well prepared before expected surgery, they experience less anxiety and experience better healthcare outcomes, which leads to improved patient satisfaction (Hoke. 2018:250).

Preoperative assessment and preparation of patients is comprised out of three essential components. The first is to familiarise patients and their families with the ambulatory environment, the second component is based on providing information to patients and families that will aid in informed decision-making, and the third component is focused on identifying potential risks that can lead to cancelation and rehospitalisation (Bailey, C, R., Ahuja, M., Bartholomew, K., Bew, S., Forbes, L., Lipp, A., Montgomery, J., Russon, K., Potparic, O., Stocker, M. 2019:781).

Cancellation of ambulatory surgery is a common source of patient dissatisfaction and increased emotional stress. These cancellations negatively impact the healthcare institution with additional administrative work, case rescheduling, staff reassignment and additional medical supply costs (Smith, B. B., Smith, M. M., Hyder, J. A., Mauermann, W. J., Warner, M. E., Licatino, L. K., Barbara, D. W. 2018:118). Research indicates that with the implementation of preoperative assessment programs the overall cancellation rate of theatre cases in ambulatory settings have decreased significantly (Lee, M. L., Rodgers, C., OH, A., Muckler, V. C. 2017: 384,391).

Preoperative assessment and preparation of patients before ambulatory surgery is crucial in ensuring patient safety and the correct application of resources (Sun Moon, T., Joshi, G. P. 2016:141). Assessing and teaching of patients on the day of elective ambulatory surgery is often not feasible or appropriate. It is often more effective to reach out to patient's days before surgery for assessment and education. Proper assessment and preparation before ambulatory surgery is a key to success for positive surgical outcomes and family satisfaction (Delaney, D., Bayley, E. W., Olszewsky, P., Gallagher, J. 2015:290).

#### **2.4.7 Theme 7: The importance of providing adequate paediatric health education**

The concept of health education is a continuous, dynamic, complexed and planned teaching process that takes place throughout the lifespan of individuals in different settings to promote and initiate positive lifestyle and behavioral changes (Pueyo-Garrigues, M., Whitehead, D., Pardavila-Belio, M. I., Canga-Armayor, A., Pueyo-Garrigues, S., Canga-Armayor, N. 2019: 133).

Nurses provide health education as an essential part of preparing paediatric patients and their families for surgical procedures and self-management after discharge (Best, J. T., Musgrave, B., Pratt, K., Hill, R., Evans, C., Corbitt, D. 2018:453). Self-management of healthcare is focused on providing primary caregivers and their children with opportunities to master care at home (Ernst, G., Lange, K., Szczepanski, R., Staab, D., Ehrich, J., Zinken, K. 2016:349). A family centred culture is crucial to providing excellent care to the unique paediatric patient demographic, with family centred techniques currently being explored in certain clinical environments as a method to improve patient satisfaction (Fustino, N. J., Moore, P., Viers, S., Cheyne, K. 2019:57). These programs focus on active parental participation during hospitalisation and on the specific behaviors primary caregivers adopt to provide their children with physical, psychological and emotional care (Chartrand. J., Tourigne, J., Mac Cormick, J. 2016:600). Patient education on

expectations of same day surgery and increased family involvement during the discharge process is vital for adequate patient recovery (Singletary 2016:35).

Health education should be available in many different forms to accommodate different learning styles of paediatric patients and their families. Traditionally health education is provided through verbal communication and then reinforced with written educational materials. The use of written educational materials in conjunction with verbal instructions and demonstrations are a valuable source of proper patient education (Chang, S., Hung, C., Hsu, Y, Liu, Y., Wang S. 2017: 299,300). However, studies indicate that patient education pamphlets, booklets, information sheets and informed consent in healthcare often exceed the literacy level of patients and their families. Patients and their families that do not comprehend the health information that is provided to them are more likely to be non-compliant and result to improvisation and guesswork (Liebner 2015:417,418). Providing health education that is at a six or eight grade literacy level is critical for patients and their families to make informed treatment decisions, provide informed consent and follow postoperative instructions (Aaronson, L, A., Cox, C, T., Boss, E, F. 2019:87). Health literacy is linked to literacy and entails an individual's knowledge, motivation and ability to comprehend, access and apply health information in order to make judgements and informed decisions in everyday life concerning health care, disease prevention and health promotion to maintain and improve an individual's quality of life (Perrenoud, B., Velonaki, V., Bodenmann, P., Ramelet, A.2015: 83). Effective health education with appropriate literacy levels can not only improve immediate short term outcomes but also improve long term outcomes and increase overall quality of life of paediatric patients and their families (Ead 2016:434).

Discharge from a day care facility can be a complex procedure that is associated with a number of possible risks such as missed follow up appointments, medication errors and failure to recognise possible complications. Studies indicate that the general consensus under caregivers is a need for thorough and complete health education. However, they also report that comprehensive discharge information can be overwhelming because of the volume of the material, mental exhaustion and competing concerns during the hospitalization and discharge process. Therefore, healthcare professionals should provide health education in such a manner that it is easy to understand, remember and execute at home (Vepraskas, S, H., O' Day, P., Zhang, L., Simpson, P., Gage, S. 2018:779). Standardised health education practices on discharge can provide patients and their families with information that is consistent and effective without the risk of omission that support safe transition to home care (Singletary 2016: 38).

### **2.4.8 Theme 8: The quality and readability of internet based health information**

Due to evolution in information and communication technology, the internet and social media has become the most popular sources of health related information for patients and their families (John, A, M., John, E, S., Hansberry, D, R., Thomas, P, J., Guo, S. 2015: 430). Parents as care givers are increasingly taking an active role in their children's healthcare and using the internet more actively to seek information around their child's health (Pehora, C., Gajaria, N., Stoute, M., Fracassa, S., O'Sullivan, R, S., Matava, C, T. 2015:9). Their involvement is demonstrated in the current health care environment, where the educational focus has shifted to individuals who is comfortable with technology and that is interested in more interactive educational experiences (Real et al. 2018:1281). However, caregivers do not routinely use websites that are known to provide safe, accurate and reliable information (Pehora et al. 2015:9).

In an age of patient centred decision making, health care providers should consider the information that is available to patients and their families on the internet and the effect it will have on them (Wadhera, V., Hwang, S., O'Connor, L., Soma, M. 2018:1).

Social media and internet based websites allow users to post content and interact with one another. However, studies indicate that the information provided on these sites are inconsistent with questionable accuracy and reliability (Bryan, M, A., Evans, Y., Nirishita, C., Midamba, N., Moreno, M. 2019:31). In addition to concerns of authenticity and reliability, internet based health education is rarely written at an appropriate reading level for the general population. The health information that is available on the internet should be at a level which is easy to understand by the general public and is not lost behind medical terminology (O'Connel Ferster, A, P., Hu, A.2017: 129).

With rising concerns over the quality of health information available on the internet, a specific code of conduct was designed by the Health on the Net foundation to enable medical information websites with guidelines on how to ensure reliability and usefulness of information. This code of conduct is an ethical standard that offers objectivity, improved quality and transparency of health information on the internet (Raj, S., Sharma, V, L., Singh, A, J., Goel, G. 2016: 1).

## 2.5 SUMMARY OF THE CHAPTER

Throughout this literature study active primary caregiver involvement has been identified. The involvement of primary caregivers has been associated with a need to actively improve their knowledge and skills with regards to child healthcare. Their involvement is demonstrated in the current health care environment, where educational focus has shifted to individuals who is more comfortable with technology and that is interested in more interactive educational experiences.

Therefore, the healthcare environment should be adjusted to provide primary caregivers with comprehensive information related to child healthcare.

In the next chapter the researcher will discuss how rapid cycle evaluation is used in the evaluation, assessment and revaluation of tonsillectomy health education.

## **CHAPTER 3**

### **RESEARCH METHODOLOGY**

#### **3.1 INTRODUCTION**

This chapter presents a description of the research process. As described in chapter one the research methodology provides information concerning the method that was used in undertaking this research as well as a justification for the use of this method. The chapter also describes the various stages of the research, which includes the selection of participants, the data collection process and the process of data analysis. The chapter discusses the role of the researcher in qualitative research in relation to reflectivity. The chapter ends with a discussion of the integrity and trustworthiness of the research and how these two requirements were met.

The research explored the evaluation and adjustment of primary caregiver education in a designated private day hospital according to the contextual and interventional facilitators and barriers to overcome identified by the CFIR. The interaction between the researcher and the participants consisted of dialogue where both shared similar experiences and multiple truths were investigated

#### **3.2 RESEARCH DESIGN**

In healthcare complex interventions such as patient education is used to deliver equally complex care. The context in which the interventions are implemented turn out to be increasingly complex. In order to understand the factors that influenced the implementation of interventions, systematic research is required (Keith et al., 2017:2). As described in chapter one the contextual and interventional factors that influenced the implementation of primary caregiver education was studied through rapid-cycle evaluation to provide information for continuous improvement of the intervention. With rapid-cycle evaluation, the improvement does not happen after a period of time. It is done during implementation to ensure that improvement is done as and when required (Keith et al., 2017:3).

Rapid cycle improvement methods were used to change and address issues raised in earlier findings from the literature review. Because researchers collect and analyse data early in the research process rather than waiting until the end of a study, the intervention can be adapted, the change tested, and interactive improvements made. The process of rapid-cycle evaluation provided the researcher with useful tools to quickly conduct practical research within the opportunities and constraints that existed in their current delivery structure (Johnson et al., 2015:3,4).

A rapid-cycle evaluation of the paediatric tonsillectomy primary caregiver education in a designated day hospital was done through a qualitative research approach. The CFIR framework was used to ensure that the contextual and interventional factors that influenced the implementation of patient education were explored and the intervention was adjusted. The advantages of using a framework in a qualitative approach in a rapid-cycle evaluation refer to the multiple cycles of primary qualitative data collection and analysis through a hybrid inductive/deductive approach (Skillman, M., Cross-Barnet, C., Singer, R., F., Rotondo, C.R., Moiduddin, A. 2019:279). Qualitative studies are performed when information surrounding a phenomenon is not extensive. In implementation research, it is used when valid measures are not available and quantitative research is not feasible (Cohan, D.C., Crabtree, B.F., Damschroder, L., Hamilton, A.B., Heuttin-Roberts, S., Leeman, J., Padgett, D.K., Palinkas, L., Rabin, B., Reisinger, H.S 2018:6).

Implementation research is a growing field for promoting a successful response to the complexities encountered when implementing evidence-based health interventions (Dako-Gyeke, P., Asampong, E., Afari, E., Launois, P., Ackumey, M., Opoku-Mensah, K., Dery, S., Akweongo, P., Nonvignon, J., Moses, A.2020:2). It is intended to address challenges posed by the slow adoption of evidence-based science by the medical and health promotion practice community (Livingood, W.C., Bilello, L., Lukens-Bull, K., Smotherman, G., Choe, U. 2020:49). It provides a comprehensive, broadly applicable structure through which the researcher can access a wide range of embedded research initiatives (Varallyay, N.L., Langlois, E.V., Tran, N., Elias, V., Raveiz, L. 2020:9).

### 3.3 METHODS

To ensure timely decisions regarding the implementation of an intervention and in the case of this study on primary caregiver education, a rapid-cycle evaluation was done to identify the factors that influenced the implementation (Skillman et al., 2019:1). Rapid cycle evaluation is specifically designed to generate contextually rich evaluative information in short timelines. Rapid assessment procedures provide timely, contextually rich evaluative information about complex interventions implemented into dynamic clinical settings (Holdsworth, L.M., Safaeinili, N., Winget, M., Lorenz, K.A., Lough, M., Asch, S., Malcolm, E.2020:1).

In implementation science, the intervention is adjusted according to the findings of the evaluation (Schneeweiss et al., 2015:214). Implementation science models such as the Consolidated Framework for Implementation Research are used to plan and guide pre-implementation strategies (Glasgow, R.E., Gattaglia, C., McCreight, M., Ayele, R.A., Rabin, B.A. 2020:2). During every round of research, the facilitators and barriers applicable to the contextual (the CFIR domains that refer to inner and outer setting as well as the characteristics of the designated individuals) and interventional (the CFIR domains that refer to the intervention characteristics and the implementation process) factors were addressed (Keith et al., 2017:8). In rapid-cycle evaluation decisions regarding 1) scaling up a successful program; 2) continuing a partially successful program, or 3) terminating an unsuccessful program are done (Schneeweiss et al., 2015:214).

In this study, two rounds of data collection were planned. After the first round, the primary caregiver education was adjusted according to the output of the analysis. Thereafter the adjusted primary caregiver education was implemented for a 4-week period and followed by another round of data collection and analysis. A final adjustment of the primary caregiver education was done after the second round of data collection and analysis. The findings and the adjustments were presented to the specific physician (the health education to his patients were used in the study) and the hospital management. The findings were discussed and imputes and suggestions from hospital management were implemented. The physician did not provide any additional information.

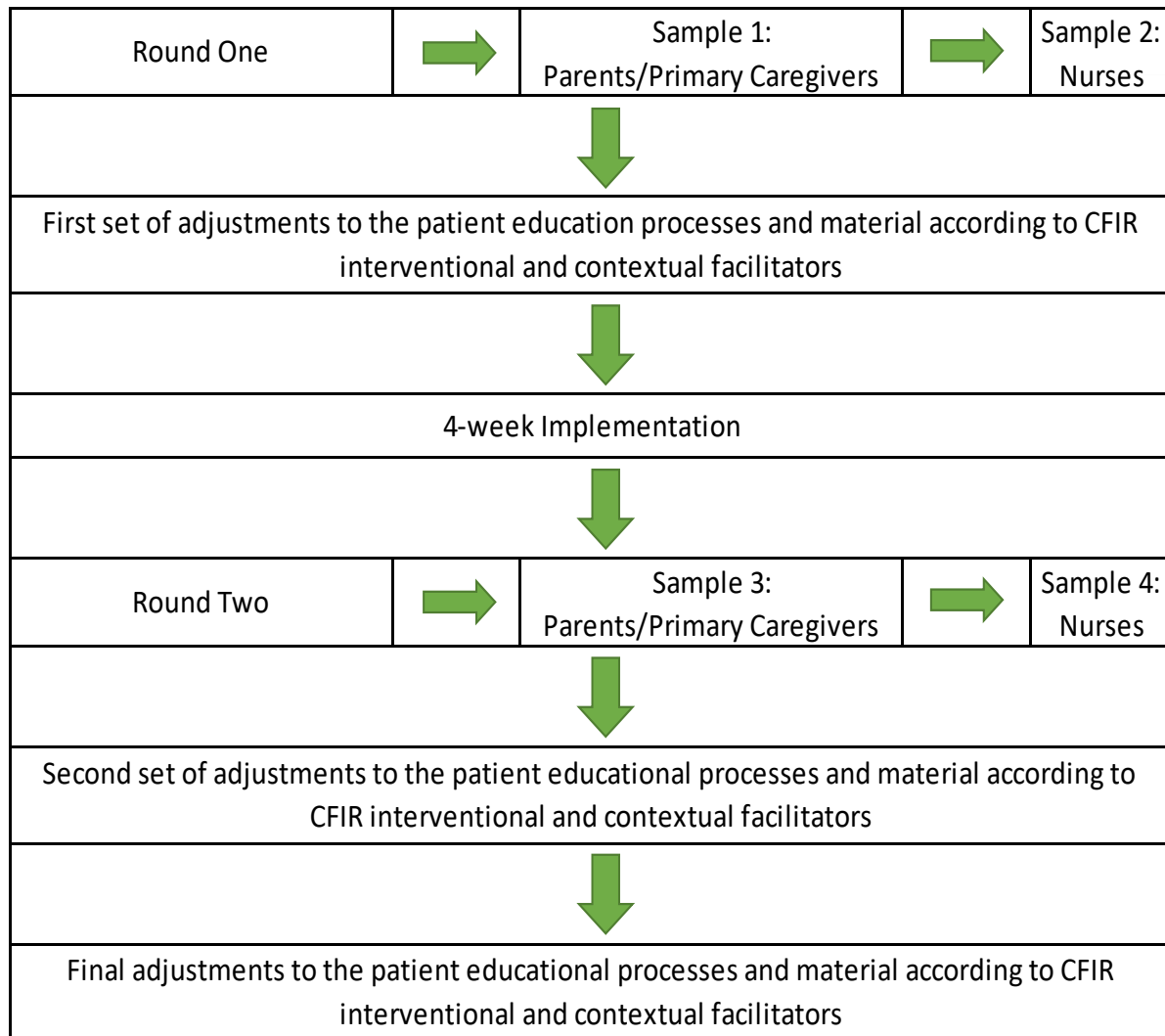


**Figure 3.1 Representation of the research design**

Rapid-cycle evaluation does more than tell what needs to be changed. It also points out how the intervention could be improved. It is done during the implementation and not after the implementation (Cody & Asher, 2014:1). Before the researcher commenced with any semi structured interviews she conducted a pilot study to ensure that the interview process was successful.

Data was collected through individual semi-structured interviews with registered nurses and the parents/caregivers of the children whose tonsils were removed. The interview guides did consist of the applicable constructs of the CFIR. The focus was on the inner and outer setting of the practice context and the processes of primary caregiver education (Refer to Addendum H). Field notes covered what happened during the interviews with the registered nurses responsible for the

paediatric tonsillectomy education and parents/caregivers of children that underwent tonsillectomy surgery.

Data collection and analysis was done with the use of the CFIR that served as an interview guide and framework for data analysis in cooperation with open coding. The data was coded as it becomes available. Multiple smaller rounds of coding provide researchers with the flexibility to conduct ongoing data collection and analysis (Skillman et al., 2019:283). The findings of one round of data collection and analysis could be used in the next round of data collection and analysis. The data that did not fit the CFIR was thematically analysed to complement the deductive analysis.

### 3.4 STUDY POPULATION

The study population consisted of all the people who met the inclusion criteria (Polit & Beck, 2017:249). They all qualified to be included in the sample. Sample adequacy in qualitative research pertains to the appropriateness of the sample composition and size (Vasileiou et al., 2018: 2).

In this study, round one had a parent/caregiver study population that consisted out of eleven parents/caregivers who had children who received tonsillectomies at the designated day hospital and who were patients of the physician who developed the paediatric tonsillectomy patient education tool. The nurse population in round one consisted out of ten nurses who were involved in the education of parents/caregivers of children whose tonsils were removed in the designated hospital by the physician who developed the tonsillectomy patient education tool.

The second round of the study consisted out of a parent /caregiver population of ten parents/caregivers who had children who received tonsillectomies at the designated day hospital and who were patients of the physician who developed the paediatric tonsillectomy patient education tool. During the second round the nurse population remained the same with ten nurse participants

### 3.5 SAMPLING METHOD AND SAMPLE SIZE

The researcher used purposive sampling in the study. Qualitative research studies are generally focused on purposive sampling. This means that the study population was not randomly selected but rather recruited based on the study populations knowledgeability and experience with the phenomenon and their willingness to communicate their experiences with the researcher (Palinkas et al., 2015:2). Samples in qualitative research are generally smaller in order to support the depth of case-orientated analysis that is fundamental to this mode of inquiry (Vasileiou et al., 2018:2).

The nurse participants were selected based on their level of participation in patient education (Colon-Emeric, C., Toles, M., Cary, M.P., Bathelor-Murphy, M., Yap, T., Song, Y., Anderson, R.A. 2016:3). Purposive sampling was the method of choice as the researcher was a full-time employee at the designated day hospital and therefore knew the nurse population. The researcher had the opportunity to select the nurses who give patient education to the parents/caregivers of children post-tonsillectomy. The parents/caregiver's sample was selected from a specific date and potential participants who agreed to take part in the study was approached by the researcher.

Both nurses and parents/caregivers were selected to ensure that data was sourced from all role players. It was important that participants in qualitative research in implementation science were selected from all the groups that were involved (Saldana, 2014:7). After the Faculty of Health Sciences Research Ethics Committee of the University of Pretoria gave their approval for the proposed research, and the day hospital management (Refer to Addendum G) and the physician who compiled the primary caregiver education material provided permission for the study to be conducted in the designated day hospital, appointments were made with the parents/caregivers and nurses.

The researcher invited parents/caregivers of children who underwent the tonsillectomy procedure for individual interviews through direct approach after the admission process was completed. (Refer to Addendum A). They received primary caregiver education before the discharge of their children. The education that was provided to parents/caregivers were from one specific guideline to ensure the educational outcome stayed the same. The researcher also invited the registered nurses to take part in the study during periods in which they were able to have an open discussion without any interruptions in the nursing process (Refer to Addendum B). The registered nurses

were selected for individual semi-structured interviews (Refer to Addendum E). In the proposed study 10 parents and caregivers and a 10 nurses were selected per data collection round. The participants were invited to take part in the study until sufficient data was collected and no new information was introduced during the interviews. Two rounds of data collection were done. The nurse participants remained the same in both rounds of data collection, but the parents/caregivers changed. Two data collection rounds were done to evaluate and adjust the patient education and not to compare the data provided by different groups of participants.

The inclusion criteria were:

- Parents/caregivers of children whose tonsillectomies were performed at the designated day hospital by the physician who compiled the guideline.
- Registered nurses that provide primary caregiver education to parents/caregivers of children who got tonsillectomies will be included in both rounds.

The exclusion criteria were:

- Registered nurses that were not directly involved with patient education to parents/caregivers of children who got tonsillectomies.
- Parents/caregivers of children whose tonsillectomies were performed at the designated day hospital by physicians other than the one who compiled the guideline.

### **3.6 DATA COLLECTION AND ORGANIZATION**

#### **Semi structured interviews**

The researcher collected data through semi-structured individual interviews. Semi-structured interviews allow researchers to capture comprehensive data, but it still allows flexibility towards the participants to bring their own perceptions to the interview (Barret & Twycross, 2018:63).

The semi-structured interview is described as a flexible tool where the researcher is guided, rather than constrained, to follow the set questions that he or she develops, with the aim of answering the research question (WASP, 2019:53).

The interviews are focused on creating a therapeutic environment in which the researcher could focus on the needs of the research participants (Bana, M., Ribi, K., Kropf-Staub, S., Naf, E., Schramm, M, S., Zurcher-Florin, S., Peters, S., Eicher, M. 2020:3).

#### **The interview participants**

Before the researcher conducted the interviews the aim of the study was discussed with all the participants. During this period the researcher allowed the participants to decide if they wanted

take part in the study. After consent was obtained from all the participants the researcher conducted forty semi-structured interviews during two rounds of data analysis. During the first round the researcher conducted eleven interviews with the parents and caregivers. The interviews with parents/caregivers happened at a times between seven- and 10-days' post-operative and at venues that they preferred. During these face to face interviews the researcher adhered to all Covid 19 regulations. The researcher also conducted ten interviews with the nurse participants during times that they preferred and in venues at the clinic while striving to limit disruptions to nursing care.

The second round of interviews were conducted four weeks after the first round of interviews. The researcher conducted ten interviews with the parents and caregivers during the second round. The interviews again happened at a times between seven- and 10-days' post-operative and at venues that they preferred. During these face to face interviews the researcher adhered to all Covid 19 regulations. During this round the nurse participants remained the same as in the second round and ten semi structured interviews were conducted.

The interviews with the nurse participants were conducted during times that they preferred and in venues at the clinic while striving to limit disruptions to nursing care. The researcher again made it a priority to adhere to all the Covid 19 regulations.

### **The interview process**

The interviews with nurses and parents/caregivers were conducted by the researcher with interview guides based on the domains and constructs of the CFIR. (Refer to Addendum E and F for the guide for the parents/caregivers and the guide for the registered nurses.) The interviews lasted 30 minutes up to an hour all were audio-recorded with the permission of the participants. Field notes were written to capture all data that was not included in the audio records.

Face to face interviews with participants is usually recorded and then transcribed verbatim for analysis. Each transcript is read thoroughly by the researcher to engage more intensely with the meanings and contextual experiences of each participant.

The researcher invited the potential participants to take part in the study without any form of coercion. Once they have agreed to take part, she arranged dates and venues for the data collection. Before the onset of the interviews the concept of informed consent was discussed.

### 3.7 DATA ANALYSIS

In this study, inductive and deductive data analysis was done. The domains of the CFIR were used in deductive data analysis. It served as a template for content analysis. The domains were also used as a guide to interpreting the main findings. The CFIR covered a wide range of influential factors such as the current educational guideline, parents, caregivers and nursing staff (Breimaier, H.E., Heckermannn, B., Halfens, R.J.G., Lohrmann, C.2015:2,4). Inductive data analysis was used to assist the researcher with identifying themes from the data that did not fit the domains of the CFIR. This process referred to specific observations, recognition of patterns and a general conclusion. Deductive data analysis is focussed on the existing theory, formulating a hypothesis, data collection, data analysis and whether a hypothesis will be rejected.

Framework analysis is a systematic process designed for qualitative data analysis in implementation science (Goldsmith, 2021:2061. This approach was very effective in this study as it allowed priori concepts such as the domains of the CFIR to be combined with inductive analysis. An explicit audit trail was being kept to indicate how the patient education was evaluated and adjusted and evaluated after the adjustment. The audio-recorded interviews were transcribed verbatim and the field notes were typed before the analysis commences.

Colon-Emeric et al. (2016: 3) developed five stages of data analysis and the researcher applied them during deductive and inductive data analysis. The **first** stage was the familiarization stage during which the researcher familiarized herself with the data. She read and re-read the transcripts and the field notes to become familiar with the content. The researcher focussed on the data that was available. In the **second** stage, a thematic framework based on the CFIR was developed from the guides that the researcher used during the interviews in the data collection phase. The domains of the CFIR became the a priori codes. During the **third** stage, the transcripts and field notes were coded by using a priori codes (deductive analysis) and themes was identified through open coding (inductive analysis). The themes and codes were linked in the **fourth** stage to the excerpts from the transcripts and field notes. In the **fifth** stage, a brief summary statement was made to link the codes (derived from the CFIR) to the excerpts (quotations to substantiate the codes and themes) to answer the first research question.

### **3.8 ADJUST THE PRIMARY CAREGIVER EDUCATION**

The researcher focussed on adjusting the primary caregiver education according to the findings of the first round of data collection and analysis. The adjusted content and method of presentation of paediatric tonsillectomy primary caregiver education was discussed with hospital manager during a meeting that was held at the particular day hospital, the nurse participants and the physician who compiled the content for the patient education. The adjusted primary caregiver education was implemented by the registered nurses for a month. During this period, they were encouraged to discuss the written material with primary caregivers this allowed nurse participants to evaluate the primary caregivers level of understanding. During the second round of data collection the process was repeated. This created an opportunity for the nurse participants to play an active role in the research process. After completion of the second round, the adjusted content and method of presentation was once again discussed with hospital management and the specific physician and only once they accepted the adjustments final implementation of the updated guideline could take place.

### **3.9 INTEGRATION OF THE FINDINGS AND THE KNOWLEDGE BASE (LITERATURE)**

The researcher verified the adjusted paediatric tonsillectomy primary caregiver education with the particular physician and the knowledge base of patient education and more specifically with the paediatric patient education knowledge base. The researcher filled the gap in the knowledge base by aligning the research problem, objective and questions.

### **3.10 RIGOUR AND QUALITY CONTROL**

According to Denzin and Lincoln, the concept of rigour has no clear approach that values insight and creativity (Polit & Beck, 2017:557). However, there is great value and need for a more standardized criterion of widely accepted rules, norms, and guidelines such as presented by the “Big-Tent” model (Tracy, S, J. 2017:1). Therefore, the researcher selected the “Big-Tent” model to ensure the trustworthiness and integrity of the research. The model has the advantage of promoting dialogue between the researcher and the research participants. This is achieved with a conceptualisation that differentiates between the end goals of qualitative research and a myriad

of other practices and methods that a researcher can choose from to reach the desired goal. This distinction of research creates the big tent theory.

As delineated by the 'Big-Tent' model high-quality qualitative research is marked with different criteria. The big tent theory presents eight criteria of qualitative quality, each that may be achieved through a variety of craft skills that are flexible depending on the goals of the research and preferences of the researcher (Tracy, S, J. 2017:1).

In qualitative research, the researcher is often the primary instrument for data collection. Any research biases that are not adequately addressed or errors in judgement can affect the quality of data and subsequent research results. Therefore, the application of standards of rigor and adherence to systematic processes well-documented in an audit trail is essential (Johnson et al., 2020:145).

The researcher used these criteria of excellent qualitative research throughout the study:

**Worthy topic:** The research topic was relevant, significant, interesting and compelling. The topic developed importance over time as the continuous process of evaluation and adjustment took place. This approach to qualitative research suggest that contextual priorities are integral when developing research. A worthy topic was reached in Chapter one of the research

**Rich rigour:** A rich rigour was achieved with careful attention to detail and precision in evaluation and adjustment by using the domains of the CFIR. A rich rigor focusses on a specific set of theoretical constructs, the data and time the reseacher spends in the field, the sample and context and the data collection and analysis of the research A rich rigor was achieved with the use of the CFIR throughout the study.

**Sincerity:** The researcher achieves sincerity through self-reflectivity with regard to subjective values, biases and inclinations the reseacher might have, honesty and transparency. Transparency was demonstrated by disclosing the studies challenges, methods of funding and by giving credit where it was due. Chapters four, five and six

**Credibility:** The researcher attained credibility through the use of thick descriptions, crystallization of data and by engaging in reflection of data with participants. This was achieved in Chapter two

**Resonance:** Resonance was achieved when the adjustments in the paediatric tonsillectomy health education had a meaningful impact on the participants and moved them through naturalistic

generalizations and transferable findings. The participants were able to make connections between the themes and the findings. Chapters four five and six

**Significant contribution:** Significance was achieved with evaluation and adjustment of the exiting paediatric tonsillectomy health education. It is also achieved when it provides a significant change in morals of participants. Chapters four, five and six

**Ethical:** Before the researcher could start with the study it was approved by the applicable research ethics committees, permission was obtained from the day hospital management and physician who compiled the guideline, and informed consent was obtained from the participants. The research considers human subjects, situational and cultural aspects of individuals, relational ethics and exiting ethics this occurs when a subject leaves the scene and share the research. This was achieved throughout the study

**Meaningful coherence:** Coherence was achieved by suitably addressing the research question with appropriate methods that fit the paradigmatic and research alliances, and when literature is meaningfully interconnected. (Tracy S. 2017: 2 - 9). This was achieved throughout the study.

### 3.11 ETHICAL CONSIDERATIONS

The principles of the Belmont report were supported throughout the research. Three principles that are central in the Belmont Report is respect for persons, beneficence and justice. The researcher was committed to upholding these prescribed principles by ensuring that ethically sound research was conducted and that the rights of the participants involved with the study were protected throughout (Ketefian, 2014:2). The Belmont report served as a key reference in evaluating the ethical sensitivity of studies involving human participants.

The report specifically recommends that informed consent be sought, the benefits and risks are evaluated and the selection, representation and the burden of participation be fair and equitable. The negative effects of the report translate to coercion, harm undue involvement of vulnerable and burdened subjects (Anabo, I.F., Elexpuru-Albizuri, I., Villardon-Gallego, L. 2018:139).

Approval to conduct the research study was obtained from the University of Pretoria Faculty of Health Sciences Research Ethics Committee (Ethics Application approval number 111/2020) (Refer to Addendum I) and permission from the day hospital management and the specific physician involved in the study.

Parents, caregivers and selected registered nurses of the day hospital were invited to take part in the research based on the selected criteria. The potential participants were approached individually and a participation leaflet containing information about the research study was discussed with them (Refer to Addendum A and B). The information provided was easy to comprehend and the participants had the power of choice to decide if they wanted to take part in the study. It was explained to participants that their participation would be voluntary and that they could refuse or withdraw from the study at any point. The researcher ensured the participants that their withdrawal or refusal to take part, would not affect the type of care that they would receive and that it would not have an effect on the co-worker relationship. Confidentiality was ensured by not revealing their names or identity during data collection, analysis and research findings. Interviews were conducted in a private venue at the hospital and permission to audio record interviews were obtained in writing from the participants.

All participants taking part in the study were treated in the same way no matter what their background or position was. They were treated with respect and the diversity of their contributions were respected. The researcher anticipated that the parents, caregivers and registered nurses might be distressed before, during and after the interview, therefore she allowed the participants to set the pace of the interview (Ketefian, 2014:2). The researcher also offered to discontinue or stop the interview, and only continued with the interview once they were ready.

### **3.12 SUMMARY OF THE CHAPTER**

This chapter presented a clear description of the various facets associated with the research process. The process focused on the research design, method that was used to perform the research, selection of possible participants, the data collection process and the process of data analysis.

## **CHAPTER 4**

### **FINDINGS: ROUND ONE OF THE RAPID CYCLE EVALUATION**

#### **4.1 INTRODUCTION**

Primary caregivers of children who had tonsillectomies in day hospitals often lack the required knowledge and skills to manage children's post-operative care at home. The primary caregiver is responsible for preventing, identifying and managing postoperative complications at home. Without reliable quality primary caregiver education material available, they may resort to non-reliable sources. Regular evaluation and adjustment of health education in day-care hospitals is required to enable caregivers to provide optimal care at home. Failing to keep up with a rapidly evolving healthcare environment results in primary caregiver education becoming outdated. The research aimed to evaluate and adjust the paediatric tonsillectomy primary caregiver education in a designated private day hospital according to the contextual and interventional facilitators and barriers of the CFIR.

Round one of the rapid cycle evaluation focused on the evaluation of the health education before the study commenced. Semi-structured interviews were conducted with eleven primary caregivers of children undergoing the tonsillectomy procedure. Ten interviews were conducted with nurses responsible for health education at the designated day. Refer to Tables 4.1 and 4.2 for the demographic information of the caregiver and nurse participants.

**Table 4.1: Primary caregiver's participant demographics**

| <b>PARTICIPANTS</b> | <b>MARITAL STATUS</b> | <b>GENDER</b> | <b>NUMBER OF CHILDREN</b> | <b>MEDICAL INSURANCE</b> | <b>PREVIOUS EXPERIENCE WITH POST-TONSILLECTOMY CARE</b> |
|---------------------|-----------------------|---------------|---------------------------|--------------------------|---------------------------------------------------------|
| PCP1                | Married               | Female        | Two                       | Yes                      | No                                                      |
| PCP2                | Married               | Female        | One                       | Yes                      | No                                                      |
| PCP3                | Married               | Female        | Two                       | Yes                      | No                                                      |
| PCP4                | Married               | Female        | Two                       | Yes                      | Yes                                                     |
| PCP5                | Married               | Female        | Three                     | Yes                      | No                                                      |
| PCP6                | Married               | Female        | One                       | Yes                      | No                                                      |
| PCP7                | Married               | Female        | One                       | Yes                      | No                                                      |
| PCP8                | Married               | Female        | Two                       | Yes                      | No                                                      |
| PCP9                | Married               | Female        | Two                       | Yes                      | Yes                                                     |
| PCP10               | Married               | Male          | One                       | Yes                      | No                                                      |
| PCP11               | Married               | Female        | Two                       | Yes                      | Yes                                                     |

**Table 4.2: Nurse participant demographics**

| PARTICIPANTS | PROFESSIONAL<br>QUALIFICATION | ACADEMIC<br>QUALIFICATION | GENDER | YEARS IN<br>POSITION | YEARS IN<br>NURSING |
|--------------|-------------------------------|---------------------------|--------|----------------------|---------------------|
| NP1          | Registered nurse              | Diploma                   | Female | 8                    | 30                  |
| NP2          | Registered nurse              | Diploma                   | Female | 7                    | 20                  |
| NP3          | Registered nurse              | Diploma                   | Female | 6                    | 19                  |
| NP4          | Registered nurse              | Diploma                   | Female | 7                    | 37                  |
| NP5          | Registered nurse              | Diploma                   | Female | 6                    | 26                  |
| NP6          | Registered nurse              | Diploma                   | Female | 9                    | 29                  |
| NP7          | Registered nurse              | Diploma                   | Female | 4                    | 24                  |
| NP8          | Enrolled nursing<br>auxiliary | Certificate               | Female | 4                    | 8                   |
| NP9          | Enrolled nurse                | Certificate               | Female | 6                    | 8                   |
| NP10         | Enrolled nursing<br>auxiliary | Certificate               | Female | 2                    | 17                  |

The researcher used the five stages of data analysis developed by Colon-Emeric et al. (2016:3) as the basis for deductive and inductive data analysis. See chapter three for detailed description of these five stages.

**Table 4.3: Categories and subcategories**

| DOMAINS                             | CATEGORIES                                         | SUB CATEGORIES                                                                                                                                                                      |
|-------------------------------------|----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Intervention characteristics</b> | Meet the needs of the primary caregiver            | Sufficient and relevant information needed<br>Health education material should be clear and simple to read                                                                          |
|                                     | Active parental involvement                        | Primary caregivers should share experiences<br>Active involvement improves primary caregiver understanding                                                                          |
|                                     | Detailed information based on recent evidence      | Changing times<br>Evaluate and adjust health education regularly<br>Health education should be detailed                                                                             |
| <b>Outer setting</b>                | Primary caregiver expectation of health education  | Duration of recovery period specified<br>Explanation of possible complications after discharge required                                                                             |
|                                     | Nurse expectation of the caregiver during recovery | Needs of the patient and primary caregiver during recovery addressed<br>Confirm understanding of caregivers regarding the prevention and management of post-operative complications |

| DOMAINS                        | CATEGORIES                                                         | SUB CATEGORIES                                                                                                                                        |
|--------------------------------|--------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Inner setting                  | Unfamiliar hospital environment                                    | The hospital setting is busy and noisy<br>Orientation to hospital setting essential                                                                   |
|                                | Pre-operative preparation                                          | Information communicated prior to the procedure<br>Preparation of caregivers while the patient is in theatre                                          |
| Characteristics of individuals | Caregivers feel uncomfortable in unfamiliar hospital circumstances | Preparedness to cope with possible complications<br>Want to feel confident to provide care<br>Willing to adapt health education to a home environment |
|                                | Empowerment of the primary caregiver                               | Encourage the primary caregiver to be actively involved<br>Ensure a good clear understanding of complications before discharge                        |

## 4.2 DESCRIPTION OF THE CATEGORIES AND SUBCATEGORIES

In this section, the researcher describes the categories and subcategories.

### 4.2.1 Category 1: Meet the needs of the primary caregiver

From the data, the need of the primary caregivers regarding information to prevent and manage complications refer to having a clear understanding of possible complications after the tonsillectomy procedure. Primary caregivers are often concerned about the outcome of the procedure and the associated risks. They want to know more about the prevention and

management of postoperative pain, bleeding or dehydration and complications of general anaesthesia.

#### **4.2.1.1 Subcategory 1: Sufficient and relevant information needed**

Without sufficient and relevant information, the primary caregiver participants experienced increased levels of anxiety as described by the following participant:

“No one told me anything about bleeding, I was not shown how to look in my children’s throats. The mouth spray that was provided does not work. My children are three years old and they do not want to open their mouths for me to check and spray their throats” (PCP1).

The primary caregiver participants were concerned about a lack of sufficient information about possible complications and the management thereof:

“On day seven my child had severe pain and I could see yellow areas in the throat that had a bad smell. I phoned the rooms and the sister at the rooms told me that it is normal and that my child should start eating coarser food to get rid of the scabs in the throat. This should have been in the health education” (PCP6).

According to the primary caregiver participants the nurses provided verbal health education on discharge without supplying sufficient and relevant written information to reinstate what was said to them before the procedure. When written health education is given it does not always correlate with what was said by the discharge nurse as described by the following participants:

“I received a lot of verbal information on the day of the procedure but it did not help me because I cannot recall everything that was said. It might be that I was stressed and worried at the time” (PCP4).

“The guideline was very basic and actually a bit simplistic. I really read and used other material, much more than that little paper that was supplied to me by the doctor” (PCP8).

In this sub-category, it becomes evident that the primary caregiver participants experienced the health education as not detailed enough. They required detailed information focused on the possible complications and the prevention and treatment thereof. Overwhelming verbal information that does not integrate with the supplied written guideline causes confusion and increases parental anxiety.

**4.2.1.2 Subcategory 2: Health education should be clear and simple to read**

Health education that is provided to primary caregivers should be clear and simple to read. Nurses in the ambulatory setting aim to meet the needs of primary caregivers by providing clear and concise information as described by the following nurse participant:

“We need more information that gives the parent or caregiver a clear understanding of what to look for” (NP1).

The current paediatric tonsillectomy guideline consists of advanced medical terminology that may not be easy for primary caregivers to understand and comprehend as described by the following nurse participants:

“No, I do not feel that the health education meets the need of the patient, because some of the words are a bit difficult and the patients might struggle to understand” (NP3).

“I feel that the terms used in the current health education is difficult and need to be simplified” (NP9).

“I think that it will fulfil the needs of the parents if the terms used in the health education is simplified” (NP10).

The current health education is very basic and does not include clear and simple guidelines on how to prevent and treat possible complications. The nurse participants that provide health education to primary caregivers felt that the guideline is very basic and lacks vital information:

“The information that is provided in clinic is very basic” (NP5).

“The health education does not clearly explain what the possible complications for a tonsillectomy are. Parents do not get a clear indication on what is normal and what is not” (NP7).

“No according to me the health education does not meet the needs of the patient because it is very basic” (NP8).

In the subcategory nurses that provide health education after ambulatory surgery felt that the current guideline is too basic and does not provide a clear understanding of the possible complications. The guideline also consists of difficult medical terminology that might lead to misconceptions and possible readmission.

### 4.2.2 Category 2: Active parental involvement

To improve the provision of paediatric tonsillectomy health education active parental involvement is required. The findings indicate that active primary caregiver involvement is recognised and preferred by parents. The responsibility of the primary caregiver after discharge is the provision of adequate care at home. They must have a good understanding of the pre- and post-operative recommendations, along with the possible risks associated with surgery.

#### 4.2.2.1 Subcategory 1: *Primary caregiver should share experiences*

The data indicated that the primary caregiver participants are very interested in taking part in their education to provide care to their children at home. They felt that by providing health education in a group setting, shared past experiences can be provided to other parents:

“I feel that parents should share their experiences” (PCP6).

When primary caregivers share their experiences with one another as well as with the nursing staff, nurses get a better understanding of what parental needs and expectations are:

“If parents are more involved nurses get a better understanding of parent’s expectations” (PCP7).

The primary caregiver participants were also aware of the busy ambulatory environment and they experienced the nurses as too busy to provide health education in a group setting:

“I do think it is very nice to involve us as parents in the health education but I also know that it is not always possible. I think it would be very good if there was a nurse that could interact with the parents when they had questions” (PCP8).

In this subcategory, it became evident that the primary caregiver participants wanted to actively take part in the health education. By sharing their experiences, they could have provided the nurses with an accurate idea of what their level of understanding was. However, the primary caregiver participants did realise that the ambulatory setting is very busy and that it leaves little time for educational group settings.

#### 4.2.2.2 Subcategory 2: *Active involvement improve primary caregiver understanding*

Active primary caregiver involvement in the provision of paediatric tonsillectomy health education reduces parental anxiety and insecurities concerning the procedure. The primary caregiver

participants experienced insecurities with regard to possible post-operative complications and the limited knowledge they had about it:

“As a parent, I was very unsure and felt like I was thrown into the deep side. I think it is a good idea to involve parents more” (PCP4).

“I want to be involved I want as much information as I can get” (PCP5).

“Yes, it is important to involve parents” (PCP10).

On discharge from the hospital, the primary caregiver participants were often preoccupied and too stressed to give their full attention to the health education that is provided by nurses. When they arrived at the home, they were realised that they were solely responsible to prevent and manage complications that left them very worried:

“Maybe phone you as the parent after the procedure when you are at home” (P3). “I think it would be good if there was a nurse that could interact with the parents when they had questions maybe through text message” (PCP8).

“I think it would be a good idea if someone can follow up with the patient postoperatively. Parents are often unsure of what they are doing is correct, so I think it would be good If someone can follow up postoperatively in the recovery period. Our follow up appointment is three weeks after the procedure then my child is already recovered” (PCP11).

In this subcategory, it became clear that the primary caregiver participants wanted to be involved in health education. They did not want to be passive recipients. It was also evident that they had a lot of insecurities, especially with regards to care at home. The primary caregiver participants wanted the nurses to follow up on them after discharge from the hospital to ensure that they were coping with the home care.

### **4.2.3 Category 3: Detailed information based on recent evidence**

The primary aim of the nurse participants was to improve outcomes related to surgery by providing the primary caregiver participants with written information. The written information that was provided included medical instructions, information concerning the prescription, health education about self-care behaviours and treatment options. Therefore, it was imperative that nurse participants provided detailed, reliable and up to date information to primary caregiver participants, aiming to prevent the dissemination of incorrect or outdated information.

#### **4.2.3.1 Subcategory 1: Changing times**

Medical technology and surgical techniques are constantly evolving and therefore health education needed to also evolve. Nursing participants were of the opinion that health education should be evaluated and adjusted regularly to keep up with changing times:

“I think that we live in changing times and we need to make health education as easy as possible and that everyone understands” (NP1).

“I think that health education should be evaluated to check if it is up to date, everything evolves, therefore, health education must also” (NP8).

According to findings, the nurse participants felt that there should have been a system in place to ensure that health education was kept current and updated:

“All patient education needs to be evaluated regularly to prevent it from becoming outdated. I believe that there should be a system in place that requires reevaluation of health education every two to four years. The information that is provided to parents and caregivers should be clear, simple and easy to read and patients should get this information during times that they are not distracted” (NP5).

The term changing times was associated with increased social media and advanced internet usage. Primary caregiver participants used internet sites to provide them with support when they become anxious or insecure about care at home:

“Because the method that is used to remove tonsils have changed and with developing times people are using the internet more often, our health education must be current” (NP9).

This subcategory indicated the importance of providing up to date and relevant information to sometimes anxious and unsure primary caregiver participants during changing times. According to nurse participants, there should have been a system in place that ensured the re-evaluation of health education. The term changing times referred to increased internet and social media usage which resulted in primary caregiver participants receiving inaccurate and outdated information.

#### **4.2.3.2 Subcategory 2: Evaluate and adjust health education regularly**

Regular evaluation and adjustment of health education ensured that information stayed current and relevant with regards to possible complications and the newest methods. The primary

caregiver participants were stressed during hospitalisation which resulted in them not paying attention when verbal health education was provided to them:

“I think it is very important to evaluate and adjust health education because parents are stressful when it comes to their kids. They hear what information is provided to them but they do not always listen to the doctor’s instructions. A revised up to date piece of information needs to be placed that parents can fall back on when they arrive home” (NP2).

The primary caregiver participants verbalised that they felt unsure and like they were thrown into the deep side with regards to care at home:

“In my opinion, we need to evaluate education to provide the best and up to date information to uninformed parents that experience this procedure as uncertain and foreign. By evaluating health education, we ensure that it is current and complications are correctly addressed and we ensure comfort during the healing process” (PCP4).

With regular evaluation and adjustment of health education nurses ensured that information provided to primary caregiver participants reflected the modernisation of surgical techniques and that it was explained in an understandable language:

During the evaluation and adjustment of health education, we need to make sure that health education is presented in laymen’s terms and that it is still relevant with regards to the methods used to remove tonsils” (NP6).

“To make health education more relevant with regard to modern techniques. The information is limited it should explain in a simple language what is normal and what is not and how to treat the possible complications” (NP7).

In this subcategory, the importance of regular evaluation and adjustment of health education was described. It emphasised that health education should have been evaluated and adjusted regularly to ensure that information stayed current. Information that was provided to primary caregiver participants should have been in an understandable language to improve their confidence level with regards to care at home.

#### **4.2.3.3 Subcategory 3: Health education should be detailed**

Detailed health education includes prevention, identification and treatment of possible complications after the paediatric tonsillectomy procedure. A primary caregiver participant

verbalised that she was not supplied with adequate health education to enable her to provide optimal care at home:

“To implement or create a pamphlet that gives you as a parent a better idea of what to expect each day. Day one this, day two that. I do understand that each child is different but today I am on day ten and I thought by this time my children would be better.” (PCP1).

From the data that was received it became clear that a primary caregiver participant was poorly supported after discharge with no support after the identification of a major complication:

“I would suggest that the health education be more detailed. My child developed a major complication that ended up in a severe infection and I was not allowed to speak to the doctor directly. I was only allowed to speak to the receptionist and she kept on reassuring me that it is normal. After two failed attempts I was forced to contact my home physician” (PCP3).

The recovery process was thoroughly discussed in the hospital but was not supported after discharge with written information. This information got misinterpreted as soon as primary caregiver participants arrived home:

“Received a lot of verbal information on the day of the procedure but it did not help me because I could not recall everything that was said. It might be that I was too stressed and worried at the time” (PCP4).

In this subcategory, it became evident that the health education that was provided was not detailed enough. Primary caregiver participants were unsure about possible complications and did not know what to expect from the healing process. It also became clear that primary caregiver participants did not know what to do when a complication took place. Primary caregiver participants received large amounts of verbal information that was not supported with written material.

#### **4.2.4 Category 4: Primary caregiver expectation of health education**

The primary caregiver participants had certain expectations with regard to health education. They expected to receive detailed treatment plans that were focused on eating preferences and pain management. They also prepared themselves for the paediatric tonsillectomy surgery by doing google searches and asking family and friends for advice. This information was very contradicting and led to increased anxiety and confusion related to the surgery.

#### **4.2.4.1 Subcategory 1: Duration of recovery period specified**

The nurse participants were unaware that the primary caregiver participants only prepared for a ten-day recovery period, as they were under the impression that all parents knew that every child's healing process is differently:

"The nurses in the ward did not explain to me that I should prepare myself and my children for a recovery period longer than ten days. I thought after ten days everything would be back to normal. They should tell you that healing might take this long" (PCP1).

The duration of the recovery period varied from patient to patient but there were certain stages in the healing process that each child should have reached. Information on the different stages of the healing process was very basic in the current health education material. It should have been described in more detail:

"Give more written information on the recovery process, how will the process proceed, are there specific things that I must focus on. What is normal and what is not?" (PCP5).

"I think it would be good if the nurse has a discussion with us as the parent on what to expect during the recovery process" (PCP6).

This subcategory indicated the primary caregiver participants' insecurities with regard to the recovery period after a tonsillectomy procedure. Primary caregivers got information from unreliable sources and only prepared for a ten-day recovery period. The nurse participants were unaware of the ten-day preparation period and did not advise parents differently.

#### **4.2.4.2 Sub category 2: Explanation of possible complications after discharge required**

After discharge from ambulatory surgery, the primary caregiver participants should have been supplied with adequate health education concerning possible complications at home. This, unfortunately, did not always take place which led to increased confusion about possible complications:

"I did not know exactly what to expect when we go home. I did not get enough information on bleeding" (PCP1).

When a paediatric patient experienced a complication such as dehydration, infection, bleeding or uncontrolled pain the primary caregiver participant was unsure on who to contact:

“I would have loved to have a quick discussion on what I could expect at home and who to contact when a complication arises” (PCP3).

Detailed health education on discharge from the hospital was a vital component in the recovery process. Verbal information was provided in addition to the current educational guideline and the current guideline were provided as support at home. Primary caregivers do not always go back to the guideline because the information is very basic:

“The information that is provided to parents should contain more detail. I reached a point where I decided I am not listening to anyone anymore” (PCP4).

I think there should be more information with regards to eating preferences and the pain management practices should be revised especially for older children” (PCP5).

In this subcategory, it becomes evident that the health education that was provided after discharge was lacking and very basic. The current educational guideline did not adequately provide detailed descriptions of the possible complications and primary caregivers were unsure who they should contact when a complication did take place.

#### **4.2.5 Category 5: Nurse expectation of the caregiver during recovery**

The nurse participants expected the primary caregiver participants to prepare themselves and their children accurately before the procedure. They wanted the primary caregiver participants to have had an idea of what the surgery entailed before the procedure commenced.

##### ***4.2.5.1 Subcategory 1: Needs of the patient and primary caregiver during recovery addressed***

According to the data provided, the nurse participants were of the opinion that the educational guideline did not accurately meet the needs of the primary caregiver participant during the recovery process. They, therefore, aimed to elaborate on the health education during verbal discussions with the primary caregiver participants while they were still in the hospital:

“Nurses should go in-depth when they explain health education. It is easy to say look for bleeding but parents don’t know what bleeding looks like so the nurses should tell parents what symptoms the child will have when they bleed” (NP1).

“Have verbal discussions with the parents and discuss the important information in detail. Important information will refer to the physician's contact details and the prevention of possible complications” (NP8).

The nurse participants that provided health education were of the opinion that when primary caregiver participants were provided with information on how to prevent possible complications at home, optimal care was possible:

“I think the needs of parents are met in the day-care setting, parents need to know about pain control, food preferences and post-operative bleeding” (NP3).

The primary caregiver participants had a lot of insecurities and concerns with regard to the tonsillectomy procedure. They wanted to know that the hospital was adequately equipped to provide the required care for their children. They also had questions with regard to the procedure time and the possible risks involved. The nurse participants aimed to meet primary caregiver participant needs in the ambulatory setting by providing this admission information:

“I think it is met in the day-care setting. The procedure can be done in the day-care setting with the necessary post-operative information” (NP4).

“I think parents want to know how long their hospital stay will be and what the risks are with relation to bleeding. How long will the healing process be and what is the factors involved with the process” (NP9).

The nurse participants were of the opinion that if health education were up to date and detailed enough the primary caregiver participant would get the impression that the staff and facility really cared and were in the position to provide the required health education:

“Parents want to know that their child is safe and that we as nursing staff have a good understanding of the tonsillectomy procedure” (NP10).

In this subcategory, it was evident that nurses were providing additional information to meet the needs of the patient and the primary caregiver participant during the recovery period. Nurses felt that the verbal information that they provided during hospitalisation were adequate. They wanted to address parental concerns and therefore provided additional information to the educational guideline. The educational guideline was experienced as sufficient enough to fulfil the primary caregiver's basic post-operative needs, but there was room for improvement.

#### ***4.2.5.2 Subcategory 2: Confirm understanding of caregivers regarding the prevention and management of post-operative complications***

Nurse participants that were responsible for health education ensured understanding ability by providing verbal instructions in an understandable language. They aimed not to use medical terminology and focussed on explaining concepts in such a way that the average person could understand what was said:

“Nurses need to explain to the patient, parent or caregiver in an understandable language it doesn’t help if you explain some things in high terms. Go down to the level of the patient and explain health education on that level” (NP1).

According to the nurse participant’s health education should have been provided to primary caregiver participants when children were still in theatre. Nurse participants provided primary caregiver participants with written information and discussed this information with them in detail. After this in-depth discussion on health education, nurse participants should encourage primary caregiver participants to ask questions.

This was done to test the understanding of the knowledge that was obtained:

“I think when nurses give the health education, they should ask the parents questions to see if they have a clear understanding. Parents are in a hurry to get home and when they get there they often feel, what now? Nurses should make sure that parents read through the written health education during the period that child is in theatre” (NP2).

“Motivate parents to ask questions and ask parents questions to test their comprehension” (NP7).

Primary caregiver participants’ comfort should have been taken into account when health education was provided. This could have been easily reached by having a dedicated nurse available that provided health education continuously throughout the hospital stay:

“Health education should be easy to understand; we need to evaluate parental comprehension. Encourage parents to ask caregivers questions. Maybe have one dedicated nurse to provide health education this might allow parents to feel at ease and ask questions but we are very busy so it might not always work” (NP5).

This subcategory focuses on the primary caregiver’s ability to understand health education and the different ways in which nurses can test parental comprehension. Ensuring that health education is understood is a very important part of ambulatory care, seeing that primary

caregivers should have the ability to identify and accurately manage post-operative complications at home.

#### **4.2.6 Category 6: Unfamiliar hospital environment**

The ambulatory setting was described as an intimidating and unfamiliar environment for many primary caregiver participants. They were concerned about the surgical procedure and its associated care. The primary caregiver participants experienced insecurities with regard to the identification and management of post-operative complications which can increase anxiety in the unfamiliar hospital environment. The nurse participants had the responsibility to provide primary caregivers with a sense of stability during their stay.

##### ***4.2.6.1 Subcategory 1: The hospital setting is busy and noisy***

The provision of health education was often challenging in a paediatric ward with increased noise levels and a busy atmosphere:

“The paediatric ward is not always conducive for patient education because it is sometimes very busy and noisy” (NP3).

“The ward is at times noisy, not calm and parents are stressed” (NP6).

Due to the busy ambulatory environment health education was at times only provided on discharge from the hospital:

“It is sometimes difficult in the day-care setting because we work against a very quick pace” (NP5).

Primary caregiver participants experienced the ward environment as inviting and friendly, but expressed their concern about the impact that crying paediatric patients coming from theatre had on children awaiting theatre:

“It was a comfortable environment the only thing that bothered me was the children coming from theatre, they made the children waiting to go into theatre anxious and confused” (PCP7).

“It was a very comfortable environment the only thing is the children that are crying after theatre” (PCP8).

This subcategory indicated that the ambulatory setting was very busy with increased noise levels due to paediatric patients crying after the theatre. Therefore, the paediatric ward was not entirely suitable for the provision of effective health education.

#### **4.2.6.2 Subcategory 2: Orientation to hospital setting essential**

On admission for ambulatory surgery patients and primary caregivers, participants should have been orientated with regards to their environment and the process that would follow during and after hospitalisation. This, unfortunately, did not always take place in the designated day hospital: “We were not really orientated because the nurses are very busy. If you don’t know you should ask” (PCP1).

The primary caregiver participant was not supplied with an estimated theatre time on admission and it increased uncertainty and anxiousness with regards to the procedure:

“Yes, they did orientate us however they did not give any information on the theatre time, so we waited a long time without knowing what was going on. But I do understand that there are a lot of children that should be helped” (PCP2).

“I had to ask when should she get dressed” (PCP4).

There were primary caregiver participants that visited the designated ambulatory facility for the second or third time, however, they were still eligible for proper orientation:

“I knew how everything works this was not my first time at the facility” (PCP11).

The importance of proper orientation was evident in this subcategory. Primary caregiver participants experienced a need for information with regards to their surroundings, the prospective procedure and possible theatre time. When the ambulatory setting was visited for the second or third time by primary caregiver participants, they were more relaxed with regards to the environment but they were still required to receive information concerning the procedure and possible theatre time.

### 4.2.7 Category 7: Pre-operative preparation

Pre-operative preparation refers to primary caregiver participants receiving health education before the procedure. When primary caregiver participants received the information in advance they could properly prepare for the surgical procedure at home.

#### 4.2.7.1 Sub category1: Information communicated prior to the procedure

If health education was communicated to the primary caregiver participant during the first consultation with the physician, the primary caregiver participant could prepare mentally and physically for the tonsillectomy procedure:

“More improved doctor’s information before the procedure, preferably on the day of the first consultation. On the day of the actual operation, tension is high and the nurses are often very busy and cannot ease the tension with the current way of providing health education” (NP4).

Health education that was provided in advance created the opportunity for the primary caregiver participant to be more confident during the duration of the hospital stay. The primary caregiver participant mentioned that it could have been beneficial for her to revise the health education with the nurse participant while the child was in theatre:

“The health education should be provided preoperatively, the mother needs to prepare at home for the recovery period. Health education can be reinstated when the child is in theatre because at that time the mother is open to receive information because she wants the best for her child” (NP5).

Some of the primary caregivers that took part in the study indicated that they did not receive much information from the physician and would have preferred to receive health education prior to the procedure:

“I would recommend that information is provided before the procedure” (PCP10).

In this subcategory, the importance of preoperative health education was described. Primary caregiver participants who received preoperative information were more confident on admission. These primary caregiver participants were supplied with the opportunity to prepare their home environments to suit the needs of the patient.

#### **4.2.7.2 Subcategory 2: Preparation of caregivers while the patient is in theatre**

The provision of health education during actual theatre time was an alternative option of providing adequate health education to primary caregiver participants. Nurse participants described this time of providing health education as a period in which the primary caregiver participant might be very susceptible for any information:

“Give health education to the parent or caregiver when the child is in theatre, then you will have their full attention” (NP1).

The nurse participants also verbalised the importance of removing the primary caregiver participant from the paediatric environment. This would provide them with the opportunity to create a therapeutic learning environment which would enhance the learning process. In this environment primary caregiver participants would be able to have open discussions with the nurse participants about their possible fears and concerns:

“In my opinion parents should be taken out of the situation to a private area where they can focus on what is said to them” (NP4). “A quiet environment where you can have a conversation with the mother” (NP5).

Health education that was provided once the child was out of the theatre was often poorly understood and primary caregivers didn’t always ask questions when they didn’t understand. Therefore, it was of more benefit for the primary caregiver participant to receive the information intraoperatively:

“One factor that can influence the health education process is noise, children that come out of theatre cry and make the provision of health education difficult” (NP10).

The benefits of providing health education while the paediatric patient was in the theatre were discussed in this subcategory. Primary caregiver participants were more open to receiving health education while the paediatric patient was in the theatre. Nurse participants were of the opinion that primary caregiver participants should have been taken out of the paediatric setting to receive adequate health education.

### 4.2.8 Category 8: Caregivers feel uncomfortable in an unfamiliar hospital setting

Primary caregiver participants experienced increased levels of anxiety on arrival to the ambulatory setting. They were often unsure what to expect with regards to the procedure and the possible complications associated with the procedure. Many primary caregiver participants prepared themselves before admission with information that they received from unreliable sources which increased their anxiety and comfortability with regards to the hospital environment.

#### 4.2.8.1 Subcategory 1: *Preparedness to cope with possible complications*

Health education that was provided was too basic and did not elaborate on the possible complications associated with the tonsillectomy procedure. The information that was provided in the guideline was focused on older children:

“Not really my children did not want to eat. I did not use the throat spray on my children, they are too small to understand that it will make them feel better. I did not know how it would look like if my children bled” (PCP1).

Many of the primary caregiver participants that took part in the study experienced the health education as too basic and not detailed enough with regards to the aftercare at home:

“Some of the information helped I would have loved the information to be a bit more detailed” (PCP3).

“I think it helped me fifty per cent, the information was very basic” (PCP4).

Primary caregiver participants were not adequately prepared to identify or manage post-operative complications at home. Many primary caregiver participants were unsure what to do if their children did not want to eat, they were also unsure about the correct pain management practices: “The educational guideline did help I just feel that parents should be prepared better for the aftercare. Guidelines are lacking in aftercare practices. What will I do if my child does not want to eat and drink and take his medication” (PCP7)?

In this category, it became evident that primary caregiver participants were not prepared with regard to complications at home. They needed detailed descriptions with regard to eating preferences and pain management practices.

#### **4.2.8.2 Subcategory 2: *Want to feel confident to provide care***

The confidence level of the primary caregiver participant was determined by how prepared he or she was to provide post-operative care at home. Many primary caregivers prepared preoperatively with the information they received from family, friends and the internet:

“I prepared myself with information from friends and google searches. For the first ten days, I felt confident but now on day ten seeing how they are struggling felt less confident” (PCP1).

Lower confidence levels of primary caregivers were also an indication of insecurities and confusion with regard to post-operative care. Primary caregiver participants received the health education on discharge and did not ask questions when they felt insecure:

“I was not confident because I was not sure about the possible complications” (PCP4).

“I was confident until my child started crying in the car” (PCP7).

Primary caregiver participants with a second or third child scheduled for the tonsillectomy procedure displayed increased levels of confidence:

“I had previous experience regarding tonsillectomies. But from the information I received from the nurses we would have been fine” (PCP10).

In this subcategory, the importance of increased confidence in the home environment after a tonsillectomy procedure was described. Primary caregiver participants who received health information from reliable and up to date sources displayed increased confidence during the provision of care at home. It was also evident that primary caregiver participants with prior experience displayed increased confidence levels.

#### **4.2.8.3 Subcategory 3: *Willing to adopt health education to the home environment***

To adapt health education to the home environment nurses should have been willing to adapt the way in which health education was provided during ambulatory care. Difficult terms that were used in the educational guideline should have been replaced with more understandable terms:

“The word haemorrhaging should be replaced with the word bleeding as not everyone will understand the term. Health education should be at the level of the patient” (NP1).

The educational guideline should have acted as a support system for the primary caregiver participant at home and provided a sense of security. The identification and treatment of possible complications should have been described in detail:

“The importance of eating and drinking should be stressed” (NP5).

“What is normal and what is not with regards to complications” (NP7).

In this subcategory, health education could have been adapted to the home environment by changing difficult terms to more understandable terms. Identification and treatment of possible complications should have been described in detail. If the primary caregiver participant had a good understanding of the health education proper care at home could take place.

#### **4.2.9 Category 9: Empowerment of primary caregiver**

Primary caregiver participants experienced a feeling of empowerment once they had a good understanding of the health education that was provided. When primary caregivers were actively involved with taking care of their children postoperatively their level of understanding improved.

##### **4.2.9.1 Subcategory 1: *Encourage the primary caregiver to be actively involved***

Nurse participants involved primary caregiver participants with the aftercare of the tonsillectomy procedure through open discussions in the paediatric setting:

“Health education should be provided through direct communication in the ward and parents should be allowed to ask questions throughout their stay in hospital” (NP1).

Verbal discussions concerning possible complications after a tonsillectomy procedure provided nurse participants with the opportunity to interact with primary caregiver participants and learn more about their fears and concerns:

“Discuss the health education verbally with parents and ask about their fears and concerns” (NP7).

Data indicated that nurse participants showed interest in the possibility of providing health education in a group setting. This would have allowed them to save valuable time and it would have created the opportunity for primary caregivers to learn from shared experiences:

*“Give health education in a group setting this will allow parents to ask questions that others might be too scared to ask” (NP8).*

In this subcategory active primary caregiver involvement was encouraged by nurses through open discussions in which fears and concerns could have been discussed. By motivating primary caregivers to ask questions nurse participants were supplied with the opportunity to test primary caregiver understanding.

#### **4.2.9.2 Subcategory 2: *Ensure a good clear understanding of complications before discharge***

Primary caregiver participants were often discharged from the ambulatory setting without ensuring that they had a good understanding of the health education that was provided:

“I did not know what complications could develop. I read on the paper something about bleeding I think it can take place twenty-four hours after the operation and if it is bright red I should worry” (PCP4).

“I did not know I did go and read about it. The guideline that was provided by the doctor did say if the child did experience bleeding, give the child ice and contact the doctor” (PCP6).

Primary caregiver participants prepared themselves with the information they received from friends, but not every child was the same and each child reacted differently to treatment:

“I did not know about bleeding. I did not know it would be so bad everyone tells me children experience this procedure as not so bad, I found that not to be true” (PCP8).

Primary caregiver participants were warned by nurses that if children refused to eat readmission to the hospital would take place:

“Yes, well I knew if she did not eat, we would be admitted to hospital again. I knew if there was any bleeding, I should give ice” (PCP9).

Some primary caregiver participants with previous experience of the tonsillectomy procedure only became aware of certain complications after going through the second round of health education:

“My home doctor who referred me to the physician did discuss the complications with me. This scared me because I did not know this with my first child”. (PCP11)

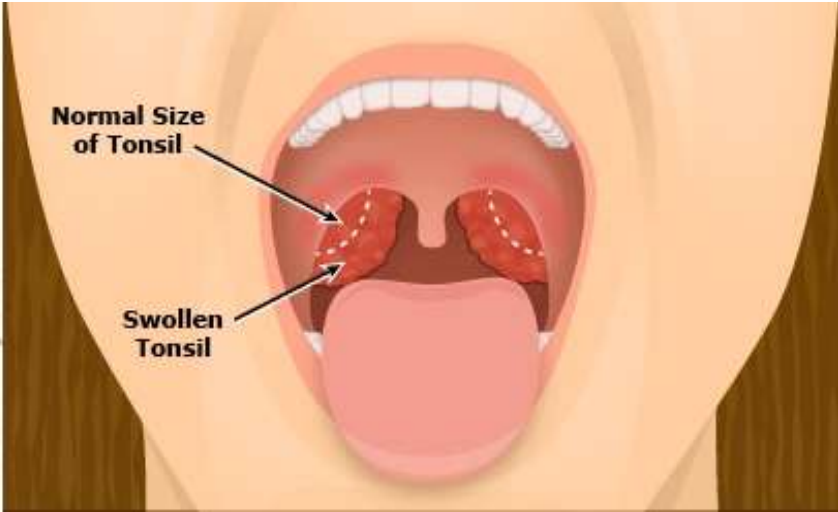
In this subcategory, it become evident that primary caregivers knew very little about the possible complications of a paediatric tonsillectomy procedure. After the first round, the quality of current primary caregiver education was evaluated and adjusted according to the output of the analysis.

The researcher used the contextual and interventional facilitators and barriers of the consolidated framework for implementation research to evaluate, analyse and adjust the paediatric tonsillectomy guideline of the specific physician.

Deductive and inductive data analysis was done. The domains of the CFIR were used during deductive data analysis. It served as a template for content analysis and also guided the interpretation of the main findings. Inductive data analysis assisted the researcher with identifying themes from the data that did not fit the domains of the CFIR. The adjusted content and method of presentation of paediatric tonsillectomy primary caregiver health education were discussed with the hospital management the nurse participants and the specific physician who compiled the original educational guideline.

#### 4.2.10 First draft of adjusted educational guideline

**Table 4.4: First set of adjustments to the primary caregiver's education processes and material**

| NEW GUIDELINE                                                                                                                                                                                                                                                                                                                                                                                                                                      | CATEGORY                                                                                                                                                                                                                                                                    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Tonsillectomy operation</b></p> <p>The tonsillectomy operation is the most common surgical procedure carried out in the day-care setting. The procedure includes the total removal of the tonsils that is situated in the throat. The reason for the operation is as discussed with your doctor but is most likely because of repeated tonsillitis.</p>  | <p>Active parental involvement</p> <p>Detailed information based on recent research</p> <p>Empowerment of the primary caregiver</p> <p>The Benefits and risks associated with same day surgery</p> <p>Preoperative assessment and preparation before ambulatory surgery</p> |

| NEW GUIDELINE                                                                                                                                                                                                                                                                                                                                                                                                                                              | CATEGORY                                                                                                                                                                                                                                                                                                                                                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>How long does it take to recover from surgery?</b></p> <p>It takes most children 7-14 days to recover from a tonsillectomy procedure. Some children feel better in just a few days and some take as many as 14 days to recover.</p>                                                                                                                                                                                                                  | <p>Meet the needs of the primary caregiver</p> <p>The Benefits and risks associated with same day surgery</p> <p>Active parental involvement</p> <p>Detailed information based on recent evidence</p> <p>Primary caregiver expectation of health education</p> <p>The impact of a tonsillectomy procedure on a paediatric patient's quality of life</p> |
| <p><b>Are there are risks related to a tonsillectomy procedure?</b></p> <p>Tonsillectomy is a surgical procedure that includes some risks. After surgery, a child may have:</p> <p>Bleeding in their mouth (from the tonsils)</p> <p>Throat pain that lasts up to two weeks</p> <p>Temperature greater than 38-40 Celsius</p> <p>Vomiting or a feeling like they have to vomit</p> <p>Thirst or dryness, especially if they are vomiting (dehydration)</p> | <p>Meet the needs of the primary caregiver</p> <p>Detailed information based on recent evidence</p> <p>Primary caregiver expectation of health education</p> <p>Nurse expectation of the caregiver during recovery</p> <p>The Benefits and risks associated with same day surgery</p>                                                                   |
| <p><b>POSSIBLE COMPLICATIONS THAT MAY BE EXPERIENCED AFTER THE OPERATION:</b></p> <p><b>Bleeding</b></p> <p>The first 24 hours after the tonsillectomy procedure is the danger period in which bleeding can be observed. If there is excessive bleeding (more than a little spit up) from the mouth or nose and the child is swallowing constantly they may be swallowing blood and this <b>SHOULD</b> be reported</p>                                     | <p>Meet the needs of the primary caregiver</p> <p>Detailed information based on recent evidence</p> <p>Primary Caregivers' perspectives on the use of</p>                                                                                                                                                                                               |

| NEW GUIDELINE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | CATEGORY                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>to your doctor immediately. <b>If it isn't office hours go straight to the emergency department.</b></p> <p><b>Note that:</b> It is not unusual to vomit up old blood (dark in colour) after the surgery (once or twice) but if it persists immediately give the patient ice to suck and inform your doctor.</p> <p><b>Pain</b></p> <p>For the first several days (occasionally up to 14 days) following surgery, pain in the throat is to be expected. This can be controlled by taking medication exactly as prescribed by your doctor. Pain medication should not be repeated more often than four to six hourly.</p> <p>Patients often experience intense pain at night. This pain can be relieved by administering medication such as (Panamor or Voltaren suppository) before bedtime.</p> <p><b>It is very important not to take additional medication such as aspirin which can lead to increased bleeding.</b></p> <p>Ear pain, especially with swallowing is also a common occurrence after surgery, it is not an ear infection. The same nerve that travels to the throat is connected to the ear, so stimulation of this nerve can lead to earache. <b>When the earache is accompanied by deafness, please notify your doctor immediately</b></p> <p><b>Things to do to relieve pain</b></p> <p>Ice to the neck</p> <p>Chew gum</p> <p>have a humidifier in the room</p> <p><b>Temperature</b></p> <p>For the first two days after the operation, it is normal for the patient to have a temperature of 38 to 40 degrees. Pain medication that is prescribed should be sufficient to treat the elevated temperature.</p> <p><b>NAUSEA AND VOMITING</b></p> <p>Your child may have nausea or vomiting after surgery which should go away by the next day. Give only sips of clear liquid until the vomiting stops. <b>If your child continues to vomit, contact the doctor immediately or go to the emergency room.</b></p> | <p>post-tonsillectomy<br/>emergency care</p> <p>Primary caregiver<br/>expectation of health<br/>education</p> <p>Nurse expectation of<br/>caregiver during recovery<br/>Pre-operative preparation<br/>Empowerment of the<br/>primary caregiver</p> <p>Complications after a<br/>tonsillectomy procedure<br/>The importance of<br/>providing adequate<br/>paediatric health education</p> |

| NEW GUIDELINE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | CATEGORY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>EATING AND DRINKING</b></p> <p>Eating and drinking are very important after surgery as it will clean and heal the throat. It is essential that the patient should start eating as soon as possible after the operation and not stop eating as a result of pain. Refraining from chewing and swallowing causes muscle spasms and infection which can be very painful.</p> <p><b>Hydration is extremely important!</b> Make sure your child also drinks plenty of fluids throughout the day for the first few days after surgery. If your child is not eating a normal amount of food, give them some drinks containing sugar which will ensure they are getting some calories for energy.</p> <p>Give pain medication 30 to 60 minutes before eating to relieve the pain of swallowing</p> <p>Your child may find drinking and eating chilled or icy drinks and food soothing</p> <p>Your child should continue with brushing teeth morning and at night</p> <p><b>RECOMMENDED FOOD AT HOME:</b></p> <p>Ice cream, Jelly, Apples, Coarse Rusks, Provita, Muesli, Weatbix, Nuts, Dry wors, Biltong, Coke.</p> <p>Adequate fluid intake must be encouraged to prevent dehydration.</p> <p>Coca-Cola, Sprite and other fizzy drinks help keep wound clean</p> <p>Chewing gum keeps the throat muscle supple and can improve the healing process.</p> <p><b>FOOD THAT SHOULD BE AVOIDED AT HOME FOR THE FIRST TWO WEEKS:</b></p> <p>Bananas, Pineapples, Tomato's, Avocado's, Cheese curls, Spices, Milk.</p> <p><b>What else do you need to know?</b></p> <p><b>Physical activity</b></p> <p>Encourage your child to play quietly for the first few days after surgery. Plan for your child to be out of school or day-care for 7 to 10 days after surgery. When your child is back at school, they should not participate in vigorous activity for 2weeks.</p> | <p>Meet the needs of the primary caregiver</p> <p>Active parental involvement</p> <p>Detailed information based on recent evidence</p> <p>Primary caregiver expectation of health education</p> <p>Nurse expectation of the caregiver during recovery</p> <p>Pre-operative preparation</p> <p>Empowerment of the primary caregiver</p> <p>Preoperative assessment and preparation before ambulatory surgery</p> <p>Meet the needs of the primary caregiver</p> <p>Active parental involvement</p> |

| NEW GUIDELINE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | CATEGORY                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Bad breath</b><br/>Bad Breath is a normal part of the healing process and it will go away in 7 to 10 days after surgery. Do not be alarmed if you see yellow scabs in the tonsil bed at the back of the throat. These yellow scabs start to form on the second day after surgery and are a normal part of the healing process and do not mean infection. When children refuse to eat, these yellow scabs become thicker and may lead to increased pain and bleeding.</p> <p><b>Congestion and drainage</b><br/>It is normal for patients to have increased nasal congestion and increased mucus drainage after a tonsillectomy procedure. This will usually go away in 7 to 10 days after surgery.</p> <p><b>Voice changes</b><br/>Your child's voice may sound different (hyper nasal) for several weeks after the tonsillectomy surgery.</p> <p><b>Upset stomach</b><br/>This is common for the first 24 to 48 hours after the surgery</p> | <p>Detailed information based on recent evidence</p> <p>Primary caregiver expectation of health education</p> <p>Nurse expectation of the caregiver during recovery</p> <p>Unfamiliar hospital environment</p> <p>Pre-operative preparation</p> <p>Empowerment of the primary caregiver</p> <p>The importance of providing adequate paediatric health education</p>                      |
| <p><b>When should you call the doctor?</b><br/>If your child has not urinated in 12 hours<br/>If your child refuses to drink fluids for 12 hours<br/>If your child has a fever of 38-40degrees for more than six hours that does not go away after giving prescribed medication.<br/>Severe pain is not relieved with prescribed pain medication<br/>Vomiting continuously</p> <p><b>When should you take your child to the emergency department?</b><br/>You should take your child to the emergency department when they have bleeding from the mouth or nose, or vomiting bright coloured blood. Bleeding can occur up to two weeks after the surgery.</p> <p><b>Who should you call if you have any questions?</b><br/>For any questions and queries, you are also welcome to send an Email</p>                                                                                                                                                | <p>Meet the needs of the primary caregiver</p> <p>Primary Caregivers' perspectives on the use of post-tonsillectomy emergency care</p> <p>Active parental involvement</p> <p>Detailed information based on recent evidence</p> <p>Primary caregiver expectation of health education</p> <p>Nurse expectation of the caregiver during recovery</p> <p>Unfamiliar hospital environment</p> |

| NEW GUIDELINE | CATEGORY                                                                                                                                                                                                                   |
|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|               | Pre-operative preparation<br>Caregivers feel<br>uncomfortable in unfamiliar<br>hospital circumstances<br>Empowerment of the<br>primary caregiver<br>The importance of<br>providing adequate<br>paediatric health education |

### 4.3 SUMMARY

During the first phase of data collection and analysis, the primary caregiver education was adjusted according to the output of the analysis. Paediatric tonsillectomy health education should focus on the empowerment and active involvement of the primary caregiver. Primary caregiver health education should be detailed to ensure optimal care of patients in their home environment.

## CHAPTER 5

### FINDINGS: ROUND TWO OF THE RAPID CYCLE EVALUATION

#### 5.1 INTRODUCTION

Round two of the rapid cycle evaluation focussed on the implementation of the adjusted health education after round one commenced and data analysis and adjustment of the health education took place. Semi-structured interviews with ten primary caregivers of the paediatric patients who underwent the tonsillectomy procedure was conducted. Ten semi structured interviews were conducted with nurses responsible for health education at the designated day hospital. Refer to Tables 5.1 and 5.2 for the demographic information of the caregiver and nurse participants.

**Table 5.1: Primary caregiver participant demographics**

| PARTICIPANTS | MARITAL STATUS | GENDER | NUMBER OF CHILDREN | MEDICAL INSURANCE | PREVIOUS WXP<br>PERIENCE WITH POST-<br>TONSILLECTOMY CARE |
|--------------|----------------|--------|--------------------|-------------------|-----------------------------------------------------------|
| PCP1         | Married        | Female | Two                | Yes               | No                                                        |
| PCP2         | Married        | Female | Two                | Yes               | No                                                        |
| PCP3         | Married        | Female | One                | Yes               | No                                                        |
| PCP4         | Married        | Female | Two                | Yes               | No                                                        |
| PCP5         | Married        | Female | One                | Yes               | No                                                        |
| PCP6         | Married        | Female | One                | Yes               | No                                                        |
| PCP7         | Married        | Female | One                | Yes               | No                                                        |
| PCP8         | Married        | Female | One                | Yes               | No                                                        |
| PCP9         | Married        | Female | Two                | Yes               | No                                                        |
| PCP10        | Married        | Male   | Three              | Yes               | No                                                        |

**Table 5.2: Nurse participant demographics**

| PARTICIPANTS | PROFESSIONAL<br>QUALIFICATION | ACADEMIC<br>QUALIFICATION | GENDER | YEARS IN<br>POSITION | YEARS IN<br>NURSING |
|--------------|-------------------------------|---------------------------|--------|----------------------|---------------------|
| NP1          | Registered nurse              | Diploma                   | Female | 9                    | 31                  |
| NP2          | Registered nurse              | Diploma                   | Female | 8                    | 38                  |
| NP3          | Enrolled nursing<br>auxiliary | Certificate               | Female | 3                    | 18                  |
| NP4          | Enrolled nurse                | Certificate               | Female | 7                    | 9                   |
| NP5          | Registered nurse              | Diploma                   | Female | 10                   | 30                  |
| NP6          | Registered nurse              | Diploma                   | Female | 7                    | 20                  |
| NP7          | Enrolled nursing<br>auxiliary | Certificate               | Female | 2 months             | 7                   |
| NP8          | Registered nurse              | Certificate               | Female | 7                    | 27                  |
| NP9          | Registered nurse              | Diploma                   | Female | 8                    | 21                  |
| NP10         | Enrolled nursing<br>auxiliary | Certificate               | Female | 3 months             | 7                   |

During the second stage of the study, the researcher used the data that was analysed in the first phase of the research as a guide to adjust and implement the revised paediatric tonsillectomy health education. The adjusted guideline was then discussed with the particular physician and the hospital manager. After receiving approval from the physician and hospital management the new health education was implemented. The health education was provided to the primary caregiver participants while their children were in theatre.

The researcher used the five stages of data analysis developed by Colon-Emeric et al. (2016:3) as the basis for deductive and inductive data analysis. During the first stage, the researcher familiarised herself with the data received as per chapter four. The researcher analysed the data to determine if any new themes could be identified. This process of familiarisation encouraged the researcher to see individual differences inherent in the data that can sometimes get lost when the coding process begins.

In the second stage, the researcher identified key themes, issues or discussion points embedded in the data from the participants under each domain identified

During the third stage, the transcripts and field notes were coded by using priori codes (deductive analysis) and themes were identified through open coding (deductive analysis). Thereafter the data were thematically analysed and the priori codes and themes were integrated into categories and sub-categories. Refer to Table 5.3.

The themes and codes were linked in the fourth stage to the excerpts from the transcripts and field notes. In the fifth stage, a brief summary statement was made to link the codes to the excerpts to answer the research question. The data analysis from the second round of interviews delivered the same categories and subcategories as from the first round of data analysis. Refer to Chapter 4.

**Table 5.3 Categories and sub-categories**

| CATEGORIES                                                                     | SUB CATEGORIES                                                                                                         |
|--------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| <b>Intervention characteristics</b><br>Meet the needs of the primary caregiver | Clear and concise health education<br>Regular evaluation of health education                                           |
| Active parental involvement                                                    | Primary caregivers should share experiences<br>Method of providing health education<br>User-friendly health education  |
| Participants view of adjusted health education                                 | Nurses compare old and new guideline<br>Parental perception of adjusted information                                    |
| <b>Outer setting</b><br>Primary caregiver expectation of health education      | Parental preparedness for the tonsillectomy procedure<br>Pre-operative source of information                           |
| Nurse expectation of the caregiver during recovery                             | Needs of the patient and primary caregiver during recovery addressed<br>Nurse perspective on Quality patient education |
| <b>Inner setting</b><br>Comfortable hospital environment                       | Orientation to hospital setting essential<br>The ward is a conducive environment for receiving health education        |
| Pre-operative preparation                                                      | Preparation of caregivers while the patient is in theatre                                                              |
| <b>Characteristics of individuals</b>                                          | Want to feel confident to provide care                                                                                 |

| CATEGORIES                                                       | SUB CATEGORIES                                                            |
|------------------------------------------------------------------|---------------------------------------------------------------------------|
| Caregivers feel comfortable in unfamiliar hospital circumstances | Level of understanding of possible complications                          |
| Implementation of adjusted health education                      | The willingness of nurses to evolve and provide adjusted health education |

## 5.2 DESCRIPTION OF THE CATEGORIES AND SUBCATEGORIES

In this section, the researcher describes the categories and subcategories

### 5.2.1 Category 1: Meet the needs of the primary caregiver

From the data, the need of the primary caregivers regarding information to prevent and manage complications refer to having a clear understanding of possible complications after the tonsillectomy procedure. Primary caregivers are often concerned about the outcome of the procedure and the associated risks. They want to know more about the prevention and management of postoperative pain, bleeding, dehydration and complications of general anaesthesia.

#### 5.2.1.1 Subcategory 1: Clear and concise health education

The adjusted educational guideline provided primary caregiver participants with information that was clear and concise, this allowed them to have a good understanding of what was expected of them in the home environment. Primary caregiver participants were vigilant and could report back about the identification and management of possible complications:

“The information about the humidifier helped a lot. The first two weeks after the operation was hell. After one week I contacted my general practitioner and he diagnosed my child with a secondary infection he also changed the doses of the antibiotics and pain medication because the initial dosage that I received after the operation was too little to clear up the infection” (PCP3).

“I used everything I just added some probiotics because my son started having diarrhoea” (PCP 5).

“Because my child started bleeding, I started giving crushed ice and that helped a lot” (PCP7).

“I used the information that provided, my child experienced severe pain and I emailed doctor and he adjusted the prescription” (PCP 8).

### **5.2.1.2 Subcategory 2: Regular evaluation of health education**

Regular evaluation and adjustment of health education are needed to reflect the newest medical technology and methods. Nurse participants were asked to provide their perception on the need to evaluate and adjust health education regularly and it became apparent that they viewed it as an essential component to proper health education:

“Regular evaluation and adjustment of health education ensure optimal patient education to concerned parents” (NP2).

“The way in which tonsils is removed changes therefore the health education should be adjusted to suit these new and improved methods. New complications that need to be focused on” (NP4).

“Health education should be revised regularly because new methods are used and health education should be adapted to reflect these methods” (NP5).

“It is always good to update education and new information. Problems that arise can be addressed in new information” (NP8).

In this category, it became evident that the detailed educational guideline acted as a guide for parents to refer back to. Primary caregiver participants were aware of the possible complications that could take place and therefore recognized warning signs related to these complications. During the evaluation and adjustment of the previous guideline, nurse participants played an active role by sharing their perceptions on the previous guideline and this allowed them to see the importance of relevant health education.

A recent study in Ontario done by Jain, Levin, Hardy, Farrokhyar and Reid (2020: 2) assessed the efficacy of a variety of tonsillectomy educational sources such as pamphlets, internet surge engines and nursing phone calls. These studies provided the researchers with mixed results

where some have shown a reduction in perioperative anxiety and post-operative pain management and others demonstrated no difference in either. As such it is still unclear which modality of pre-operative paediatric tonsillectomy health education improves the quality of post-operative care at home.

Interventions provided by child life specialists that help caregivers better understand their child's healthcare experience and normal response to treatment have been shown to reduce rates of anxiety (Jain et al., 2020: 2).

Health literacy is an important aspect of physician and parent communication and it is imperative for positive progress throughout the health care system. The reading writing and numerical literacy of parents and patients have been explored thoroughly. Oral literacy is defined as the ability to understand, synthesize and contribute to topics of conversation, it is often overlooked despite the key role it plays in physician-patient communication. Oral communication between health care personnel and parents are critical for the accurate exchange of information during health-related interactions (Forner et al., 2020:2).

The concepts of understandability and actionability are clearly grasped when consumers of diverse backgrounds with varying levels of health literacy can process, explain and identify and implement key aspects of the information provided. Although readability, understandability and actionability are important qualities of written information, these qualities are worthless if the information is biased or wrong (Doruk et al., 2018:16).

A recent study indicates that there has been an increased awareness amongst physicians and otolaryngologists with regard to the importance of early recognition and effective treatment of obstructive sleep apnoea. There is also an evolution in the recognition of the importance and the need to improve the multidisciplinary approach towards paediatric patients with comorbidities who are likely to have persistent obstructive sleep apnoea after receiving the tonsillectomy procedure. The study also refers to the current situation in which the availability of guidelines and recommendations published by peer reviews offers the opportunity for evaluation and quality improvement (Benedek et al., 2020:2).

The impact of the corona pandemic has affected elective surgery globally and has demonstrated why it is important to regularly adjust and improve surgical services. To decrease the risk and

improve outcomes of elective surgery new protocols have been introduced (Kavanagh et al., 2021:1).

## **5.2.2 Category 2: Active parental involvement**

Active parental involvement throughout the healing process is needed for optimal healing of the paediatric patient. In this round primary caregivers have demonstrated active involvement by taking part in open discussions during the educational period that took place while children were in theatre. During these discussions, they provided nurse participants with clear a clear understanding of what they expected from the surgery.

### **5.2.2.1 Subcategory 1: Primary caregivers should share experiences**

Data suggested that primary caregiver participants took part in open discussions about their concerns and fears related to the paediatric tonsillectomy surgery. The ward environment was described by them as a conducive learning environment because they were able to relate to other primary caregiver participants that shared their concerns and fears.

“Yes, I think that it is beneficial to share experiences between parents” (PCP 1).

“I do think that parents should be involved with health education” (PCP2).

“Yes, parents should be involved because parents learn from one another” (PCP4).

“I do think it is good for parents to be involved in health education. I was so confident after receiving the health education I could provide my sister in law with information before she took her child to own for a tonsillectomy procedure” (PCP5).

“Yes, I feel that it is good if parents are involved in the process of giving education” (PCP).

### **5.2.2.2 Subcategory 2: Method of providing health education**

The method of providing health education was adjusted in this second round of data collection and analysis to a more appropriate time that ensured that primary caregiver participants received optimal information. Health education was provided during the intraoperative period which allowed primary caregiver participants to focus on the information that was provided to them without any disruptions. The method was also adjusted to an informal discussion which created the opportunity for primary caregiver participants and nurse participants to interact with one another more openly.

“The method that was used was good (my child was theatre)” (PCP3).

“Personal involvement with the parents” (PCP4).

“The way in which the health education was provided to me was good, this was done while my child was in theatre” (PCP5).

“The method of providing health education while my child was in theatre was used, and that worked for me” (PCP6).

“I feel that the method of providing health education to me while we were in hospital was suitable for the situation. I appreciated it” (PCP7).

“No, I think the way in which you presented the health education was perfect. The timing it was done was” (PCP10).

### **5.2.2.3 Subcategory 3: User-friendly health education**

Health education becomes user friendly when it is concise, understandable, relevant and more relatable. Primary caregiver’s participants are often stressed and anxious while information is provided to them by the physician or nurse participants. When they experience these feelings, they refrain from asking questions when they do not understand and therefore health education becomes user-friendly because they can refer back to it. During this round of data, collection

health primary caregiver participants described the information as user friendly because it boosted their confidence level when they referred back to it.

“The fact that the health education is straight to the point makes it user-friendly for me” (PCP1).

“Information that is easy to understand and that is provided” (PCP2).

“The fact that the health is easy to read and understand” (PCP 4).

“The fact that it is easy to understand and close by so that you can refer to it when needed” (PCP5).

“Health education is user friendly when you can take it home and read it and refer back to it” (PCP6).

“When health education is easy to understand, it acts as a textbook that you can refer back to” (PCP7).

“The fact that the health education is with me I could go back and review if I was unsure” (PCP8).

“The fact that the health education was readily available helped me, I could go back and refer to it when unsure” (PCP9).

The new method of providing paediatric tonsillectomy health education to primary caregiver participants allowed open discussions about fears and concerns to take place. It created a safe environment in which primary caregiver participants felt comfortable to ask questions while their children were in theatre.

Primary caregiver participants described the health education as a user-friendly guide which they could refer back to when they became insecure or unsure. When they were asked what the term user-friendly health education meant to them they described it as information that is concise, understandable, relevant and relatable.

Effective communication between healthcare professionals and primary caregivers is essential for the provision of quality paediatric healthcare. The manner in which health education is provided to parents may be unfamiliar and therefore have a significant effect on parental decision-making (Links et al., 2019:1).

Active parental involvement in healthcare includes different behaviours displayed by patients, parents and health care professionals. Closely related to patient engagement, patient-centred care is characterized as “respectful of, and responsive to, individual patient preferences, needs and values, and ensuring that patient values guide all clinical decisions. One approach that healthcare professionals can use to improve active patient and parental engagement is shared decision making (Ryan et al., 2019: 23).

Literature indicated that parents and children often feel anxious, uncomfortable and helpless before a surgical procedure which might negatively affect them both. Therefore, health care professionals should search for alternative methods to reduce anxiety associated with surgery (Aydin et al., 2021: 1,22).

Providing information pre-operatively can be beneficial in increasing parental knowledge and confidence about possible postoperative complications. Parents need to develop a sense of assurance, understand pain management practices and know what to expect in general (Faramarzi et al., 2020:1).

Pre-operative anxiety is a subjective and conscious feeling of worry and tension, an unpleasant experience and a universal psychological reaction. According to a study by Li, Qiao, Sun, Wang and Bai (2021:3) participation in situational simulation, frequent communication and preoperative sharing of knowledge about the tonsillectomy procedure relieves parental and patient anxiety (Li et al., 2021:3).

### 5.2.3 Category 3: Participants view of adjusted health education

Regular evaluation and adjustment of health education are needed to address new methods and scenarios related to the tonsillectomy procedure. According to the data, nurse participants viewed the adjustment of health education as a way to address new surgical techniques and complications related to these techniques.

#### 5.2.3.1 Subcategory 1: Nurses compare old and new guidelines

Adjustment of health education was described by nursing participants as a huge improvement and a way to provide primary caregivers with optimal health education that increased their level of understanding.

“It is a huge improvement on the previous health education. The information addresses all relevant scenarios related to the tonsillectomy procedure” (NP1).

“The new and adjusted health education provides parents and caregivers with good and comprehensive health education” (NP2).

“The health education is easy to read and understand. No medical terms are used” (NP4).

“The new guideline provides the parents with more information and a better understanding of what to do in an emergency situation” (NP6).

“The guideline is very simple and easy to understand” (NP7).

“The tonsil health education is good, new information leaflet is more comprehensive. It gives clear information to parents and the graphics is good” (NP8).

#### 5.2.3.2 Subcategory 2: Parental perception of adjusted information

Throughout this study, it became evident that primary caregiver participants wanted to play an active role in the educational process by sharing their experiences and adding information that they found completed the educational process.

“I think parents need to be made aware of the possibility of night terrors. My child did develop anxiety and because he is a special needs child, thinking about what we have gone through I might have delayed the process a little bit more” (PCP1).

“I think I was so stressed about postoperative bleeding that I focused so much on that and then my child developed an infection which I feel could have been prevented with the right doses of antibiotics. Medication should be prescribed according to each individual patient’s weight” (PCP3).

“Add probiotics” (PCP5).

“Highlight that fact that coarse food improves healing faster” (PCP7).

“Pain management should be improved. I e-mailed doctor and he adjusted the prescription” (PCP8).

“I would add the slush puppy drink” (PCP9).

“I just added the energy drinks on day 7 and 8” (PCP10).

In this category, nurse participants described the adjusted health education as comprehensive and more understanding. The information is described as a relevant guide that will assist primary caregiver participants in anxious and stressful situations. Primary caregiver participants also provided valuable information that according to them would make the educational guideline more complete. The information that the primary caregivers provided focussed on children developing night terrors, better pain management, probiotics, and drinks filled with sugar.

A study done by Kaleem, Othman and McKinnon suggested that increased interconnectedness has profoundly affected the medical field. Ambulatory clinics are increasingly adapting communication to digital platforms for more effective advertisement strategies, transfer of information and improved patient engagement. Increased patient communication was used to improve outcomes through reminders, patient education and increased patient participation (Kaleem et al., 2020:1).

Research suggests that websites about pre-and post-operative tonsillectomy information often provide contradictory and outdated health education. Therefore, it is imperative to emphasise the importance of health professionals providing health education that is relevant and concise to prevent the dissemination of incorrect and outdated information (Pina et al., 2021:67).

Pre-operative paediatric anxiety can also cause post-surgical results such as continuous anxiety, discomfort, fear, nightmares, nausea, restlessness and fatigue and all of these symptoms may result in delayed recovery (Aydin et al., 2021:1).

A study done by Teruel et al. suggested that preoperative parental anxiety is a robust predictor of paediatric anxiety. The study also indicated that distraction techniques such as virtual reality and music therapy have resulted in reduced levels of anxiety. Effective distraction techniques for paediatric patients that are awaiting surgery must consider age, developmental level, cognitive and communicative skills. The timing of the distraction during potentially traumatic periods such as separation from parents, movement to theatre and the induction of anaesthesia is essential (Teruel et al., 2021:2).

The model of quality improvement that paediatric hospitals use to improve care is likely the most used improvement methodology in health care. The methodology that Subramony et al. used in their study was focused on the SMART principles that referred to specific, measurable, actionable, relevant, and time-bound criteria. Quality improvement in paediatric hospitals is seen as a platform for the education of employees, serve as a catalyst for research opportunities and a framework for career advancements (Subramony et al., 2019: 700,708).

#### **5.2.4 Category 4: Primary caregiver expectation of health education**

In this category, data suggested that primary caregiver participants had conflicting expectations on admission. The level of expectation varied from expecting nothing to expecting the worst. Some of the primary caregiver participants verbalised that they did not have an idea of how long the recovery process would be. Other participants verbalised that if they knew how intense the recovery would be they would have postponed the process a bit until their children were older to have a better understanding of what was expected of them.

**5.2.4.1 Subcategory 1: Parental preparedness for the tonsillectomy procedure**

Preparing for a surgical procedure such as the paediatric tonsillectomy procedure is often misunderstood. Primary caregiver participants are often ill-prepared for the tonsillectomy procedure because they receive information from friends and through google searches. After receiving this information from these sources' primary caregiver participants level of confusion and anxiety is increased:

"I read a little bit about tonsillectomies about what type of food should be given and what food should be avoided" (PCP 1).

"I don't know, I thought well everyone removes their tonsils it can't be that bad. But now I think I would have waited a bit until he was older" (PCP3).

"I spoke to friends who have undergone the whole process of removing their children's tonsils. I was really scared and unsure after speaking to them because they described this whole process as terrifying" (PCP4).

"I did not prepare my child or myself at all" (PCP5).

"I googled a bit because I was very stressed" (PCP6).

"I did not prepare my child; I read on the internet and spoke to a friend that has previous experience with this procedure" (PCP8).

"I did not prepare me or my child because I suffer from anxiety so the only thing, I told my child was that doctor was going to remove the stuff that is making her sick" (PCP9).

**5.2.4.2 Subcategory 2: Pre-operative source of information**

The health education was presented to primary caregiver participants while their children were in theatre. During this time the researcher found that primary caregiver participants were listening attentively and took part in the one-on-one conversation with nursing participants. Primary

caregiver participants asked questions when unsure and the nurse participants had the opportunity to respond to them before discharge from the hospital.

“Information is now given to parents and guardians before the tonsillectomy procedure when everyone is still calm and relaxed. It was previously done when the crying child is out of theatre just before discharge” (NP1).

“By providing the health education before the procedure so that parents can ask questions when they are unsure. When health education is provided in advance parents and caregivers can be provided with the correct support” (NP2).

“By being available all the time to answer questions from parents when they are unsure” (NP3).

“Maybe give information before the procedure and do a follow up just before discharge this will give a clear indication if the parent or guardian has a good understanding of the health education that was provided” (NP6).

“Nurses need to be sympathetic and they need to be very clear when giving guidelines by pointing out specific reasons to encourage the patient to be on track” (NP7).

“The time when health education is given needs to be adjusted to when the caregiver is most likely to take the information in. Information should not be provided when the crying child is brought back from theatre” (NP 8).

In this category, it became clear that primary caregiver participants do not adequately prepare for theatre either because of disinterest or increased levels of anxiety. Many of the primary caregiver participants verbalized that they did receive basic information from the doctor’s rooms however when asked about possible complications they were unsure. Health education was presented to the primary caregiver participants after their children were sent to the theatre, during this time primary caregiver participants were open for discussion and displayed an intense desire to receive information. Participants were encouraged to ask questions through open discussions.

A study done by Lindquist, Feng, Patro and Mukerji suggests that knowledge of the more likely complications for children of different ages may offer important information in anticipatory counselling and perioperative guidance for parents. The study also suggests that future studies

should focus on the cost of emergency department visits and readmission (Lindquist et al., 2021:3).

Research suggested that the intraoperative period created an increased period of suspense and anxiety for parents. During this period children and parents are confronted with discomfort, unfamiliar hospital environment and the surgery's potential longer-term impacts. Experiences during the preoperative, intraoperative and postoperative periods can have lasting psychosocial effects on parents and children who undergo surgery (Gabriel et al., 2018: 134,147).

The entire perioperative efficiency process is seen as a vital component for decreasing healthcare costs, patient and caregiver anxiety and possible post-operative complications (Jain et al., 2020:2).

Faramarzi refers to parental preparation about non-pharmaceutical interventions as alternative treatment options for possible complications such as pain management. Pre-operative preparation and education can be beneficial in increasing parental knowledge and confidence (Faramarzi et al., 2020:1).

### **5.2.5 Category 5: Nurse expectation of the caregiver during recovery**

The recovery period after a tonsillectomy procedure can be quite a stressful period for primary caregiver participants. As indicated by the data nurse participants provided clear information on what is expected of primary caregiver participants after discharge. Primary caregiver participants need clear and concise information on the identification, prevention and management of post-operative complications such as pain, bleeding, eating patterns and dehydration.

#### ***5.2.5.1 Subcategory 1: Needs of the patient and primary caregiver during recovery addressed***

In this subcategory, nurse participants give a clear description of the health education needed by primary caregiver participants to achieve optimal care at home. Nurse participants described the new and adjusted guideline as a comprehensive piece of information that provided primary caregiver participants with enough information to identify and manage possible complications.

“In my opinion, the new health education is very informative and do not need further adjustment” (NP1).

“Parents and caregiver’s parents need information about pain management, eating patterns and other complications. The new health education does address these needs in a comprehensive manner” (NP2).

“As the new health education indicates parents must be made aware of the complications such as increased temperature, vomiting and the possibility of bleeding. Parents also need to know when to contact doctor and to go to the emergency department” (NP4).

“As the new guideline suggests parents must have knowledge about the different complications that their children may experience after the tonsillectomy procedure. The guideline also gives a clear indication of what parents should do in an emergency situation and who to contact when a complication arises. And I do believe that these needs are met in the day-care setting” (NP6).

“It is important for parents to follow the guidelines provided and not feel that the instruction provided are somewhat unnecessary for the wellbeing of the patient” (NP7).

“In hospital basic information that allows parents to ask questions. And on discharge a more comprehensive piece of information that will act as a support system” (NP8).

#### **5.2.5.2 Subcategory 2: Nurse perspective on quality patient education**

Communication, Empathy, Clear instruction, Patience and listening are terms used in the data collection to describe quality patient education. Quality patient education is information that provides primary caregiver participants with exact information on what to expect during the recovery period. This information is easy to understand and it allows the primary caregiver participants to perform health care at home with confidence.

“Quality patient education is when parents know exactly what to expect before the procedure and when they are unsure, they have this information with them as a reference guide” (NP1).

“Nursing care policies that are related to quality improvement of patient care should be easily available to all staff. Easy access” (NP3).

“Health education must be easy to understand and it must give a clear indication of what to expect” (NP4).

“Parents should have enough information to take care of their child at home” (NP5).

“For me, quality patient education means going down to the level of the parent and explaining the information in such a way so that they leave on discharge with confidence to look after the patient” (NP6).

“Communication, empathy, clear instruction, patience, listening” (NP7).

“Correct information that is clear and easy to understand. Clear signs to look out for and what to do when a complication arises. Contact information should also be clear” (NP8).

In this category nurse participants described the adjusted health education as an informative piece of information that adequately addressed pain management, eating patterns and other complications to the full extent. Nurse participants also made it clear, that in their opinion, the health education did meet the needs of the primary caregiver participants and therefore does contribute to the quality improvement practices of the ambulatory hospital.

The transition to ambulatory surgery requires optimal strategies to ensure quality care and safety of patients after early discharge. Several studies have indicated that uncontrolled pain management at home is often the main reason for emergency department visits and readmission to the hospital. Therefore, it is imperative that patients receive adequate analgesia (Carlier et al., 2021:1).

A quality improvement project performed by Atfeh et al. (2018) to improve the effectiveness of ambulatory paediatric tonsillectomy surgery and increase compliance of post-operative care with guidelines focused on evidence-based relaxation of day case criteria, improved list management, and enhanced education provided by the physician (Atfeh et al., 2018:1604,1607).

### **5.2.6 Category 6: Comfortable hospital environment**

The ambulatory setting was described in this second round of data analysis as a comfortable environment in which primary caregiver participants could openly discuss their fears and concerns. They verbalised that they were orientated towards the environment and this allowed them to feel less anxious about the surgical procedure. During the orientation process, primary caregiver participants were informed by nurse participants that they would receive health education once their children were admitted to the theatre. Nurse participants, however, had a different opinion about the ambulatory setting, they believed that the environment was not conducive for patient education because of its busy and noisy nature.

Data suggest that nurse participants would rather provide health education in a separate area that is more private and noise-free.

#### **5.2.6.1 Subcategory 1: Orientation to hospital setting essential**

Orientation to the hospital environment decreases pre-operative anxiety and allow primary caregiver participants to relax and focus on health education that is provided to them. The primary caregiver participants that took part in the study reacted positively towards the orientation that they received in the hospital.

“I was orientated” (PCP 2).

“Yes, I was orientated when admitted” (PCP4).

“Yes, I was” (PCP5).

“Yes, we orientated” PCP7).

“This was the best hospital experience me and my child have ever had” (PCP8).

“Yes, we were” (PCP9).

“Yes, and no they did explain a bit but not in detail however I was there before so I knew what was going on” (PCP10).

#### **5.2.6.2 Subcategory 2: *The ward as a conducive environment for receiving health education***

In this subcategory, the paediatric ward environment is described by nurse participants as a very busy noisy environment that is not conducive for patient education. Data suggest that nurse participants preferred a more private area where one on one discussions with primary caregiver participants could take place.

“No, I do not think that the ward environment is a good environment for health education because it is very stressful on the day of operation” (NP2).

“In my opinion, I do not think that the ward is conducive for patient education. I would suggest that the day care facility provide a private comfortable area in which nurses can provide health education to parents” (NP3).

“Not always as the ward can be a bit busy at times” (NP5).

This category provided the researcher with some insight into the orientation process at the specific day hospital. Primary caregiver participants described the orientation process during admission for the tonsillectomy procedure as a positive experience that allowed them to relax. The ward environment however is experienced differently by the nurse participants who would rather provide orientation and health education in a more private area. The nurse participant referred to the ward as a stressful environment that was noisy and very busy.

The physical hospital environment can significantly contribute to parental and paediatric psychological and physiologic manifestations. Therefore, a range of pharmacological and non-pharmacological interventions such as administration of pre-medication, presence of parent or guardian during anaesthetic induction and watching age-appropriate movies is advised (Wingler et al., 2020:466).

In a study done by Li et al. parents and paediatric patients received situational adaption training during the pre-operative period. They were provided with routine education and information about the general procedures, from the entrance to the exit of the operation room (Li et al., 2021:2).

The tonsillectomy procedure is an invasive procedure that is performed under general anaesthesia and causes parents and paediatric patients to feel anxious and insecure. The search for more information about the procedure along with the possible complications is common amongst parents. Therefore, it is imperative that health care professionals include information considered reliable and complete in their clinical routine (Pina et al., 2021:67).

### **5.2.7 Category 7: Pre-operative preparation**

Pre-operative preparation of primary caregiver participants took place during the first consultation with the physician. During this period primary caregiver participants experienced elevated levels of anxiety and confusion and refrained from asking questions. This resulted in them searching for alternative sources of information. Data collected from the study indicated that these alternative sources of information existed out of internet searches and family and friends providing insight from their experiences. During the admission process, nurse participants evaluated the pre-existing knowledge that primary caregiver participants had about the paediatric tonsillectomy procedure.

#### **5.2.7.1 Subcategory 1: Preparation of caregivers while the patient is in theatre**

Primary caregiver participants are often too anxious and stressed to properly prepare themselves and their children for the whole surgical experience. Data has suggested that they are ill-prepared on admission and are often very emotional. The researcher identified the intraoperative period as the most suitable time for the preparation of primary caregiver participants. The intraoperative period allowed nurse participants and primary caregiver participants to have in-depth discussions about health education. Primary caregiver participants were provided with the opportunity to focus on the information that was provided to them and they could ask questions when they were unsure or felt insecure. They described the information that was provided to them as a helpful guide that they could refer back to when they were unsure.

“None, I do think the new information in the booklet is very informative and now that the health education is provided to parents and guardians before the patient comes out of theatre, they experience less anxiety and more confidence” (Np1).

“Small educational sessions with the parent are addressed personally. One on one training” (PN3).

“No changes are required; health education is now provided to parents when the patient is in theatre” (NP5)

“Yes, it is after my child was sent to the theatre I could focus on the health education that was provided to me” (PCP 7).

“Timing of education needs to be adjusted to a time that allows parents and caregivers to concentrate and not be distracted too much. Adjust education according to needs an uncertain mother will ask a lot of questions whereas an experienced mother will only need a leaflet to read through” (NP8).

What became obvious through the data was that the nurse participants and the primary caregiver participants displayed a positive attitude with regard to the educational process. The intraoperative period allowed primary caregiver participants to receive the information, think about it and then ask questions when they felt unsure or insecure. The adjusted health education was referred to as a textbook that primary caregiver participants could refer back to when they felt insecure or unsure. This resulted in primary caregiver participants leaving the hospital environment with a confident attitude towards care at home.

A study done by Links et al (2021:1378) describes how clinicians use language to provide treatment recommendations to parents of children evaluated for paediatric tonsillectomy surgery and presents a classification system. They gave treatment options to parents in a variety of ways with distinct linguistic phrasing styles, including definitive and vague language patterns. This study serves as a foundation for future research to understand how clinicians provide treatment recommendations and engage parents in the decision-making process (Links et al., 2021:1378).

Although the tonsillectomy procedure is a part of basic clinical practice in paediatrics post-surgical admission to emergency departments is still common. Research indicates that there appears to be a gap in proper post-operative pain management which is not properly covered by analgesia. The particular study suggests that changes to the discharge medications and parental education are warranted to meet the needs of the patient and their family (Richards et al., 2019:121).

Findings from a recent study that focused on opioid exposure during the first thirty days after tonsillectomy surgery can help clinicians identify patients that are at risk and therefore treatment plans can be adjusted and altered to mitigate risks and potentially reduce the rate of persistent opioid dispensing following tonsillectomy surgery (Basco et al., 2021: 6,7).

### **5.2.8 Category 8: Caregivers feel comfortable in unfamiliar hospital circumstances**

Most of the primary caregiver participants verbalised that they felt comfortable during admission and on discharge from the ambulatory hospital setting. Primary caregiver participants were enthusiastic when information was provided to them. Data provided displayed their confidence in the health education, the participants described the information as a textbook that they could refer back to.

There were three isolated incidences in which the primary caregiver participants described the period after discharge as challenging. Data suggest that two of the primary caregiver participants followed instructions to contact the specific physician about the possibility of complications. They were met by the physician's secretary who did not allow them to speak to the specific physician which resulted in them failing to receive the necessary post-operative support.

#### **5.2.8.1 Subcategory 1: Want to feel confident to provide care**

When primary caregiver participants were confronted with the question of comfortability they responded positively. They verbalised that they had a good understanding of the health education that was provided to them while their children were in theatre. Data suggested that primary caregiver participants did not receive adequate pre-operative information from the specific physician and that they only felt comfortable after receiving health education in the hospital.

“I did not have a choice I am a mother I had to take care of my child” (PCP1).

“Yes, before I received health education from you, I was unaware of what could develop but afterwards I was more confident. After receiving the health education, I could phone home and ask stuff ready for our return” (PCP2).

“Yes, I was confident until he started crying at home” (PCP3).

“Yes” (PCP4).

“Not in the beginning but after I received the health education I was more at ease. I did not realize that a tonsillectomy is such a big operation” (PCP5).

“Yes, I was confident. I had to be” (PCP6).

“Yes, I focused on having a positive attitude towards the procedure” (PCP7).

“Yes, I was until we reached day 3,4,5,6 this was absolute hell I struggled a lot especially with eating and drinking I had to distract him to get food and drink into him” (PCP8).

“Yes, definitely so. Before I got the health education, I was very nervous and unsure” (PCP9).

#### **5.2.8.2 Subcategory 2: Level of understanding of possible complications**

It is important to have a clear understanding of the possible complications that are associated with the paediatric tonsillectomy procedure. It is beneficial for optimal post-operative care if primary caregiver participants are able to prevent, identify and manage postoperative complications. Data suggested that primary caregiver participants had a clear understanding of how to prevent, identify and manage postoperative complications. However, there were isolated incidents in which the primary caregiver participants needed reassurance from the particular physician and this was sadly not provided.

“Yes, I was very aware because my child is a hemiplegic” (PCP1).

“Yes, the health education that you provided was amazing. I just needed a bit more help afterwards because it is day ten now and my child is still suffering. The doctor’s rooms are not supportive because I am dealing with the receptionist. I was forced to consult my local general practitioner and he changed the pain medication to suit my child’s needs better he also told me that he is going to prescribe antibiotics because in his opinion my child developed a secondary infection” (PCP2).

“Yes, the first two weeks after the operation was hell. After one week I contacted my general practitioner and he diagnosed my child with a secondary infection he also changed the doses of the antibiotics and pain medication because the initial dosage that I received after the operation was too little to clear up the infection” (PCP3).

“Yes, I did. The information that was provided to me assisted me in that” (PCP7).

“Not before I received the health education” (PCP10).

The paediatric tonsillectomy procedure is the most common surgical procedure that is currently performed in the ambulatory setting. It is however associated with various complications that primary caregiver participants should be aware of. Data suggested that primary caregiver participants received proper orientation during the admission process and this allowed them to relax and feel less anxious about the surgical experience. It also became evident that they understood the health education that was provided to them. In this category data identified that primary caregiver participants recognised possible complications at home and when they reacted to what they have recognised, merger support was provided from the specific physician.

Research suggested that in paediatric otolaryngology uncontrolled postoperative pain is generally associated with adverse events, such as airway compromise, restless sleep, behavioural changes, and difficulty in tolerating oral fluids, all of which can significantly complicate and delay the recovery period (Maroda et al., 2020:280).

A study done by Australian and New Zealand researchers has made vital contributions to the improvement and understanding of adenotonsillectomy surgery. The study mainly focused on the provision, efficacy and safety of tonsillectomy health education. There are promising future directions in research particularly as there is an ongoing rise in tonsillectomy surgery for

obstructive sleep apnoea and developing efficient pre-operative assessment tools (Tran et al., 2021:106).

The benefits of Intracapsular tonsillectomies have been described in the literature and primarily focused on the short-term outcomes such as post-operative pain control, fewer admissions associated with dehydration and decreased rates of post-tonsillectomy haemorrhaging (Soaper et al., 2020:2).

Kong, Wasserman, Villavisanis and Hackett hypothesised that a three-hour observation period would be sufficient for post-operative observations after a tonsillectomy procedure eliminating the need for routine overnight stay (Kong et al., 2020:5).

### **5.2.9 Category 9: Implementation of adjusted health education**

The need to adjust and improve the way in which nurse participants provide health education is just as important as providing relevant, informative and concise health education. The implementation of adjusted health education was seen as a quality improvement process that allowed primary caregiver participants to be discharged with a positive attitude towards paediatric tonsillectomy health education.

#### ***5.2.9.1 Subcategory 1: Willingness of nurses to evolve and provide adjusted health education***

According to the data received in this subcategory, nurse participants were willing to adapt and adjust the way in which they provided health education to primary caregiver participants.

The research provided ambulatory care nurse participants with an inside view into the adaption and adjustment of health education and also allowed them to experience the effect of proper relevant health education. The data also suggested that primary caregiver participants reacted positively towards the way in which health education was provided to them.

“Yes, they are all willing to improve the health education and the way in which it is provided to parents and guardians” (NP1).

## Chapter 5: Findings: Round two of the rapid cycle evaluation

“Yes, improving service delivery is always good” (NP2).

“Yes, I do think they would be willing to adjust their old ways” (NP3).

“Yes, I do think they would” (NP4).

“Yes, they would” (NP5).

“Yes, I do think they would” (NP6).

“Yes, I do think they would” (NP7).

The willingness of nurse participants to adapt and evolve health education was described in this category as a positive change to the ambulatory environment. Primary caregiver participants had a clear understanding of the health education after it was provided to them while their children were in theatre.

A study done by Faramarzi et al (2020:1) focused on better understanding pre-operative pain management patient education. The study has shown that an informative and concise patient education booklet may be just as effective as a sophisticated method of patient education (Faramarzi et al., 2020: 5).

After tonsillectomy surgery, caregivers are faced with the responsibility of having to manage post-operative pain effectively. Though shortcomings of having caregivers assess children's pain still remain, the findings of a study done by Hui et al. indicate that parents can meaningfully assess paediatric patients' level of pain with the assistance of structured telephonic interviews (Hui et al., 2020:6).

### 5.3 CONCLUSION

The second phase of the research study consisted of the implementation of the new and adjusted paediatric tonsillectomy health education. Once the adjusted material was implemented data collection and analysis took place. The researcher provided primary caregiver participants with the new and adjusted health education while paediatric patients were in theatre. The study was concluded once the same information started to reflect within the interviews.

## **CHAPTER 6**

### **CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS**

#### **6.1 INTRODUCTION**

A rapid-cycle evaluation and adjustment of paediatric tonsillectomy primary caregiver education using the consolidated framework for implementation research (CFIR) are presented in six chapters.

The first chapter was used to set the tone of the study. The background, rationale and significance of the research were described and key terms that were used throughout the study were clearly defined. Chapter 2 focused on the literature review and chapter three was used to address the research methodology. The research methodology described the rapid-cycle evaluation of primary caregiver education. It was done to identify the factors that influenced the implementation of the original health education that was provided to primary caregivers of children undergoing the tonsillectomy procedure. It was also used to assess the health education that the researcher developed in the second round of the study. The researcher learned that the process of rapid-cycle evaluation does more than an identification of what needs to be changed, it provides a clear perspective on how to improve processes. Two rounds of data collection and analysis were described in Chapters 4 and 5. During these two rounds, domains of the CFIR were used to create categories and subcategories to identify trends within the data.

Chapter 4 described the data collection process along with the evaluation and adjustment of the health education that was provided by the specific physician. The researcher focussed on the evaluation of information that was provided to primary caregivers by nurses. The result of this evaluation was that the educational guideline from the specific physician was far too basic and it did not meet the educational needs of the primary caregivers. When health education does not meet the needs of primary caregivers it results in increased levels of anxiety, confusion and disinterest.

Chapter 5 focussed on the implementation and evaluation of the adjusted guideline that is now called the Evidence-based Paediatric Tonsillectomy Primary Caregiver Education Guideline.

## **6.2 AIM OF THE STUDY**

This study aimed to evaluate and adjust the paediatric tonsillectomy primary caregiver education in a designated private day hospital according to the contextual and interventional facilitators and barriers of the CFIR.

## **6.3 CONCLUSIONS**

The importance of proper health education after paediatric surgery was clearly demonstrated throughout this study. Primary caregiver participants demonstrated a need to receive information that would act as a guide during the recovery process of their children. Nurse participants recognised the need to improve the educational process and were eager to provide information that would aid in patient recovery. The conclusions were drawn from the categories and sub-categories that were eminent in the study.

### **6.3.1 Paediatric tonsillectomy health education should meet the needs of the primary caregiver**

The paediatric tonsillectomy procedure is a surgical procedure that normally takes place in an ambulatory environment. After discharge from the hospital, primary caregivers are confronted with the responsibility of providing care at home. During this part of the healing process primary caregivers often experience elevated levels of anxiety and confusion when the possibility of a complication arises. Therefore, they need to have a clear understanding of what to expect post-operatively.

The new paediatric tonsillectomy educational guideline (called the Evidence-based Paediatric Tonsillectomy Primary Caregiver Education Guideline) was implemented and assessed with the use of the CFIR. The caregiver and nurse participants provided input about the barriers and facilitators regarding its implementation.

The caregivers were satisfied with the information that the guideline provided regarding the possible complications, advice about food to be served to the children and what should be done in case of an emergency situation. During data collection, primary caregivers verbalised that the Evidence-based Paediatric Tonsillectomy Primary Caregiver Education Guideline did meet their needs and provided them with sufficient information to optimally care for their children.

### **6.3.2 Regular evaluation of health education**

The medical field is consistently evolving and therefore it becomes vital for health education to be kept relevant and easy to understand. During the research process, the nurse participants became aware of their responsibility in the educational process and accepted their responsibility to regularly revise the material for health education. Regular evaluation and adjustment of health education are needed as part of ongoing quality improvement processes in the ambulatory care environment.

Health education that is current and descriptive provides primary caregivers with an elevated sense of security that leads to improved confidence levels. When primary caregivers are confident in providing post-operative care in the home environment, they will avoid unreliable websites and other information that is provided by family members and friends.

The impact of the Corona pandemic has affected elective surgery globally and has demonstrated why it is important to regularly adjust and improve surgical services, including the care before and after surgery. To decrease the risk and improve outcomes of elective surgery new protocols have been introduced (Kavanagh et al., 2021:1).

### **6.3.3 The method of providing health education**

During the process of evaluation and adjustment of the health education, the method of providing health education was also scrutinised. The period and time of providing health education play an important factor in primary caregiver success in the home environment. Nurses should consider the primary caregiver's awareness, concentration and level of understanding when providing health education.

In this study health education was provided to primary caregivers while the children were in theatre for the tonsillectomy procedure. During this period primary caregivers were allowed to relax and focus on the information that was provided to them by nurses. It created an opportunity for them to ask questions and receive feedback while they were waiting for their children to return from theatre.

Before discharge from the ambulatory environment, primary caregivers should be able to recognise and identify possible complications of the tonsillectomy procedure. The guideline that is provided to them should be concise, understandable, relevant and relatable because primary caregivers often become anxious during the hospitalisation of their children and do not always focus during the provision of health education.

The Evidence-based Paediatric Tonsillectomy Primary Caregiver Education Guideline allows for better communication between nurses and parents of children who received the tonsillectomy procedure.

#### **6.3.4 Primary caregiver participants' perception of the Evidence-based Paediatric Tonsillectomy Primary Caregiver Educational Guideline**

The primary caregiver participants described the Evidence-based Paediatric Tonsillectomy Primary Caregiver Education guideline as a comprehensive piece of information that is easy to understand. The guideline provides detailed descriptions of possible post-tonsillectomy complications and different methods to manage these complications. The Evidence-based Paediatric Tonsillectomy Primary Caregiver Education guideline also consists of information about general postoperative complications such as night terrors as well as better pain management.

Primary caregivers are hesitant to handle complications at home, probably due to a lack of information and elevated levels of anxiety. Without sufficient scientific health education, they refer to websites that often provide unreliable information. The disadvantage of these sites is that they provide contradictory information that only adds to primary caregiver confusion and anxiety. It is, therefore, imperative to emphasise the obligation of health professionals to provide health education that is relevant and concise to prevent the dissemination of incorrect and outdated information (Pina et al., 2021:67).

### **6.3.5 Nurse participants' perception of the Evidence-based Paediatric Tonsillectomy Primary Caregiver Educational Guideline**

The nurse participants were of the opinion that quality health education consists of information that improves the healing process at home. They described the Evidence-based Paediatric Tonsillectomy Primary Caregiver Education Guideline with words such as improved communication, clear instruction, and improved understanding by the primary caregivers and nurses' job satisfaction.

### **6.3.6 The ward as a conducive environment for health education**

The ambulatory setting is mainly used for procedures such as paediatric tonsillectomies and other procedures that require no overnight stay. During this study, the ward environment was described by all of the primary caregiver participants as a comfortable environment for health education. They were satisfied that they have been thoroughly orientated during the admission process and that it allowed them to feel more confident and less anxious during their children's stay in the ambulatory environment. The ward environment created opportunities for them to openly discuss concerns with other parents and the nurses.

The nurse participants however did not share the same sentiment and described the ward environment as a very fast-paced environment that allowed little interaction between nursing staff and the caregivers of the child patients. The data suggested that the nurse participants preferred the appointment of a designated nurse with the sole responsibility of providing health education in a venue that is conducive for health education.

### **6.3.7 Understanding and implementing interventions to manage possible complications at home**

The paediatric tonsillectomy procedure is one of the most common paediatric surgical procedures to be performed in ambulatory settings worldwide. However, the procedure is still associated with serious complications such as postoperative bleeding, uncontrolled pain, nausea, vomiting and dehydration. After discharge from the hospital, the primary caregivers of children who received

tonsillectomies should have a good understanding of what to do to prevent complications and to manage them when it arises.

In the first round of the study, the participants voiced their concerns about their lack of information on the prevention and management of possible complications. In the second round of the study, they expressed their appreciation for the quantity and quality of the information. They described the Evidence-based Paediatric Tonsillectomy Primary Caregiver Education Guideline as a guide that they could refer to when required.

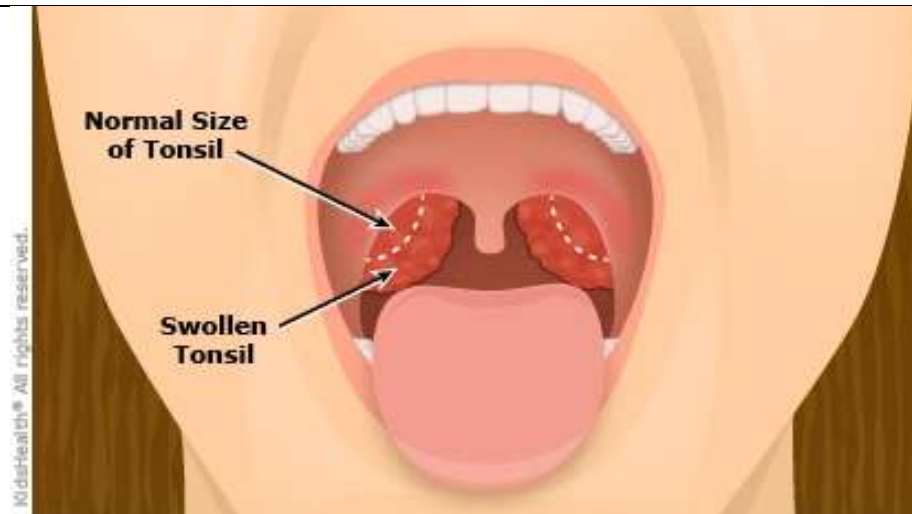
#### **6.4 THE EVIDENCE-BASED PAEDIATRIC TONSILLECTOMY PRIMARY CAREGIVER EDUCATIONAL GUIDELINE**

The primary caregiver and nurse participants described the Evidence-based Paediatric Tonsillectomy Primary Caregiver Educational Guideline as a comprehensive description that primary caregivers could use to prevent and manage complications after discharge from the ambulatory care facility. Refer to Figure 6.1 for the guideline.

**Figure 6.1: Evidence-based Paediatric Tonsillectomy Primary Caregiver Education Guideline**

#### **THE TONSIL OPERATION (TONSILLECTOMY)**

The tonsillectomy operation is the most common surgical procedure carried out in the day-care setting. The procedure includes the total removal of the tonsils that is situated in the throat. The reason for the operation is as discussed with the physician but is most likely because of repeated tonsillitis.



### How long does it take to recover from surgery?

It takes most children 7-14 days to recover from a tonsillectomy procedure. Some children feel better in just a few days and some take as many as 14 days to recover.

### Are there any risks related to a tonsillectomy procedure?

Tonsillectomy is a surgical procedure that includes some risks. After surgery, a child may have:

- Bleeding in their mouth (from the tonsils)
- Throat pain that lasts up to two weeks
- Temperature greater than 38-40 Celsius
- Vomiting or a feeling like they have to vomit
- Thirst or dryness, especially if they are vomiting (dehydration)

## POSSIBLE COMPLICATIONS THAT MAY BE EXPERIENCED AFTER THE OPERATION:

### BLEEDING

The first 24 hours after the tonsillectomy procedure is the danger period in which bleeding can be observed. If there is excessive bleeding (more than a little spit up) from the mouth or nose and the child is swallowing constantly they may be swallowing blood and this **SHOULD** be reported to the physician immediately. If it isn't office hours go straight to the emergency department.

**Note that:** It is not unusual to vomit up old blood (dark in colour) after the surgery (once or twice) but if it persists immediately give the patient ice to suck and inform the physician.

## PAIN

For the first several days (occasionally up to 14 days) following surgery, pain in the throat is to be expected. This can be controlled by taking medication exactly as prescribed by the physician. Pain medication should not be repeated more often than four to six hourly.

Patients often experience intense pain at night. This pain can be relieved by administering medication such as Panamor or a Voltaren suppository before bedtime.

**It is very important not to take additional medication such as aspirin which can lead to increased bleeding.**

Ear pain, especially with swallowing is also a common occurrence after surgery, it is not an ear infection. The same nerve that travels to the throat is connected to the ear, so stimulation of this nerve can lead to earache. **When the earache is accompanied by deafness, please notify the physician immediately**

## Things to do to relieve pain

- Ice to the neck
- Chew gum
- Have a humidifier in the room

## TEMPERATURE

For the first two days after the operation, it is normal for the patient to have a temperature of 38 to 40 degrees. Pain medication that is prescribed should be sufficient to treat the elevated temperature.

## NAUSEA AND VOMITING

Your child may have nausea or vomiting after surgery which should go away by the next day. Give only sips of clear liquid until the vomiting stops. **If your child continues to vomit, contact the doctor immediately or go to the emergency room.**

**EATING AND DRINKING**

Eating and drinking are very important after surgery as they will clean and heal the throat. It is essential that the patient should start eating as soon as possible after the operation and not stop eating as a result of pain. Refraining from chewing and swallowing causes muscle spasms and infection which can be very painful.

**Hydration is extremely important!** Make sure your child also drinks plenty of fluids throughout the day for the first few days after surgery. If your child is not eating a normal amount of food, give them some drinks containing sugar which will ensure they are getting some calories for energy.

Give pain medication 30 to 60 minutes before eating to relieve the pain of swallowing

Your child may find drinking and eating chilled or icy drinks and food soothing

Your child should continue with brushing morning and at night

**RECOMMENDED FOOD AT HOME:**

- Ice cream, Jelly, Apples, Coarse Rusks, Provita, Muesli, Weatbix, Nuts, Dry wors, Biltong, Coke.
- It is very important that adequate fluid intake is encouraged to prevent dehydration.
- Coke, sprite and other fizzy drinks help keep wound clean
- Chewing gum keeps the throat muscle supple and can improve the healing process.

**FOOD THAT SHOULD BE AVOIDED AT HOME FOR THE FIRST TWO WEEKS:**

- Bananas, Pineapples, Tomato's, Avocado's, Cheese curls, Spices, Milk.

What else do I need to know?

- Physical activity

Encourage your child to play quietly for the first few days after surgery. Plan for your child to be out of school or day-care for 7 to 10 days after surgery. When your child is back at school, they should not participate in vigorous activity for 2weeks.

Bad breath

Bad Breath is a normal part of the healing process and it will go away in 7 to 10 days after surgery. Do not be alarmed if you see yellow scabs in the tonsil bed at the back of the throat. These yellow scabs start to form on the second day after surgery and are a normal part of the recovery process and do not mean infection. When children refuse to eat, these yellow scabs become thicker and may lead to increased pain and bleeding.

#### **Congestion and drainage**

It is normal for patients to have increased nasal congestion and increased mucus drainage after a tonsillectomy procedure. This will usually go away in 7 to 10 days after surgery.

#### **Voice changes**

Your child's voice may sound different (hyper nasal) for several weeks after the tonsillectomy surgery.

#### **Upset stomach**

This is common for the first 24 to 48 hours after the surgery

#### **When should I call the doctor?**

- If your child has not urinated in 12 hours
- If your child refuses to drink fluids for 12 hours
- If your child has a fever of 38-40 degrees for more than six hours that does not go away after giving prescribed medication.
- Severe pain is not relieved with prescribed pain medication
- Vomiting continuously
- Contact the physician at the rooms on this particular number.

#### **When should I take my child to the emergency department?**

You should take your child to the emergency department when they have bleeding from the mouth or nose, or vomiting bright coloured blood. Bleeding can occur up to two weeks after the surgery.

#### **Who should I call if I have any questions?**

For any questions and queries, you are also welcome to send the particular physician an Email at:  
Please arrange for a follow-up appointment immediately after you leave the hospital for three weeks after the operation.

## 6.5 LIMITATIONS

The study was focused on improving paediatric tonsillectomy health education provided to one specific physician's patients at one designated ambulatory hospital.

## 6.6 RECOMMENDATIONS FOR PRACTICE

Recommendations are based on the findings of the study. The researcher makes the following recommendations for practice and further research:

Nurses in the ambulatory setting should be encouraged to provide health education that is always consistent and relevant. The medical field is an area that is ever-evolving with the discovery of new diseases the development of new medication the evolution of surgical techniques and equipment. Therefore, it becomes important for nurses to provide health education to primary caregivers that is current, easy to understand and perform in their home environment.

The regular evaluation and adjustment of health education provided meaningful insight into the adaption of all paediatric tonsillectomy health education that is provided in the ambulatory setting. The researcher identified recommendations to improve paediatric tonsillectomy health education throughout the particular ambulatory setting.

- The Evidence-based Paediatric Tonsillectomy Primary Caregiver Education Guideline should be implemented as a standard operating procedure for all paediatric tonsillectomy surgery throughout the company.
- The Evidence-based Paediatric Tonsillectomy Primary Caregiver Education Guideline should be implemented as a quality improvement measure to improve the level of education that is provided by all nurses in the particular ambulatory environment
- The information should be provided preoperatively to all primary caregivers of children awaiting to undergo paediatric tonsillectomy surgery.

- The Evidence-based Paediatric Tonsillectomy Primary Caregiver Education Guideline should be reinstated on admission to the hospital and all questions related to the surgery should be answered by nurses.

## 6.7 RECOMMENDATIONS FOR FUTURE RESEARCH

The findings of this study can be used by nurses and primary caregivers to bridge the gap of what is known and unknown about the topic.

The following areas for future research were identified:

- The researcher recommends that more research be done on the interaction between doctors and their patients and how better communication could improve post-operative care. Explore the development of an improved communication system or process that could be beneficial for both the doctor and his patient.
- Further research could be done on the different surgical techniques that are used to remove tonsils. Compare possible complications of each surgical technique with one another.
- With COVID-19 taking preference above all elective surgery, is long term antibiotic treatment of infected tonsils an alternative treatment option that could replace general surgery for an extended period.

## 6.8 PERSONAL REFLECTION

Taking part in the process of evaluating, adjusting and improving a very basic piece of health education has made me as a nurse very proud. Providing patients and their families with a comprehensive piece of information that they could use during the recovery process was enlightening.

Post-operative discussions with primary caregivers changed my perception of what patients and their families understand during their short stay in the hospital. It has motivated me as a nurse to provide them with a better insight into their surgical procedure. I have also realised that healthcare workers often assume that patients and their families are informed with regards to their diagnosis but this is very often not the case.

## 6.9 SUMMARY

The research aim was to evaluate and adjust the paediatric tonsillectomy primary caregiver education in a designated private day hospital according to the contextual and interventional facilitators and barriers of CFIR. The researcher performed two rounds of data collection and analysis and it became evident in round one that the information was outdated, too basic and not at the literacy level of a grade eight student. Primary caregivers struggled with postoperative complications such as uncontrolled pain, bleeding, throat infections and decreased eating patterns. The health education did not provide the required support that primary caregivers needed resulting in them seeking additional medical care.

The paediatric tonsillectomy health education was adjusted to a more informative piece of information that was described as a textbook that could be referred back to. The Evidence-based Paediatric Tonsillectomy Primary Caregiver Education Guideline focused on improved and up to date pain management practices, better eating alternatives and ways to improve the whole eating experience and methods to limit and manage post-operative bleeding. The researcher also provided parents with additional information that focussed on paediatric patients developing night terrors and improved ways to prevent, identify and manage possible throat infections.

The researcher believes that the study was successful and the guideline developed can be beneficial for primary caregivers.

## REFERENCES

- Aaronson, L. A., Cox, C. T., Boss, E. F. (2019). Parental health literacy in paediatric otolaryngology: A pilot study. *International Journal of Paediatric Otorhinolaryngology*, 125, 87-91. <https://doi.org/10.1016/j.ijporl.2019.06.029>
- Adugna, M., B., Nabbouh, F., Shehata, S., Ghahari, S. (2020). Barriers and facilitators to healthcare access for children with disabilities in low and middle income sub-Saharan African countries: a scoping review. *BMC Health Services Research*, 20, 1-11. <https://doi.org/10.1186/s12913-019-4822-6>.
- Afonso, A. M., Hanae, K. T., McCormick, P. J., Twersky, R. S. (2019). Enhanced Recovery Programs in Outpatient Surgery. *Anesthesiology Clin*, 37(2019), 225-238. <https://doi.org/10.1016/j.anclin.2019.01.007>.
- Albaladejo, P., Aubrun, F., Samama, C., Jouffroy, L., Beaussier, M., Benhamou, D., Romegoux, P., Skaare, K., Bosson, Ecoffey, C. (2017). The structure, organisation and perioperative management ambulatory surgery and anaesthesia in France: Methodology of the SFAR-OPERA study. *Anaesth Crit Care Med*. 36(2017), 307-312. <http://dx.doi.org/10.1016/j.accpm.2016.10.002>
- Albrecht, L., Scott, S. D., Hartling, L. (2017). Knowledge translation tools for parents on child health topics: a scoping review. *BMC health service research*. 17:689. DOI 10.1186/s12913-017-2632-2.
- Amoils, M., Chang, K. W., Saynina, O., Wise, P.H., Honkanen, A. (2016). Postoperative Complications in Pediatric Tonsillectomy and Adenoidectomy in Ambulatory vs Inpatient Settings. *JAMA Otolaryngol Head Neck Surg*, 142(4):344-350. DOI:10.1001/jamaoto.2015.3634.
- Anabo, I.F., Elexpuru-Albizuri, I., Villardon-Gallego, L. (2018). Revisiting the Belmont Report's ethical principles in internet-mediated research: perspectives from disciplinary associations in the social sciences. *Ethics and Information Technology*, (21):137-149. [Online] Available from: <https://doi.org/10.1007/s10676-018-9495-z>.

## References

- Arian, M., Ramezani, M., Tabatabaeichehr, M., Kamali, A. (2016). Designing and Evaluating Patient Education Pamphlets based on Readability Indexes and Comparison with Literacy Levels of Society. *Evidenced Based Care Journal*, 6 (2):19-28., [Online] Available from: <http://ebcj.mums.ac.ir/article7304.html>.
- Arsenault, M., Blouin, M.J., Guiton, M. J. (2016). Information quality and dynamics of patients' interactions on tonsillectomy web resources. *Internet Interventions*, (4):99-104. [Online] Available from: [www.elsevier.co./locate/inventwww.elsevier.co./locate/invent; http://dx.doi.org/10.1016/j.invent.2016.05.002](http://dx.doi.org/10.1016/j.invent.2016.05.002).
- Atfeh, M.S., Richardson-May, J., Rainsbury, J. (2018). Day case paediatric tonsillectomy: a quality improvement project. *European Journal of Paediatrics*, 177(2018):1603-1608. [Online] Available from: <https://doi.org/10.1007/s00431-018-3220-0>.
- Aydin, G.B., Uyar, B.S. (2021). Mothers level of education and pre-operative informative storybook reading helps reduce pre-operative anxiety in children in turkey. *Journal of Pediatric Nursing*, 60(2021):19-23. [Online] Available from: <https://doi.org/10.1016/j.pedn.2021.02.012>.
- Aydogdu, O., Dal Yilmaz, U. (2019). Patient's experiences and Difficulties at Home Following Day Surgery. *Turkiye Klinikleri J Nurs Sci*, 12(1), 1-9. DOI:10.5336/nurses.2019-66571.
- Babademez, M, A., Gul, F., Muz, E., Muderris, T., Kale, H. (2016). Impact of Partial and Total Tonsillectomy on Adenoid Regrowth. *Laryngoscope*, 127, 759-756. DOI:10.1002/lary.25982.
- Bailey, C, R., Ahuja, M., Bartholomew, K., Bew, S., Forbes, L., Lipp, A., Montgomery, J., Russon, K., Potparic, O., Stocker, M. (2019). Guidelines from the Association of Anaesthetists and the British Association of Day Surgery. *Anaesthesia*, 74,778-792. DOI:10.1111/anae.14639
- Bana, M., Ribi, K., Kropf-Staub, S., Naf, E., Schramm, M, S., Zurcher-Florin, S., Peters, S., Eicher, M. (2020). Development and implementation strategies of a nurse-led symptom self-management program in outpatient cancer centres: The symptom Navi Programme. *European Journal of Oncology Nursing*, 44:1-9. [Online] Available from: <https://doi.org/10.1016/j.ejon.2019.101714>.
- Bannister, M., Thompson, C. (2017). Post tonsillectomy dietary advice and haemorrhage risk: systematic review. *International Journal of Paediatric Otorhinolaryngology*, 103(2017), 29-31. <http://dx.doi.org/10.1016/j.ijporl.2017.09.031>.
- Barrett, D., Twycross, A. (2018). Data collection in qualitative research. *Evid Based Nurs*, 21(3):63. <http://dx.doi.org/10.1136/eb-2018-102939>

## References

- Basco, W.T., Ward, R.C., Taber, D.J., Simpson, K.N., Gebregziabher, M., Cina, R.A., McCauley, J.L., Lockett, M.A., Moran, W.P., Mauldin, P.D., Ball, S.J. (2021). Patterns of dispensed opioids after tonsillectomy in children and adolescents in South Carolina, United States 2010-2017. *International Journal of Otorhinolaryngology*, 143:1-10. [Online] Available from: <https://doi.org/10.1016/j.ijporl.2021.110636>.
- Benedek, P., Balakrishnan, K., Cunningham, M.J., Friedman, N.H., Goudy, S.L., Ishman, S.L., Katona, G., Kirkham, E.M., Lam, D.J., Leboulanger, N., Lee, J.S., Treut, C.L., Mitchell, R.B., Muntz, H.R., Musso, M.F., Parikh, S.R., Rahbar, R., Roy, S., Russell, J., Sidell, D.R., Sie, K.C.Y., Smith, R.J.H., Soma, M.A., Wyatt, M.E., Zalzal, G., Zur, K.B., Boudewyns, A. (2020). International Pediatric Otolaryngology Group (IPOG) consensus on the diagnosis and management of pediatric obstructive sleep apnoea (OSA). *International Journal of Otorhinolaryngology*, 138:1-7. [Online] Available from: <https://doi.org/10.1016/j.ijporl.2020.110276>.
- Best, J, T., Musgrave, B., Pratt, K., Hill, R., Evans, C., Corbitt, D. (2018). The Impact of Scripted Pain Education on Patient Satisfaction in Outpatient Abdominal Surgery Patients. *Journal of PeriAnesthesia Nursing*, 33(4), 453-460. <http://dx.doi.org/10.1016/j.jopan.2016.02.014>
- Breimaier, H.E., Heckermannn, B., Halfens, R.J.G., Lohrmann, C. (2015). The Consolidated framework or implementation Research (CFIR): a useful theoretical framework for guiding and evaluating a guideline implementation process in a hospital-based nursing practice. *BMC Nursing*, (14):43. DOI: 10.1186/s 12912-015-0088-4.
- Bryan, M, A., Evans, Y., Nirishita, C., Midamba, N., Moreno, M. (2019). Parental Perceptions of the Internet and Social Media as a Source of Paediatric Health Information. *Academic PeadiatricAssociation*, 20(1), 31-38. <https://doi.org/10.1016/j.acap.2019.09.009>
- Butz, S, F. (2019). Paediatric Ambulatory Anaesthesia Challenges. *Anesthesiology Clin*, 37, 289-300. <https://10.1016/j.anclin.2019.01.002>
- Cai, Y., Lopata, L., Roh, A., Huang, M., Monteleone, M, A., Wang, S., Sun, L. (2017). Factors influencing postoperative pain following discharge in paediatric ambulatory surgery patients. *Journal of Clinical Anesthesia*, 39,100-104. <http://dx.doi.org/10.1016/j.jclinane.2017.03.033>
- Callahan, J.L. (2014). Writing Literature Reviews: A Reprise and update. *Human Resource Development Review*, 13 (3), 271-275. DOI:1177/534484314536705

## References

- Capurso, M., Ragni, B. (2016). Psycho-educational preparation of children for anaesthesia: A review of intervention methods. *Patient Education and Counseling*, 2016, (99), 173-185. <http://dx.doi.org/10.1016/j.pec.2015.09.004>.
- Carlier, J., Robin, F., Pages, N., Quinard, A., Roy, M., Pauchard, J., Quintana, I., Nouette-Gaulain, K. (2021). Pain evaluation after day surgery using a mobile phone application. *Anesthesia Critical Care & Pain Medicine*, 40:1-7. [Online] Available from: <https://doi.org/10.1016/j.accpm.2021.100879>
- Carr, M, M., Schaefer, E, W., Schubart, J, R. (2019). Post-Tonsillectomy Outcomes in Children with and Without Narcotics Prescription. *Ear, Nose and Throat Journal*, (2019), 1-6. DOI:10.1177/0145561319859303.
- Chang, S., Hung, C., Hsu, Y, Liu, Y., Wang S. (2017). The Effectiveness of Health Education on Maternal Anxiety, Circumcision Knowledge, and Nursing Hours: A Quasi-Experimental Study. *The Journal of Nursing Research*, 25(4), 296-302. Doi:10.1097/jnr.0000000000000177
- Chartrand. J., Tourigne, J., Mac Cormick, J. (2016). The effect of an educational pre-operative DVD on parents' and children's outcomes after a same-day surgery: a randomized controlled trial. *Journal of Advanced Nursing*, 73(3), 599-611. doi:10.1111/jan.13161
- Children's Act 38 of 2005. Pretoria: Government Gazette.
- Chinnadurai, S. (2019). Paediatric Tonsillectomy: A Surgery in Search of an Outcome Measure. *Paediatrics*, 144(4). DOI:10.1542/peds.2019-2405.
- Cody, S. & Asher, A. (2014). Proposal 14: Smarter, Better, Faster. The potential for predictive analysis and rapid rapid-cycle evaluation to improve program development and outcomes. The Hamilton Project, 1-11.
- Cohan, D.C., Crabtree, B.F., Damschroder, L., Hamilton, A.B., Heuttin-Roberts, S., Leeman, J., Padgett, D.K., Palinkas, L., Rabin, B., Reisinger, H.S. (2018). Qualitative methods in implementation science. National Cancer Institute: Division of Cancer Control & Population Sciences, 15.
- Colon-Emeric, C., Toles, M., Cary, M.P., Bathelor-Murphy, M., Yap, T., Song, Y., Anderson, R.A. (2016). Sustaining complex interventions in long- term care: A Qualitative study of direct care staff and managers. *Implementation Science*, 11(94), 1-10. DOI10.1186/s13012-016-0454-y.

## References

- Creamer, E.G. (2018). An introduction to fully Integrated Mixed Methods research. SAGE: ISBN 798-1-4833-5093-6.
- Criss, C, N., Brown, J., Gish, J, S., Gadepalli, S, K., Hirschl, R, B. (2018). Clinic-day surgery for children; a patient and staff perspective. *Pediatric Surgery International*, 34(2018), 755-761. <https://doi.org/10.1007/s00383-018-4288-3>
- Curran, J., Cassidy, C., Chiasson, D., MacPhee, S., Bishop, A. (2017). Patient and caregiver expectations of emergency department care: A scoping literature review. *International Emergency Nursing*, 32 (2017), 62-69. <http://dx.doi.org/10.1016/j.ienj.2016.07.001>
- Dako-Gyeke, P., Asampong, E., Afari, E., Launois, P., Ackumey, M., Opoku-Mensah, K., Dery, S., Akweongo, P., Nonvignon, J., Moses, A. (2020). Capacity building for implementation research: a methodology for advancing health research and practice. *Health Research policy and systems*, (18):53,1-10. <https://doi.org/10.1186/s12961-020-00568-y>.
- Damschroder, L.J., Lowery, J.C. (2013). Evaluation of a large-scale weight management program using the Consolidated Framework for Implementation Research (CFIR). *Implementation Science*, 8(51):1-17. <https://doi.org/10.1186/1748-5908-8-51>.
- Davis, T., Meyer, A., Beste, J., Batish, S. (2018). Decreasing Low Acuity Paediatric Emergency Room Visits with Increased Access and Improved Parent Education. *JABFM*, 31(4), 550-557. Doi:10.3122/jabfm.2018.04.170474
- De Souza Neto, E, P., Martinez, J, L., Dekoven, K., Ruest, P., Girard, M. (2019). Predictors of Unanticipated Admission in Paediatric Patients after Ambulatory Surgery. *EC Anaesthesia*, 49, 71-80.
- Delaney, D., Bayley, E, W., Olszewsky, P., Gallagher, J. (2015). Parental Satisfaction with Paediatric Preoperative Assessment and Education in a Presurgical Care Centre. *Journal of PeriAnesthesia Nursing*, 30(4), 290-300. <http://dx.doi.org/10.1016/j.jopan.2014.04.004>.
- Doganer, Y.C., Rohrer, J.E., Aydogan, U., Thurston, M.J., Saglam. K. (2015). Tonsillectomy, adenoidectomy and adenotonsillectomy rates in school school-aged children: Relative contributions of socio-demographic and clinical features. *International Journal of Pediatric Otorhinolaryngology*, (79):969-974. <http://dx.doi.org/10.1016/j.ijporl.2015.03.005>.

## References

- Doruk, C., Envir, C., Caytemel, B., Azezli, E., Basaran, B. (2018). Readability, Understandability, and Quality of Online Education Materials for Vocal Fold Nodules. *Journal of Voice*, 34(2):15-20. <https://doi.org/10.1016/j.jvoice.2018.08.015>.
- Dwyer-Hemmings, L. (2018). A Wicked Operation? Tonsillectomy in Twentieth-Century Briton. *Cambridge Journals Medical History*, 62(2):217-241. DOI:10.1017/mdh.2018.5.
- a.Ead, H. (2016). Addressing the Barriers to Pain Management in Ambulatory Surgery. *Journal of Peri Anesthesia Nursing*, 31(1), 83-85. <http://dx.doi.org/10.1016/j.jopan.2015.12.11.006>
- b.Ead, H. (2016). Ambulatory surgery and Obstructive Sleep Apnoea - A Challenge and Opportunity for Patient Health Teaching. *Journal of Peri Anaesthesia Nursing*, 31(5), 434-439. <http://dx.doi.org/10.1016/j.jopan.2016.04.001>
- c.Ead, H.M. (2016). Ensuring a Smooth Discharge Home after Ambulatory Surgery. *Journal of Perianesthesia Nursing*, 31(3), 254-256. <http://dx.doi.org/10.1016/j.jopan.2016.02.005>
- Elsayed, M., Alhasani, W., Sudarshan, P., Leong, L., Hurley, M., Daniel, M. (2020). Adenotonsillectomy in children. *Paediatrics and Child Health*, 30(1),1-5. <https://doi.org/10.1016/j.pead.2019.10.001>
- Eltorai, A.F.M., Sharma, P., Wang, J., Daniels, A.H. (2014). Most American Academy of Orthopedic Surgeons' Online Patient Education Material Exceeds Average Patient Reading Level. *Clinical Orthopedics and Related Research*, 30(1), 1181-1186. DOI: 10.1007/s11999-014-4071-2.
- Ernst, G., Lange, K., Szczepanski, R., Staab, D., Ehrich, J., Zinken, K. (2016). How to train families to cope with Lifelong Health Problems? *European Paediatric Association*, 107(2016), 349-350. <http://dx.doi.org/10.1016/j.jpeds.2015.11.057>
- Faramarzi, M., Roosta, S., Faramarzi, A., Salehi, A., Matani, N. (2020). The Effectiveness of a preoperative multi-component non-pharmacologic preparation on post-tonsillectomy pain: A randomised controlled clinical trial. *International Journal of Paediatric Otorhinolaryngology*, 138(2020):1-6. <https://doi.org/10.1016/j.ijporl.2020.110359>.
- Forner, D., Ungar, G., Meier, J., Hong, P. (2020). Oral literacy in paediatric otolaryngology surgical consultations amongst parents with high levels of decisional conflict. *International Journal of Otorhinolaryngology*, 138(2020):1-5. <https://doi.org/10.1016/j.ijporl.2020.110269>.

## References

- Fustino, N, J., Moore, P., Viers, S., Cheyne, K. (2019). Improving Patient Experience of Care Providers in a Multispecialty Ambulatory Paediatrics Practice. *Clinical Paediatrics*, 58(1), 50-59. DOI:10.1177/0009922818806309.
- Gabriel, M.G., Wakefield, C.E., Vetsch, J., Karpelowsky, J.S., Darlington, A.E., Grant, D.M., Signorelli, C. (2018). The Psychosocial Experiences and Needs of Children Undergoing Surgery and Their Parents: A Systematic Review. *Journal of Paediatric Health Care*, 32(2):133-149. <http://dx.doi.org/10.1016/j.pedhc.2017.08.003>.
- Gauci, M.G. (2019). Interpretative phenomenological analysis: Its attraction and relevance to the medical field. *Early Human Development*, (133):52-56. <https://doi.org/10.1016/j.earhumandev.2019.03.012>.
- Gehrke, T., Scherzad, A., Hagen, R., Hackenberg, S. (2019). Risk factors for children requiring adenotonsillectomy and their impact on postoperative complications: a retrospective analysis of 2000 patients. *Anaesthesia*, 74 (2019), 1572-1579. Doi:10.1111/anae.14844.
- Glasgow, R.E., Gattaglia, C., McCreight, M., Ayele, R.A., Rabin, B.A. Making Implementation Science More Rapid: Use of the RE-AIM Framework for Mid-Course Adaptations Across Five Health Services Research Projects in the Veterans Health Administration. *Frontiers in Public Health*, 8(194):1-13. DOI:10.3389/fpubh.2020.00194.
- Goldsmith, L, J. (2021). Using Framework Analysis in Applied Qualitative Research. *The Qualitative Report*, 26(6),2061-2076. <https://doi.org/10.46743/2160-3715/2021.5011>.
- Gregory, A, T., Nenniss, A, R. (2018). An Introduction to Writing Narrative and Systematic Reviews-Tasks, Tips and Traps for Aspiring Authors. *Heart, Lung and Circulation*, 27(7), 893-898. <https://doi.org/10.1016/j.hlc.2018.03.027>.
- Greig, S, R. (2017). Current perspectives on the role of the tonsillectomy. *Journal of Paediatrics and Child Health*, 53(2017), 1065-1070. DOI:10.1111/jpc.13745.
- Hammersmith, A, M., Lin, I. (2019). Evaluative and Experienced Well-being of Caregivers of Parents and Caregivers of Children. *Journal of Gerontology: Social Sciences*, 74(2), 339-352. DOI: 10.1093/geronb/gbw065.
- Hansen, J., Shah, R, D., Benzon, H, A. (2016). Management of paediatric tonsillectomy pain: a review of the literature. *Ambulatory Anaesthesia*, 3(2016),23-26. <https://www.dovepress.com/by165.215.209.15>

## References

- Hinton-Bayre, A. D., Noonan, K., Ling, S., Vijayasekaran, S. (2017). Experience is more important than technology in paediatric post-tonsillectomy bleeding. *The Journal of Laryngology and Otology*, 131(S2), 35-40. Doi:10.1017/S0022215117000755.
- Hoke, N. (2018). Outpatient and Ambulatory Surgery Consumer Assessment of Healthcare Providers and Systems. *AORN Journal*, 107(2), 249-252. <https://doi.org/10.1002/aorn.12064>
- Holdsworth, L.M., Safaeinili, N., Winget, M., Lorenz, K.A., Lough, M., Asch, S., Malcolm, E. (2020). Adapting rapid assessment procedures for implementation research using a team team-based approach to analysis: a case example of patient quality and safety interventions in the ICU. *Implementation Science*, (15):12, 1-12. <https://doi.org/10.1186/s13012-020-0972-5>.
- Hopia, H., Latvala, E. & Liimatainen, L. (2016). Reviewing the methodology of an integrative review. *Scandinavian Journal of Caring Sciences*, 30 (4). 662-669. DOI:10.1111/scs.12327
- Hui, D., Sovik, S. (2020). Postoperative pain course after paediatric tonsillectomy: A prospective observational study comparing one behavioural and one numerical pain assessment tool. *International Journal of Pediatric Otorhinolaryngology*, 138(2020):1-6. <https://doi.org/10.1016/j.ijporl.2020.110395>.
- Jain, C., Levin, M., Hardy, H., Farrokhyar, F., Reid, D. (2020). The association between pre-tonsillectomy education and post-operative emergency department returns: A retrospective cohort pilot study. *International Journal of Otorhinolaryngology*, 138(2020):1-5. <https://doi.org/10.1016/j.ijporl.2020.110314>.
- John, A. M., John, E. S., Hansberry, D. R., Thomas, P. J., Guo, S. (2015). Analysis of online patient education materials in paediatric ophthalmology. *Journal of AAPOS*, 19(5), 430-434. <http://dx.doi.org/10.1016/j.jaapas.2015.07.286>
- Johnson, J.L., Adkins, D., Chauvin, S. (2020). Qualitative research in pharmacy education. *American Journal of Pharmaceutical Education*, 84(1):138-146.
- Johnson, K., Gustafson, D., Ewigman, B., Provost, M.S., Roper, R. (2015). Using Rapid-Cycle Research to Reach Goals: Awareness, Assessment, Adaptation, Acceleration. AHRQ Publication No. 15-0036. Rockville (MD): Agency for Healthcare Research and Quality.
- Johnson, R.F., Chang, A., Mitchell, R.B. (2018). Nationwide readmissions after tonsillectomy among pediatric patient – United States. *International Journal of Pediatric Otorhinolaryngology*, (107):10-13. <https://doi.org/10.1015/j.ijporl.2018.01.026>.

## References

- Jotic, A., Vujovic, K, S., Milovanovic, J., Vujovic, A., Radin, Z., Milic, N., Vuckovic, S., Medic, B., Prostran, M. (2019). Pain Management After Surgical Tonsillectomy: Is There a Favourable Analgesic. *Ear, Nose and Throat Journal*, 98(6), 356-361. DOI:10.1177/014556131986065.
- Kaleem, S.Z., Othman, S., McKinnon, B.J. (2020). The use of text-messaging for telecommunications with patients in otolaryngology: A narrative review. *Am J Otolaryngol*, 41(2020):1-5. <https://doi.org/10.1016/j.amjoto.2020.102509>.
- Kampouroglou, G., Velonaki, V, S., Pavlopoulou, I, D., Fildissis, G., Tsoumakas, K. (2019). Parental Health literacy in the Paediatric Surgical Setting. *Chirurgia*, 2019(114),326-330.<http://dx.doi.org/10.21614/chirurgia.114.3.326>.
- Kao, S, S., Peters, M, D, J., Dharmawardana, N., Stew, B., Ooi, E, H. (2017). Scoping Review of Paediatric Tonsillectomy Quality of Life Assessment Instruments. *Laryngoscope*,127(2017),2399-2406. DOI:10.1002/lary.26522.
- Kavanagh, F.G., James, D.L., Brinkman, D., Cornyn, S., Murphy, G., O- Neill, S., O'Shea, R., Affendi, A., Lang, B., O-Conner, A., Keogh, I., Lang, E., Russell, J., O'Brien, D., Sheahan, P., ICE Collaborative Group. (2021). Safety of elective pediatric surgery during the coronavirus disease 2019 pandemic. *International Journal of Otorhinolaryngology*, 15(2021):1-5. <https://doi.org/10.1016/j.ijporl.2021.110861>.
- Keith, R.E., Crosson, J.C., O'Malley, A.S., Crompton, D., Taylor, E.F. (2017). Using the Consolidated Framework for Implementation Research to produce actionable findings: a rapid-cycle evaluation approach to improving implementation. *Implementation Science*, (12):15. doi: 10.1186/s13012-017-0550-7.
- Ketefian, S. (2014). Ethical considerations in research: focus on vulnerable groups. *Invest Enferm*, 33(1):164-172. doi: 10.17533/udea.iee.v33n1a19
- Kirk, M.A., Kelly, C., Yankey, N., Birken, S.A., Abadie, B., Damschroder, L. (2016). A systematic review of the use of the consolidated framework for implementation research. *Implementation Science*, (11):72. DOI: 10.1186/S13012-016-0437-Z.
- Kong, D.K., Kong, A.M., Wasserman, I., Villavisanis, D.F., Hackett, A.M. (2020). Ambulatory tonsillectomy for children with severe obstructive sleep apnoea without risk factors. *Am J Otolaryngol*, 41(2020):1-6. <https://doi.org/10.1016/j.amjoto.2020.102467>.

## References

- Kumar, G., Howard, S.K., Kou, A., Kim, T.E., Butwick, A.J., Mariano, E.R. (2017). Availability and Readability of Online Patient Education Materials Regarding Regional Anesthesia Techniques for Perioperative Pain Management. *American Academy of Pain Medicine*, (18):2027-2032. DOI: 10.1093/pm/pnw179.
- Lawlor, C. M., Riley, C. A., Carter, J. M., Rodriguez, K. H. (2018). Association Between Age and Risk Factors for Complication After Tonsillectomy in Healthy Children. *JAMA Otolaryngol Head Neck Surg*, 144(5),399-405. Doi:10.1001/jamaoto.2017.3431.
- Lee, M. L., Rodgers, C., OH, A., Muckler, V. C. (2017). Reducing Surgery Cancellations at a Paediatric Ambulatory Surgery Centre. *AORN Journal*, 105(4),384-391. <http://dx.doi.org/10.1016/j.aorn.2017.01.011>
- Li, X., Qiao, X.F., Sun, L., Wang, G.P., Bai, Y.H. (2021). Application of situational adaption training combined with childlike nursing for children undergoing tonsillectomy or adenoidectomy. *International Journal of Otorhinolaryngology*,145(2021):1-4. <https://doi.org/10.1016/j.ijporl.2021.110707>.
- Liebner, L. T. (2015). I Can't Read That! Improving Perioperative Literacy for Ambulatory Surgical Patients. *AORN Journal*, 101(4), 416-427. <http://dx.doi.org/10.1016/j.aorn.2015.01.016>
- Lindquist, N.R., Feng, Z., Patro, A., Mukerji, S.S. (2019). Age-related causes of emergency department visit after pediatric adenotonsillectomy at a tertiary referral centre. *International Journal Pediatric Otorhinolaryngology*, 127(2019):1-5. <https://doi.org/10.1016/j.ijporl.2019.109668>.
- Links, A.R., Callon, W., Wasserman, C., Beach, M.C., Ryan, M.A., Lue, G.R., Tunkel, D., Boss, E.F. Treatment recommendations to parents during paediatric tonsillectomy consultations: A mixed-methods analysis of surgeon language. *Patient Education and Counselling*, 104(2021):1371-1379. <https://doi.org/10.1016/j.pec.2020.11.015>.
- Livingood, W.C., Bilello, L., Lukens-Bull, K., Smotherman, G., Choe, U. (2020). Implementation research as appliedscience: Bridging the research to practice gap. *The Circle of Research and Practice*, 21(1):49-57. DOI:10.1177/1524839919858082.
- Maier, H.R. (2013). What constitutes a good literature review and why does its quality matter? *Environmental Modelling & Software*, 43: 3-4. Doi: 10.1016/j.envsoft.2013.02.004

## References

- Marcus, C. (2014). Strategies for improving the quality of verbal patient and family education: a review of the literature and creation of the EDUCATE model. *Health Psychology and Behavioral Medicine*, 1(2):482-495. DOI: 10.1080/21642850.2014.900450.
- Maroda, A.J., Caca, K.K., McLevy-Bazzanella, J.D., Wood, J.W., Grissom, E.C., Sheyn, A.M. (2020). Perioperative Analgesia in Pediatric Patients Undergoing Otolaryngologic Surgery. *Otolaryngol Clin North AM*, 53(5):819-830. doi: 10.1016/j.otc.2020.05.01
- Martin, S, D., John, L, D. (2019). Framework to Explain the Progression of Pain in Obese or Overweight Children Undergoing Tonsillectomy. *Journal of Paraesthesia Nursing*, 34(6),1106-1119. Doi: 10.1016/j.jopan.2019.03.015
- McKoen, M., Kirsh, E., Kawai, K., Roberson, D., Watters, K. (2018). Risk factors for Multiple Haemorrhages Tonsil Surgery in Children. *The Laryngoscope*,129(2019), 2765-2770.DOI:10.1002/lary.27719.
- Mitchell, J, M. (2019). Quality Data Reporting by Ambulatory Surgery Centers. *De Paul Law Review*, 68(2), 291-308. <https://via.library.depaul.edu/law-review/vol68/iss2/7>
- Mitchell, R.B., Archer, S.M., Ishman, S.L., Rosenfeld, R.M., Coles, S., Finestone, S.A., Friedman, N.R., Giordano, T., Hildrew, D.M., Kim, T.W., Lloyd, R.M., Parikh, S.R., Shulman, S.T., Waler, D.L., Walsh, S.A., Nnacheta, L.C. (2019). Clinical Practice Guideline: Tonsillectomy in Children (Update). *Otolaryngology - Head and Neck Surgery*, 160(IS): S3. <https://doi.org10.1177/0194599818801757>.
- Molina, G., Neville, B, A., Lipsitz, S, R., Gibbons, L., Childers, A, K., Gawande, A, A., Berry, W, R., Haynes, A, B. (2016). Postoperative acute care use after freestanding ambulatory surgery. *Journal of surgical research*, 205(2016),331-340. <http://dx.doi.org/10.1016/j.jss.2016.06.084>
- Morad, A., Sathe, N, A., Francis, D, O., McPeeters, L., Chinnadurai, S. (2017). Tonsillectomy Versus Watchful Waiting for Recurrent Throat Infection: A Systematic Review. *Paediatrics*, 139(2),2,7,10. DOI:10.1542/peds.2016-3490.
- Morris, S., Hassin, E., Borschmann, M. (2017). Overnight in-hospital observation following tonsillectomy: retrospective study of post-operative intervention. *The Journal of Laryngology nad Otology*, 132(2018),46-52. doi:10.1017/S0022215117002171.

## References

- Motta, S., Testa, D., Ferrillo, B., Massimilla, E. A., Varriale, R., Barrella, T., Motta, G., Motta, G. (2017). Surgical techniques and post-tonsillectomy haemorrhage. *Curr Pediatr Res*, 21(40), 559-566. ISSN 0971-9032. [www.currentpediatrics.com](http://www.currentpediatrics.com)
- Mukhatiyar, P., Nandalike, K., Cohen, H. W., Sin, S., Gangar, M., Bent, J. P., Arens, R. (2016). Intracapsular and Extracapsular Tonsillectomy and Adenoidectomy in Paediatric Obstructive Sleep Apnoea. *JAMA Otolaryngol Head Neck Surg*, 142(1), 25-31. DOI:10.1001/jamaoto.2015.2603.
- Munnich, E., Parente, S. T. (2017). Returns to specialisation: Evidence from the outpatient surgery market. *Journal of Economics*, 57(2018), 147-167. <https://doi.org/10.1016/j.jhealeco.2017.11.004>
- Nemetchek, B., Khowaja, A., Kavuma, A., Kabajaasi, O., Owilli, A. O., Ansermino, J. M., Fowler-Kerry, S., Jacob, S., Kenya-Mugisha, N., Kabakyenga, J., Wiens, M. O. (2019). Exploring healthcare provider's perspectives of the pediatric discharge process in Uganda: A Qualitative exploratory study. *BMJ Open*, (9): e029526. DOI: 10.1136/bmjopen-2019-029526.
- Nilsson, U., Jaensson, M., Dahlberg, K., Hugelius. (2019). Postoperative Recovery After General and Regional Anaesthesia in Patients Undergoing Day Surgery: A Mixed Method Study. *Journal of PeriAnesthesia nursing*, 34(3), 517-528. <https://doi.org/10.1016/j.jopan.2018.08.003>.
- Nordin, A. B., Shah, S. R., Kenney, B. D. (2018). Ambulatory paediatric surgery. *Seminars in Paediatric Surgery*, 27(2018), 75-78. <https://doi.org/10.1053/j.sempedsurg.2018.02.003>
- Norton, J. L., Raciti, M. M. (2017). Co-creating healthful eating behaviors with very young children: The impact of information overload on primary caregivers. *Health Marketing Quarterly*, 34(1), 18-34. <http://dx.doi.org/10.1080/07359683.2016.1238664>
- O'Connell Ferster, A. P., Hu, A. (2017). Evaluating the quality and readability of Internet information sources regarding the treatment of swallowing disorders. *ENT- Ear, Nose & Throat Journal*, 96 (3), 128-138. [www.entjournal.com](http://www.entjournal.com)
- Obianuju, O., Gerlach, R. M., Sweiter, B. (2019). Preoperative Evaluation for Ambulatory Anaesthesia What, When and How. *Anesthesiology Clin*, 37(2019), 195-213. <https://doi.org/10.1016/j.anclin.2019.01.014>

## References

- Ogilvie, S., Hopgood, K., Higginson, I., Ives, A., Smith, J, E. (2016). Why do parents use the emergency department for minor injury and illness? A cross- sectional questionnaire. *Journal of the Royal Society of Medicine Open*, 0(0),1-10. DOI:10.1177/2054270415623695.
- Olson, J, K., Darning, L, A., King, D, R., Rager, T, M., Gartner, S., Huibregtse, N., Moss, R, L., Besner, G, E. (2017). Single visit surgery for paediatric ambulatory surgical procedures: a satisfaction and cost analysis. *Journal of Paediatric Surgery*, 53(2018), 81-85. <https://doi.org/10.1016/j.jpedsurg.2017.10.021>
- Ordemann, A, G., Hartzog, A, J., Seals, S., Spankovich, C., Stringer, S, P. (2018). Is weight a predictive risk factor of postoperative tonsillectomy bleed. *Laryngoscope Investigative Otolaryngology*, 3(2018),238-243. DOI:10.1002/lio2.155.
- Palinkas, L.A., Horwitz, S.M., Green, C.A., Wisdom J.P., Duan, N., Hoagwood, K. (2015). Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. *HHS Public Access*, 42(5):533-544. DOI:10.1007/s10488-013-0528-y.
- Panella, J, J. (2016). Preoperative Care of Children: Strategies from a Child Life Perspective. *AORN Journal*, 2016 (104), 12-19. <http://dx.doi.org/10.1016/j.aorn.2016.05.004>.
- Parah, S.R., Khan, M.M. (2019). Is Day Care Tonsillectomy a Safe Procedure? Association of Otolaryngologists of India. <https://doi.org/10.1007/s12070-019-01587-0>.
- Parikh, S, R., Archer, S., Ishman, S, L., Mitchell, R, B. (2019). Why is There No Statement Regarding Partial Intracapsular Tonsillectomy (Tonsillectomy) in the New Guidelines? *Otolaryngology- Head and Neck Surgery*, 160(2), 213-214. DOI:10.1177/0194599818810507.
- Pauley, T., Chang, B, W., Wojtak, A., Seddon, G., Hirdes, J. (2018). Predictors of Caregiver Distress in the community Setting Using the Home Care Version of the Resident Assessment Instrument. *Professional Case Management*, 23(2), 60-69. DOI: 10.1097/NCM.0000000000000245.
- Pehora, C., Gajaria, N., Stoute, M., Fracassa, S., O'Sullivan, R, S., Matava, C, T. (2015). Are Parents Getting It Right? a Survey of Parents' Internet Use for Children's Health Care Information. *Interact J Med Res*, 4(2): e12. DOI: 10.2196/ijmr.3790.
- Pereira, L., Figueiredo-Braga, M., Carvalho, I, P. (2015). Preoperative anxiety in ambulatory surgery: The impact of an empathic patient-centered approach on psychological and clinical outcomes. *Patient Education and Counselling*, 99 (2016), 733-738. <http://dx.doi.org/10.1016/j.pec.2015.11.016>

## References

- Perrenoud, B., Velonaki, V., Bodenmann, P., Ramelet, A. (2015). The effectiveness of health literacy interventions on the informed consent process of health care users: a systematic review protocol. *JBI Database of Systematic Reviews & Implementation Reports*, 13(10). 82-94. Doi:10.11124/jbisir-2015-2304
- Pfadenhauer, L.M., Gerhardus, A., Mozygemba, K., Bakke Lysdahl, K., Booth, A., Hofmann, B., Wahlster, P., Polus, S., Burns, J., Brereton, L., Rehfuss, E. (2017). Making sense of complexity in context and implementation: The Context and Implementation of Complex interventions (CICI) framework. *Implementation Science*, (12):21. DOI: 10.1186/s13012-017-0552-5.
- Pickner, W, J., Ziegler, K, M., Hanson, J, D., Payne, N, R., Zook, H, G., Kharbanda, A, B., Weber, T, L., Russo, J, N., Puumala, S, F. (2018). Community Perspectives on Emergency Department Use and Care for American Indian Children. *J. Racial and Ethnic Health Disparities*, 2018 (5), 393-946. <https://doi.org/10.1007/s40615-017-0442-1>
- Pina, P.S., de Castro Correa, C., de Carvalho, L.R., Weber, S.A.T. (2021). Comprehensiveness, readability, reliability of Brazilian websites available for lay people's guidance on adenotonsillectomy. *Brazilian Journal of Otorhinolaryngology*, 87(2021):66-73. <https://doi.org/10.1016/j.bjorl.2019.06.012>.
- Pivot, D., Hoch, G., Astruc, K., Lepelletier, D., Lefebvre, A., Lucet, J., Beaussier, M., Philippe, H., Vons, C., Triboulet, J., Grandbastien, B., Aho Glele, L, S. (2019). A systematis review of surgical site infections following day surgery: a frequentist and Bayesian meta-analysis of prevalence. *Journal of hospital infection*, 101(2019),196-209. <https://doi.org/10.1016/j.jhin.2018.07.035>.
- Polit, D.F. & Beck, C.T. (2017). *Nursing research. Generating and Assessing Evidence for Nursing Practice* (10th Ed.). Wolters Kluwer.
- Pueyo-Garrigues, M., Whitehead, D., Pardavila-Belio, M, I., Canga-Armayor, A., Pueyo-Garrigues, S., Canga-Armayor, N. (2019). Health Education: A Rogerian Analysis. *International Journal of nursing Studies*, 94(2019), 131-138. <https://doi.org/10.1016/j.ijnurstu.2019.03.005>
- Pulgaron, E, R., Marchante, A, N., Agosto, Y., Lebron, C, N., Delamater, A, M. (2016). Grandparent Involvement and Children's Health Outcomes: The Current State of The Literature. *Families, Systems & Health*, 34(3), 260-269. <http://dx.doi.org/10.1037/sh0000212>.
- Raj, S., Sharma, V, L., Singh, A, J., Goel, G. (2016). *Evaluation of Quality and Readability of Health Information Websites Identified through India's Major Search Engines*. Hindawi Publishing

## References

Corporation Advances in Preventative Medicine, 2016, 1-6.  
<http://dx.doi.org/10.1155/2016/4815285>

Real, F. J., Deblasio, D., Rounce, C., Henize, A. W., Beck, A. F., Klein, M. D. (2018). Opportunities for and barriers to Using Smartphones for Health Education Among Families at an Urban Primary Care Clinic. *Clinical Paediatrics*, 57(11), 1281-1285. DOI:10.1177/00099228/8772157

Richards, J., Lang, M., Andresen, E., O'Leary, K., Jauncey-Cooke, J., Anderson, N., Burns, H., Slee, N., Ullman, A.J., Cooke, M. (2019). Impact of paediatric tonsillectomy perioperative management on pain, nausea and recovery: A prospective cohort study. *Journal of Paediatrics and Child Health*, 56(2020):114-122. <https://doi.org/10.1111/jpc.14505>.

Rohlfing, M. L., Wistermayer, P. R., Bungo, T. M., Mims, W., Kirse, D. J. (2016). Investigation of Postoperative Oral Fluid Intake as a Predictor of Postoperative Emergency Department Visits After Paediatric Tonsillectomy. *JAMA Otolaryngol Head Neck Surg*, 142(4), 357-363. DOI:10.1001/jamaoto.2015.3711.

Rodgers, L. H., Hernando, S. P., Fernandez, S. N., Sanchez, A., Martoz, C., Morenzo, M., Grandes, G. (2021). Barriers and facilitators in the implementation of an evidence-based health promotion intervention in a primary care setting: A Qualitative study. *Journal of health organisation and management*. 35(9), 349-367. DOI:10.1108/JHOM-12-2020-0612

Arifin, S. R. M. (2018). Ethical considerations in Qualitative Study. *International Journal of Care Scholars*, 1(2):30-32. DOI: <https://doi.org/10.31436/ijcs.vli2.82>

Ryan, M.A., Boss, E.F. (2019). Patient engagement in otolaryngology. *Otolaryngol Clin N Am*, 52(2019):23–33. <https://doi.org/10.1016/j.otc.2018.08.003>

Saldana, L. (2014). The stages of implementation completion for evidence-based practice: a protocol for a mixed mixed-method study. *Implementation Science*, 9(43):1-11. [Online] <http://www.implementationscience.com/content/9/1/43>.

Sauers-Ford, H. S., Simmons, J. M., Shah, S. S. Strategies to Engage Stakeholders in Research to Improve Acute Care Delivery. *Journal of Medicine*, 11 (2) ,123-125. DOI:10.1002/jhm.2492.

Schneeweiss, S., Shrank, W., Ruhl, M., Maclure, M. (2015). Decision-making aligned with Rapid-Cycle Evaluation in healthcare. *International Journal of Technology Assessment in Healthcare*. 31(4):214-222. DOI:10.1017/s0766467315000410.

## References

- Schug, S. A., Chandrasena, C. (2015). Postoperative pain management following ambulatory anaesthesia: challenges and solutions. *Ambulatory Anesthesia*, 2(2015), 11-20. <http://dx.doi.org/10.2147/AA.5S4869>
- Shafir, A., Garrigues, S. K., Schenker, Y., Leffe, B., Neil, J., Ritchie, C. (2016). Homebound Patient and Caregiver Perceptions of Quality of Care in Home- Based Primary Care: A Qualitative Study. *Jags*, 64 (2016), 1622-1627. DOI:10. 1111/jgs.14244.
- Shrank, W. (2013). The Center for Medicine Innovation's blueprint for rapid-cycle evaluation of new care and payment models. *Health Affairs*, 32(4):807-812. DOI:10.1377/hlthaff.2013.0216.
- Sibiya, M.N. (2018). *Effective Communication in Nursing*. IntechOpen. [Online] Available from: <http://dx.doi.org/10.5772/intechopen.74995>.
- Singletary, D. (2016). Evaluation of the safety and efficacy of same day discharge following outpatient surgery in a US hospital. *Nursingmanagement.co.uk*, 23(4), 34-38. doi:10. 7748.nm. 2016.el410
- Skillman, M., Cross-Barnet, C., Singer, R., F., Rotondo, C.R., Moiduddin, A. (2019). A framework for rigorous qualitative research as a component of mixed method rapid-cycle evaluation. *Qualitative Health Research*, 29(2):279-289. DOI:10.1177/1049732318795675.
- Smith, B. B., Smith, M. M., Hyder, J. A., Mauermann, W. J., Warner, M. E., Licatino, L. K., Barbara, D. W. (2018). Same-Day Cancellation in Ambulatory Surgery. *J Ambulatory Care Manage*, 41(2), 118-127. DOI:10.1097/JAC.0000000000000226
- Soaper, A.L., Richardson, Z.L., Chen, J.L., Gerber, M.E. (2020). Paediatric tonsillectomy: A short-term and long-term comparison of Intracapsular techniques. *International Journal Pediatric Otorhinolaryngology*, 133(2020):1-6. <https://doi.org/10.1016/j.ijporl.2020.109970>.
- Spector, Z., Saint-Victor, S., Kay, D. J., Mandell, D. L. (2016). *International Journal of Pediatric Otorhinolaryngology*. Risk factors for pediatric post-tonsillectomy hemorrhage, 84(2016):151-155. <http://dx.doi.org/10.1016/j.ijporl.2016.03.005>
- Stjernberg, M. I., Rustoen, T., Raeder, J. (2018). Few patients receiving multimodal antiemetic treatment experience postoperative nausea after ambulatory surgery. *Sykepleien Forskning*, 13(2018), 1-19. <https://doi.org/10.4220/Sykepleienf.2018.71442>

## References

- Subramony, A., Kocalas, I., Srivastana, R. (2019). Pediatric Hospitalists Improving Patient Care Through Quality Improvement. *Pediatr Clin N Am*, 66(2019):697-712. [Online] Available from: <https://doi.org/10.1016/j.pcl.2019.03.009>.
- Sumo, J., Wilbur, J., Julion, W., Buchholz, S., Schoeny, M. (2018). Intervention to Improve Grandparent Caregivers Mental and Physical Health: An Integrative Review. *Western Journal of Nursing Research*, 40(8), 1236-1264. DOI: 10.1177/01939459/7705376.
- Sun Moon, T., Joshi, G, P. (2016). Are morbidly obese patients suitable for ambulatory surgery? *Curr Opin Anesthesiol* ,29(2016), 141-145. DOI:10.00000000000000266
- Teruil, J., Stafford, G., Brown, J., Jones, B., Hopkins, M., Johnson, A., Edenfield, J., Guo, A., Schammel, C., Renfro, S., Nisonson, A. (2021). Reduction of perioperative anxiety using a hand-held video game device. *Perioperative Care and Operating Room Management*, 24(2021):1-7. <https://doi.org/10.1016/j.pcorm.2021.100203>.
- Theissen, A., Slim, K., Deleuze, A., Beaussier, M. (2019). Risk management in outpatient surgery. *Journal of Visceral Surgery*, 156 (2019), 41-49. <https://doi.org/10.1016/j.jviscsurg.2019.04.005>.
- Tonsaker, T., Law, S., Ormel, I., Nease, C., Bartlett. (2017). Engaging caregivers: exploring perspectives on web-based health information. *Family practice*, 34(4),479-484. Doi:10.1093/fampra/cmw084.
- Torraco, R, J. (2016). Writing Integrative Literature Reviews: Using the Past and Present to Explore the Future. *Human Resource Development Review*, 15(4), 404-428. <https://doi:10.1177/1534484316671606>
- Torretta, S., Rosazza, C., Pace, M, E., Lofrida, E., Paola, M. (2017). Impact of adenotonsillectomy on pediatric quality of life: review of the literature. *Italian Journal of Paediatrics* (2017), 43:107. DOI10.1186/s13052-017-0424-2.
- Tracy, S.J. (2010). Qualitative quality: Eight 'big tent' criteria for excellent qualitative research. *Qualitative Inquiry*, 16(10):837-851. DOI:10.1177/1077/08909352248.
- Tran, A.H.L., Horne, R.S.C., Rimmer, J., Nixon, G.M. (2021). Adenotonsillectomy for paediatric sleep disorder breathing in Australia and New Zealand. *Sleep Medicine*, 78(2021):101-107. [Online] Available from: <https://doi.org/10.1016/j.sleep.2020.12.010>.

## References

- Tumin, D., Raman, V. T., Tobias, J. D. (2017). Insurance Coverage and Acute Care Revisits After Paediatric Ambulatory Tonsillectomy. *Clinical Paediatrics*, 57(7), 812-826. DOI:10.1177/0009922817733695.
- Turkoglu, S., Somuk, B. T., Sapmaz, E., Bilgic, A. (2019). Effect of adenotonsillectomy on sleep problems, attention deficit hyperactivity disorder symptoms, and quality of life of children with adenotonsillar hypertrophy and sleep-disordered breathing. *The International Journal of Psychiatry in Medicine*, 54(3), 231-241. DOI:10.1177/0091217419829988.
- Varallyay, N.L., Langlois, E.V., Tran, N., Elias, V., Raveiz, L. (2020). Health system decision-makers at the helm of implementation research: development of a framework to evaluate the processes and effectiveness of embedded approaches. *Health Research Policy and Systems*, 18(64):1-12. <https://doi.org/10.1186/s12961-020-00579-9>.
- Vasileiou, K., Barnett, J., Thorpe, S., Young, T. (2018). Characterising and justifying sample size sufficiency in interview-based studies: systematic analysis of qualitative health research over a 15-year period. *BMC Medical Research Methodology*, 18(148):1-18. <https://doi.org/10.1186/s12874-018-0594-7>.
- Vepraskas, S. H., O' Day, P., Zhang, L., Simpson, P., Gage, S. (2018). Parents Support Teach-back, Demonstration and a Post Discharge Phone Call to Augment Discharge Education. *Hospital Paediatrics*, 8(12). 778-784. DOI: <https://doi.org/10.1542/hpeds.2018-0119>.
- Verstraete, J., Ramma, L., Jelsma, J. (2018). Influence of the child's perceived general health on primary caregiver's health status. *Health and Quality of Life Outcomes*, 16(8), 1-11. DOI: 10.1186/s12955-018-0840-z.
- Vishnevetsky, J., Burrows Walters, C., Tan, K.S. (2018). Interrater reliability of the Patient Education Materials Assessment Tool (PEMAT). *Patient Education and Counselling*, (101):490-496. <http://dx.doi.org/10.1016/j.pec.2017.09.003>.
- Wadhera, V., Hwang, S., O'Connor, L., Soma, M. (2018). Health information: sourcing patterns and quality improvement prior to surgery. *Australian Journal of Otolaryngology*, 1(4), 1-8. <http://dx.doi.org/10.21037/ajo.2018.01.04>
- Wall, J. J., Tay, K. (2018). Postoperative Tonsillectomy Haemorrhage. *Emerg Med Clin N Am*, 36(2018), 415-426. <https://doi.org/10.1016/j.emc.2017.12.009>

## References

- Walter- Larsen, S., Aagaard, G. B., Molin Friis, S., Petersen, T., Moller-Sonnergaard, J., Romsing, J. (2016). Structured intervention for management of pain following day surgery in children. *Paediatric Anaesthesia*, 26(2016), 15888)81-157. Doi:10.1111/pan.12811
- Waniga, H.M., Gerke, T., Shoemaker, A., Bourgoine, D., Earanond, P. (2016). The Impact of Revised Discharge Instructions on Patient Satisfaction. *Journal of Experience*, 3(3):64-68. DOI: 10.1177/2374373516666972.
- Ward, T., Goldingay, S., Parson, J. (2017). Evaluating a supported nature play programme, parents perspectives. *Early Child Development and Care*, DOI:10.1080/03004430.2017.1317764.
- Waters, K, A., Chawla, J., Harris, M, A., Heussler, H., Black, R, J., Cheng, A, T., Lushington, K. (2020). Cognition After Early Tonsillectomy for Mild OSA. *Paediatrics*, 145(2), 1-10.DOI: 10.1542/peds.2019-1450.
- Wingler, D., Liston, D., Joseph, A., Wang, Y., Feng, H., Martin, L. (2020). Perioperative anxiety in paediatric surgery: Induction room vs. operating room. *Paediatric Analgesia*, 2021(31):465-473. [Online] Available from: <http://doi.org/10.1111/pan.14098>.
- Wong, H.T., Hui, T.S., Wee Chong, A. (2016). Is Daycare Tonsillectomy Safe. *Iranian Journal of Otorhinolaryngology*, 28(86):183-188. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4930840>.
- Wong, K., Levi, J, R. (2017). Partial Tonsillectomy: Content and Readability of Online Health Information. *Annals of Otology, Rhinology and Laryngology*, 126(3), 192-198. DOI:10.1177/0003489416681583.
- Wozney, L., Chorney, J., Huguet, A., Soo Song, J., Boss, E.F., Hong, P. (2017). Online Tonsillectomy Resources: Are Parents getting Consistent and Readable Recommendations? *Otolaryngology Head and Neck Surgery*, 156(5):844-852. DOI: 0.1177/0194599817692529.
- Xin, Y., Li, X., Cheng, J., Yi, C., Mao, H. (2018). Efficacy of Telephone Follow Up in Children Tonsillectomy with Day Surgery. *The Indian Journal of Paediatrics*, 86(3),263-266. <https://doi.org/10.1007/S12098-018-2813-y>.
- Yan, Y., Song, Y., Liu, Y., Su, J., Cui, L., Wang, J., Geng, J., Liu, X., Shi, Y., Quan, S., Hang, A., Zuo, L, (2019). Short-and long-term impacts of adenoidectomy with/without tonsillectomy on

## References

immune function of young children younger than three years of age. *Medicine*, 98(19), 1-5.  
<http://dx.doi.org/10.1097/MD.00000000000015530>.

Yang, J.Y., Lee, H., Zhang, Y., Lee, J.U., Park, J.H., Yun, E.K. (2016). The Effects of Tonsillectomy Education Using Smartphone Text Message for Mothers and Children Undergoing Tonsillectomy: A Randomized Control Trial. *Telemedicine and e-Health*, 22(11):  
<https://doi.org/10.1089/tmj.2016.0019>

Zorn, T. & Campbell, N. (2006). Improving the writing of literature reviews through a literature integration exercise. *Business Communications Quarterly*, 69(2): 172-183.  
<https://doi.org/10.1177/1080569906287960>

# **ADDENDUM A**

## **PARTICIPANT INFORMATION LEAFLET FOR PARENTS/CAREGIVERS**



## **ADDENDUM A – PARTICIPANT INFORMATION LEAFLET FOR PARENTS/LEGAL GUARDIANS**

**ICD 5**

### **PARTICIPANT'S INFORMATION & INFORMED CONSENT DOCUMENT FOR AN INDIVIDUAL SEMI-STRUCTURED INTERVIEW RESEARCH STUDY**

**Study title: A RAPID-CYCLE EVALUATION AND ADJUSTMENT OF PAEDIATRIC TONSILLECTOMY PATIENT EDUCATION: APPLYING THE CONSOLIDATED FRAMEWORK FOR IMPLEMENTATION RESEARCH**

**Principal Investigator:** C Duvenage  
**Supervisor:** Prof NC van Wyk  
**Institution:** University of Pretoria Department of Health Sciences

#### **DAYTIME AND AFTER-HOURS TELEPHONE NUMBER(S):**

Daytime numbers: 0828172187

After hours number: 0828172187

#### **DATE AND TIME OF FIRST INFORMED CONSENT DISCUSSION:**

|             |              |             |             |
|-------------|--------------|-------------|-------------|
|             |              |             | :           |
| <b>Date</b> | <b>Month</b> | <b>Year</b> | <b>Time</b> |

**Dear Prospective Participant**

#### **1) INTRODUCTION**

You are invited to volunteer for a research study. I am doing this research for the purposes of a master's degree at the University of Pretoria. This document gives information about the study to help you decide if you would like to participate. Before you agree to take part in this study, you should fully understand what is involved. If you have any questions, which are not fully explained in this document, do not hesitate to ask the investigator. You should not agree to take part unless you are completely happy about what we will be discussing during the interview.

*Christelle Duvenage*

Tonsillectomies are one of the most frequently performed surgical procedures on paediatric patients. The procedure is performed as day surgery and patients are discharged after four to six hours of observation for complications. Parents and other caregivers are responsible for home care. They require extensive education to guide them on how to prevent and identify complications. Health education that is provided to parents should be accurate, accessible and easy to implement. Patient education material needs to be continuously evaluated to ensure that people find the content easy to read and understand.

## **2) THE NATURE AND PURPOSE OF THIS STUDY**

The aim of this study is to evaluate and adjust the paediatric tonsillectomy patient education in a designated private day hospital according to the contextual and interventional facilitators and barriers of the Consolidated Framework for Implementation research. By doing so I wish to learn more about the current health education that is available for pediatric tonsillectomy patients at the designated day hospital and improve on an already informative educational guide. You will be interviewed by the researcher in a place that is private and easy for you to reach.

## **3) EXPLANATION OF PROCEDURES AND WHAT WILL BE EXPECTED FROM THE PARTICIPANTS**

If you agree to participate, you will be asked to participate in an individual interview which will take about 30 to 60 minutes. The individual interview will be a one-on-one meeting between the two of us. I will ask you several questions about the research topic. This study involves answering some questions such as how you experience the current pediatric tonsillectomy patient educational guideline and what improvements can be implemented to the guideline.

With your permission, the interview will be recorded on a recording device to ensure that no information is missed.

## **4) RISKS AND DISCOMFORTS INVOLVED?**

We do not think that taking part in the study will cause any physical or emotional discomfort or risk. The only possible risk and discomfort involved are that you might feel uncomfortable with the current paediatric tonsillectomy health education that is under review. The researcher ensures that the current guideline is under no circumstances inaccurate.

**5) POSSIBLE BENEFITS OF THE STUDY**

You will not benefit directly by being part of this study. But your participation is important for us to better understand the needs of the participants involved with pediatric tonsillectomy patient education. The information you give may help the researcher improve on the provision of future health education.

**6) COMPENSATION**

You will not be paid to take part in the study. There are no costs involved for you to be part of the study.

**7) VOLUNTARY PARTICIPATION**

The decision to take part in the study is yours and yours alone. You do not have to take part if you do not want to. You can also stop at any time during the interview without giving a reason. If you refuse to take part in the study, this will not affect you in any way. You will still receive standard care and treatment for your illness.

**8) ETHICAL APPROVAL**

This study was submitted to the Research Ethics Committee of the Faculty of Health Sciences at the University of Pretoria, Medical Campus, Tswelopele Building, Level 4-59, telephone numbers 012 356 3084 / 012 356 3085 and written approval has been given by that committee. The study will follow the Declaration of Helsinki (last update: October 2013), which guides doctors on how to do research on people. The researcher can give you a copy of the Declaration if you wish to read it.

**9) INFORMATION ON WHO TO CONTACT**

If you have any questions about this study, you should contact:

Mrs. Christelle Duvenage at 0828172187. Alternatively, you may contact her supervisor Prof NC van Wyk at 0827761649.

**10) CONFIDENTIALITY**

We will not record your name anywhere and no one will be able to connect you to the answers you give. Your answers will be linked to a fictitious code number or a pseudonym (another name) and we will refer to you in this way in the data, any publication, report or other research output.

## Addenda

All records from this study will be regarded as confidential. Results will be published in medical journals or presented at conferences in such a way that it will not be possible for people to know that you were part of the study.

The records from your participation may be reviewed by people responsible for making sure that research is done properly, including members of the Research Ethics Committee. All of these people are required to keep your identity confidential. Otherwise, records that identify you will be available only to people working on the study, unless you give permission for other people to see the records. All hard copy information will be kept in a locked facility at the University of Pretoria, and only the research team will have access to this information.

### 11) CONSENT TO PARTICIPATE IN THIS STUDY

- I confirm that the person requesting my consent to take part in this study has told me about the nature and process, any risks or discomforts, and the benefits of the study.
- I have also received, read and understood the above-written information about the study.
- I have had adequate time to ask questions and I have no objections to participating in this study.
- I am aware that the information obtained in the study, including personal details, will be anonymously processed and presented in the reporting of results.
- I understand that I will not be penalized in any way should I wish to stop taking part in the study and my withdrawal will not affect my treatment and care.
- I am participating willingly.
- I have received a signed copy of this informed consent agreement.

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 Participant's name (Please print)

---

 Date

---

 Participant's signature

---

 Date

---

 Researcher's name (Please print)

---

 Date

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*Christelle Duvenage*

Addenda

Researcher's signature

Date

I understand that the interview will be audio-taped. I give consent that it may be audio-taped.

YES / NO

# **ADDENDUM B**

## **PARTICIPANT INFORMATION LEAFLET FOR NURSES**



**ADDENDUM B – PARTICIPANT INFORMATION LEAFLET FOR NURSES****ICD 5****PARTICIPANT'S INFORMATION & INFORMED CONSENT DOCUMENT FOR AN  
INDIVIDUAL SEMI-STRUCTURED INTERVIEW RESEARCH STUDY****Study title: A RAPID-CYCLE EVALUATION AND ADJUSTMENT OF PAEDIATRIC  
TONSILLECTOMY PATIENT EDUCATION: APPLYING THE CONSOLIDATED  
FRAMEWORK FOR IMPLEMENTATION RESEARCH**

**Principal Investigator:** C Duvenage  
**Supervisor:** Prof NC van Wyk  
**Institution:** University of Pretoria Department of Health Sciences

**DAYTIME AND AFTER-HOURS TELEPHONE NUMBER(S):**

Daytime numbers: 0828172187

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**DATE AND TIME OF FIRST INFORMED CONSENT DISCUSSION:**

|             |              |             |
|-------------|--------------|-------------|
|             |              |             |
| <b>Date</b> | <b>Month</b> | <b>Year</b> |

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| <b>Time</b> |

**Dear Prospective Participant****1) INTRODUCTION**

You are invited to volunteer for a research study. I am doing this research for the purposes of a master's degree at the University of Pretoria. This document gives information about the study to help you decide if you would like to participate. Before you agree to take part in this study, you should fully understand what is involved. If you have any questions, which are not fully explained in this document, do not hesitate to ask the investigator. You should not agree to take part unless you are completely happy about what we will be discussing during the interview.

*Christelle Duvenage*

Tonsillectomies are one of the most frequently performed surgical procedures on paediatric patients. The procedure is performed as day surgery and patients are discharged after four to six hours of observation for complications. Parents and other caregivers are responsible for home care. They require extensive education to guide them on how to prevent and identify complications. Health education that is provided to parents should be accurate, accessible and easy to implement. Patient education material needs to be continuously evaluated to ensure that people find the content easy to read and understand.

## **2) THE NATURE AND PURPOSE OF THIS STUDY**

The aim of this study is to evaluate and adjust the paediatric tonsillectomy patient education in a designated private day hospital according to the contextual and interventional facilitators and barriers of the Consolidated Framework for Implementation research. By doing so I wish to learn more about the current health education that is available for pediatric tonsillectomy patients at the designated day hospital and improve on an already informative educational guide. The process of providing health education will be observed and you will be interviewed by the researcher in a place that is private and within a timeframe that is accommodating to you.

## **3) EXPLANATION OF PROCEDURES AND WHAT WILL BE EXPECTED FROM THE PARTICIPANTS**

If you agree to participate, the researcher will observe you providing health education towards parents and caregivers. You will be asked to participate in an individual interview which will take about 30 to 60 minutes. The individual interview will be a one-on-one meeting between the two of us. I will ask you several questions about the research topic. This study involves answering some questions such as how you experience the current pediatric tonsillectomy patient educational guideline and what improvements can be implemented to the guideline.

With your permission, the interview will be recorded on a recording device to ensure that no information is missed.

## **4) RISKS AND DISCOMFORTS INVOLVED?**

We do not think that taking part in the study will cause any physical or emotional discomfort or risk. The only possible risk and discomfort involved are that you might feel uncomfortable with providing

health education to parents and caregivers while being observed. The researcher ensures staff that the purpose of the study is to improve the relevance of the current health educational guideline.

#### **5) POSSIBLE BENEFITS OF THE STUDY**

You will not benefit directly by being part of this study. But your participation is important for us to better understand the needs of the participants involved with pediatric tonsillectomy patient education. The information you give may help the researcher improve on the provision of future health education.

#### **6) COMPENSATION**

You will not be paid to take part in the study. There are no costs involved for you to be part of the study.

#### **7) VOLUNTARY PARTICIPATION**

The decision to take part in the study is yours and yours alone. You do not have to take part if you do not want to. You can also stop at any time during the interview without giving a reason. If you refuse to take part in the study, this will not affect you in any way.

#### **8) ETHICAL APPROVAL**

This study was submitted to the Research Ethics Committee of the Faculty of Health Sciences at the University of Pretoria, Medical Campus, Tswelopele Building, Level 4-59, telephone numbers 012 356 3084 / 012 356 3085 and written approval has been given by that committee. The study will follow the Declaration of Helsinki (last update: October 2013), which guides doctors on how to do research on people. The researcher can give you a copy of the Declaration if you wish to read it.

#### **9) INFORMATION ON WHO TO CONTACT**

If you have any questions about this study, you should contact:

Mrs. Christelle Duvenage at 0828172187. Alternatively, you may contact her supervisor Prof NC van Wyk at 0827761649.

## 10) CONFIDENTIALITY

We will not record your name anywhere and no one will be able to connect you to the answers you give. Your answers will be linked to a fictitious code number or a pseudonym (another name) and we will refer to you in this way in the data, any publication, report or other research output.

All records from this study will be regarded as confidential. Results will be published in medical journals or presented at conferences in such a way that it will not be possible for people to know that you were part of the study.

The records from your participation may be reviewed by people responsible for making sure that research is done properly, including members of the Research Ethics Committee. All of these people are required to keep your identity confidential. Otherwise, records that identify you will be available only to people working on the study, unless you give permission for other people to see the records. All hard copy information will be kept in a locked facility at the University of Pretoria, and only the research team will have access to this information.

## 11) CONSENT TO PARTICIPATE IN THIS STUDY

- I confirm that the person requesting my consent to take part in this study has told me about the nature and process, any risks or discomforts, and the benefits of the study.
- I have also received, read and understood the above-written information about the study.
- I have had adequate time to ask questions and I have no objections to participating in this study.
- I am aware that the information obtained in the study, including personal details, will be anonymously processed and presented in the reporting of results.
- I understand that I will not be penalized in any way should I wish to stop taking part in the study and my withdrawal will not affect my treatment and care.
- I am participating willingly.
- I have received a signed copy of this informed consent agreement.

---

Participant's name (Please print)

---

Date

---

Participant's signature

---

Date

*Christelle Duvenage*

Addenda

\_\_\_\_\_  
Researcher's name (Please print)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Researcher's signature

\_\_\_\_\_  
Date

I understand that the interview will be audio-taped. I give consent that it may be audio-taped.

YES / NO

# **ADDENDUM C**

## **PATIENT EDUCATION LEAFLET**



## ADDENDUM C – PATIENT EDUCATION LEAFLET



Suite 119  
The Wilgers Hospital  
THE WILGERS

Postbus / P.O. Box 325  
FAERIE GLEN  
0041

**Dr Harry Engelbrecht**  
M.Med (Lst. Of Post)  
Otor., Rhin., Keel Chirurg  
Ear, Nose & Throat Surgeon  
Pr. No. 3001652  
TEL: 012 807-1035 / Fax 012-2621  
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Suite 119  
The Wilgers Hospital  
THE WILGERS  
Woning / Residence  
012 809-3188  
Road / Emergency

**THE TONSIL OPERATION (TONSILLECTOMY)**

**RECOMMENDED FOOD**

> Ice cream, Jelly, Apples, Biscuits, Biltong, Coke. **GIVE FLUIDS LIBERALLY**

**AVOID**

> Bananas, Pineapples, Tomatoes, Avocado's and spices for the 1<sup>st</sup> two weeks.

**PAIN**

Post operative pain can last up to 14 days. Usually everything goes well for the first few days but on the fourth or fifth day the pain worsens. The best treatment for this is regular and sufficient intake of food.

When discharged the patient will receive a syrup or tablets for pain. In addition it may be necessary to add antibiotics, and in some cases it may be necessary to repeat the antibiotics. No pain-killers should be repeated more than four to six hourly. It is advisable to take it an hour before meals and at bedtime.

Please do not give any medicine containing aspirin

**GENERAL INFORMATION**

It is essential that the patient should start eating as soon as possible after the operation and not stop as a result of pain. Refraining from chewing and swallowing causes muscular spasm and infection which can be very painful.

Barache is very common and is almost always referred from the throat. Should it be accompanied by deafness, please notify Dr Engelbrecht immediately.

For the first two days the patient may run a temperature. The pain medication should be sufficient to counteract this.

Yellow scabs in the throat do not mean infection, but are due to the healing of the tonsillar bed.

**HAEMORRHAGE**

This complication may arise during the first two weeks, especially when the patient does not eat. Should this happen, inform Dr Engelbrecht immediately and give the patient ice to suck – this is very often all that is necessary. If you have difficulty in contacting any of the other ENT surgeons, take the patient to the nearest hospital or clinic.

A post operative examination, within 3 weeks after the operation, is essential. Please make an appointment as soon as the patient is released from hospital.

**GET WELL SOON!!**

# **ADDENDUM D**

## **REVISED AND ADJUSTED**

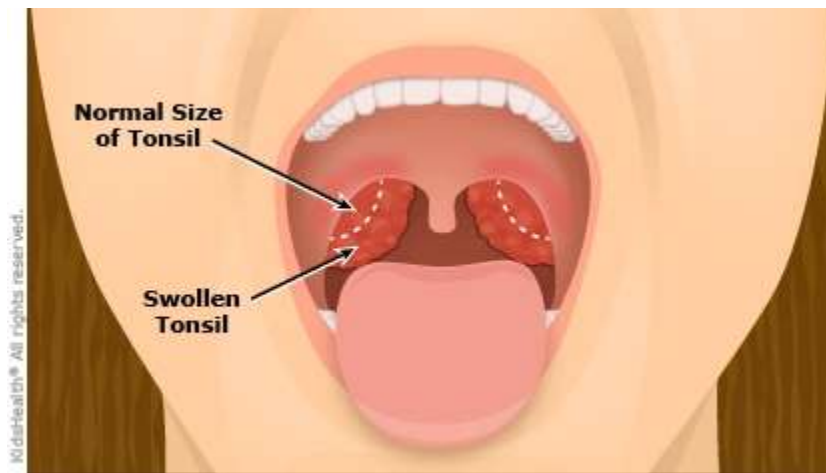
## **PATIENT EDUCATION LEAFLET**



**ADDENDUM D - REVISED AND ADJUSTED PATIENT EDUCATION LEAFLET**

## THE TONSIL OPERATION (TONSILLECTOMY)

The tonsillectomy operation is the most common surgical procedure carried out in the day-care setting. The procedure includes the total removal of the tonsils that is situated in the throat. The reason for the operation is as discussed with the physician but is most likely because of repeated tonsillitis.



### How long does it take to recover from surgery?

It takes most children 7-14 days to recover from a tonsillectomy procedure. Some children feel better in just a few days and some take as many as 14 days to recover.

### Are there any risks related to a tonsillectomy procedure?

Tonsillectomy is a surgical procedure that includes some risks. After surgery, a child may have:

- Bleeding in their mouth (from the tonsils)
- Throat pain that lasts up to two weeks
- Temperature greater than 38-40 Celsius

## Addenda

- Vomiting or a feeling like they have to vomit
- Thirst or dryness, especially if they are vomiting (dehydration)

## POSSIBLE COMPLICATIONS THAT MAY BE EXPERIENCED AFTER THE OPERATION:

### 1. BLEEDING

The first 24 hours after the tonsillectomy procedure is the danger period in which bleeding can be observed. If there is excessive bleeding (more than a little spit up) from the mouth or nose and the child is swallowing constantly they may be swallowing blood and this **SHOULD** be reported to the physician immediately. **If it isn't office hours go straight to the emergency department.**

**Note that:** It is not unusual to vomit up old blood (dark in colour) after the surgery (once or twice) but if it persists immediately give the patient ice to suck and inform the physician.

### 2. PAIN

For the first several days (occasionally up to 14 days) following surgery, pain in the throat is to be expected. This can be controlled by taking medication exactly as prescribed by the physician. Pain medication should not be repeated more often than four to six hourly.

Patients often experience intense pain at night. This pain can be relieved by administering medication such as Panamor or a Voltaren suppository before bedtime.

**It is very important not to take additional medication such as aspirin which can lead to increased bleeding.**

Ear pain, especially with swallowing is also a common occurrence after surgery, it is not an ear infection. The same nerve that travels to the throat is connected to the ear, so stimulation of this nerve can lead to earache. **When the earache is accompanied by deafness, please notify the physician immediately**

## Addenda

### Things to do to relieve pain

- Ice to the neck
- Chew gum
- Have a humidifier in the room

### 3. TEMPERATURE

For the first two days after the operation, it is normal for the patient to have a temperature of 38 to 40 degrees. Pain medication that is prescribed should be sufficient to treat the elevated temperature.

### 4. NAUSEA AND VOMITING

Your child may have nausea or vomiting after surgery which should go away by the next day. Give only sips of clear liquid until the vomiting stops. **If your child continues to vomit, contact the doctor immediately or go to the emergency room.**

### EATING AND DRINKING

Eating and drinking are very important after surgery as they will clean and heal the throat. It is essential that the patient should start eating as soon as possible after the operation and not stop eating as a result of pain. Refraining from chewing and swallowing causes muscle spasms and infection which can be very painful.

**Hydration is extremely important!** Make sure your child also drinks plenty of fluids throughout the day for the first few days after surgery. If your child is not eating a normal amount of food, give them some drinks containing sugar which will ensure they are getting some calories for energy.

- Give pain medication 30 to 60 minutes before eating to relieve the pain of swallowing
- Your child may find drinking and eating chilled or icy drinks and food soothing
- Your child should continue with brushing morning and at night

## RECOMMENDED FOOD AT HOME:

- Ice cream, Jelly, Apples, Coarse Rusks, Provita, Muesli, Weatbix, Nuts, Dry wors, Biltong, Coke.
- It is very important that adequate fluid intake is encouraged to prevent dehydration.
- Coke, sprite and other fizzy drinks help keep wound clean
- Chewing gum keeps the throat muscle supple and can improve the healing process.

## FOOD THAT SHOULD BE AVOIDED AT HOME FOR THE FIRST TWO WEEKS:

- Bananas, Pineapples, Tomato's, Avocado's, Cheese curls, Spices, Milk.

## What else do I need to know?

- **Physical activity**

Encourage your child to play quietly for the first few days after surgery. Plan for your child to be out of school or day-care for 7 to 10 days after surgery. When your child is back at school, they should not participate in vigorous activity for 2weeks.

- **Bad breath**

Bad Breath is a normal part of the healing process and it will go away in 7 to 10 days after surgery. Do not be alarmed if you see yellow scabs in the tonsil bed at the back of the throat. These yellow scabs start to form on the second day after surgery and are a normal part of the recovery process and do not mean infection. When children refuse to eat, these yellow scabs become thicker and may lead to increased pain and bleeding.

- **Congestion and drainage**

It is normal for patients to have increased nasal congestion and increased mucus drainage after a tonsillectomy procedure. This will usually go away in 7 to 10 days after surgery.

## Addenda

- Voice changes

Your child's voice may sound different (hyper nasal) for several weeks after the tonsillectomy surgery.

- Upset stomach

This is common for the first 24 to 48 hours after the surgery

### When should I call the doctor?

- If your child has not urinated in 12 hours
- If your child refuses to drink fluids for 12 hours
- If your child has a fever of 38-40 degrees for more than six hours that does not go away after giving prescribed medication.
- Severe pain is not relieved with prescribed pain medication
- Vomiting continuously
- Contact the physician at the rooms on this particular number.

### When should I take my child to the emergency department?

You should take your child to the emergency department when they have bleeding from the mouth or nose, or vomiting bright coloured blood. Bleeding can occur up to two weeks after the surgery.

### Who should I call if I have any questions?

For any questions and queries, you are also welcome to send the particular physician an Email at:

Please arrange for a follow-up appointment immediately after you leave the hospital for three weeks after the operation.

*Christelle Duvenage*

# **ADDENDUM E**

## **GUIDE FOR INTERVIEWS WITH NURSES**



## ADDENDUM E – GUIDE FOR INTERVIEWS WITH NURSES

### Intervention Characteristics

|                                        |                                                                                                                                                        |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Intervention source</b>             | What is your perception of the need to evaluate and adjust the current pediatric tonsillectomy patient education?                                      |
| <b>Evidence strength &amp; quality</b> | Do you feel that the current patient education meets the needs of the patient? Does it contribute to quality improvement of care? Please give reasons. |
| <b>Relative advantage</b>              | How does the current patient education compare to the other guidelines that you have in place for pediatric patients after the procedure?              |
| <b>Adaptability</b>                    | What are the components that need adjustment to improve the current patient education? What adjustments are necessary?                                 |

### Outer setting (the hospital)

|                                                |                                                                                                                                                                                                                                                                                                                                                                                  |
|------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Patients' needs and available resources</b> | What information is needed by parents/caregivers? Can the needs be met in a daycare setting? How do the nurses adjust the patient education to suit the needs of the patients/parents/caregivers? What resources are required? How should the policies be adjusted to support quality patient education? Please share with me your perspectives about quality patient education. |
|------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### Inner setting (the ward in the hospital)

|                               |                                                                                                                                                                             |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Culture</b>                | Do you think the organization's norms, values and beliefs are reflected in the current patient education? What changes need to be implemented? Please motivate your answer. |
| <b>Implementation climate</b> | Do you think that the ward environment is conducive for patient education? What makes a ward conducive for patient education? Please motivate your answer.                  |
| <b>Learning climate</b>       | Is patient education a priority in the ward? What does a learning conducive environment look like? Please motivate your answer.                                             |
| <b>Tension for change</b>     | Do you think that the nurses will easily accept changes in patient education? What changes are required? Please motivate your answer.                                       |

**Characteristics of Individuals**

|                                                       |                                                                                                                                                                                               |
|-------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Knowledge &amp; beliefs about the intervention</b> | According to your knowledge, what information should be included in a revised tonsillectomy guideline for pediatric patients and their parents/caregivers? Why and how should it be improved? |
| <b>Self-efficacy</b>                                  | How should the adjusted patient education be implemented? Do you think that the nurses would be willing to adjust the way patient education is done?                                          |

**Process**

|                         |                                                                                                                                                                            |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Planning                | How should the planning for the implementation of the adjusted patient education be done?                                                                                  |
| Engaging                | Who should be involved?                                                                                                                                                    |
| Executing               | How should the execution be done?                                                                                                                                          |
| Reflecting & evaluating | What quantitative and qualitative feedback about the progress and quality of the implementation will be required? How should the feedback and debriefing sessions be done? |

# **ADDENDUM F**

## **GUIDE FOR INTERVIEWS WITH PARENTS AND CAREGIVERS**



**ADDENDUM F – GUIDE FOR INTERVIEWS WITH PARENTS/CAREGIVERS****Intervention Characteristics**

|                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Intervention source</b>             | Who should develop the material for the patient education of the parents/caregivers of a child following a tonsillectomy? Should it be the surgeon, or the nurses, or the surgeon and the nurses? Do you think that parents/caregivers need to be involved when patient education is revised? Should one or two parents/caregivers be part of a team who revises the patient education? Who should decide how the patient education should be done? What methods do you think should be used in patient education? |
| <b>Evidence strength &amp; quality</b> | What according to you makes patient education user friendly? Did you receive patient education that you could use? What improvements in the material and process of patient education are necessary? What information that you received did you use and what did you not use? What information do you think should be added to the material?                                                                                                                                                                       |

**Outer Setting**

|                      |                                                                                                                                                                                                                                                                                                                                                                               |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Patient needs</b> | What patient education did you expect from the nurses before, during and after the tonsillectomy procedure? What can nurses do to improve patient education? How did you prepare yourself and your child for the tonsillectomy procedure? Did you receive information from the surgeon's rooms, perform internet searches or get information from friends and family members? |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**Inner Setting**

|                                   |                                                                                                                                                                          |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Structural characteristics</b> | Where were you orientated to the layout of the ward? Is the ward a comfortable environment? Is the ward a learning conducive environment? What changes do you recommend? |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**Characteristics of Individuals**

|                                                           |                                                                                                                                                                                                                                                                                                      |
|-----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Knowledge &amp; beliefs<br/>about the intervention</b> | Did the patient education help you to take care of your child?<br>Were you confident that you could deliver the required care?<br>Did you know what complications could develop? Did you<br>know how to observe your child for complications? Did you<br>know what to do when complications develop? |
|-----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

# **ADDENDUM G**

## **PERMISSION LETTER FROM HOSPITAL MANAGEMENT TO PERFORM RESEARCH**



## ADDENDUM G – PERMISSION LETTER FROM HOSPITAL MANAGEMENT TO PERFORM RESEARCH



ERASMUSKLOOF

Cure Day Hospital Erasmuskloof (Pty) Ltd  
Reg 2016/01059801 / PK NR 0445087  
506 Johannes Street, Erasmuskloof Ext.3, Pretoria, 0156  
T: 012 603 2501 E: [erasmuskloof@cure.co.za](mailto:erasmuskloof@cure.co.za)

04/05/2020

Dear Christelle Duvenage

I have reviewed your request regarding your study and I am pleased to support your research project entitled

**A RAPID-CYCLE EVALUATION AND ADJUSTMENT OF PAEDIATRIC TONSILLECTOMY PATIENT EDUCATION: APPLYING THE CONSOLIDATED FRAMEWORK FOR IMPLEMENTATION RESEARCH.**

Your request to use Cure Day Erasmuskloof as a research facility is granted. The proposed research will include semi structured interviews with nurses and parents of children undergoing tonsillectomies to improve the current health education that is provided. This authorization will last for a 12-month period.

We look forward to working with you.

Sincerely

Mariana Nove

Hospital Manager, Cure Day Hospital Erasmuskloof

E: [mariana@cure.co.za](mailto:mariana@cure.co.za)

T: 012 603 2001

C: 082 779 2141



GENERAL ENQUIRIES: T: 012 603 2100 F: 086 233 6245 E: [info@cure.co.za](mailto:info@cure.co.za) [www.cure.co.za](http://www.cure.co.za)

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|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>CDH Sebille 011 606 5951 info@sebille.cure.co.za</p> <p>CDH Bloemfontein 051 607 6177 info@bloemfontein.cure.co.za</p> <p>CDH Erasmuskloof 012 603 2001 info@erasmuskloof.cure.co.za</p> | <p>CDH Klerksdorp 051 607 6177 info@klerksdorp.cure.co.za</p> <p>CDH Mafikeng 051 607 6177 info@mafikeng.cure.co.za</p> <p>CDH Mmabatho 051 607 6177 info@mmabatho.cure.co.za</p> | <p>CDH Mmofeng 051 607 6177 info@mmofeng.cure.co.za</p> <p>CDH Mmofeng 051 607 6177 info@mmofeng.cure.co.za</p> <p>CDH Mmofeng 051 607 6177 info@mmofeng.cure.co.za</p> | <p>CDH Mmofeng 051 607 6177 info@mmofeng.cure.co.za</p> <p>CDH Mmofeng 051 607 6177 info@mmofeng.cure.co.za</p> <p>CDH Mmofeng 051 607 6177 info@mmofeng.cure.co.za</p> |
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Christelle Duvenage

# **ADDENDUM H**

## **RESEARCH FIELD NOTES**



**ADDENDUM H – RESEARCH FIELD NOTES****GUIDE FOR INTERVIEWS WITH NURSES (Nurse 1)****Intervention Characteristics**

|                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Intervention source</b>             | <p><b>What is your perception on the need to evaluate and adjust the current pediatric tonsillectomy patient education?</b></p> <p>I think that we live in changing times and we need to make health education as easy as possible and that everybody understands it.</p> <p>Not everybody is well educated so health education must be in a simple language that everyone understands.</p>                                                                                                                                                                                                                                                                          |
| <b>Evidence strength &amp; quality</b> | <p><b>Do you feel that the current patient education meets the needs of the patient, and does it contribute to quality improvement of care? Please give reasons.</b></p> <p>No, I don't think so. We need more information that gives the parent or caregiver a clear understanding what to look for.</p>                                                                                                                                                                                                                                                                                                                                                            |
| <b>Relative advantage</b>              | <p><b>How does the current patient education compare to the other guidelines that you have in place for pediatric patients?</b></p> <p>The current one is not so good according to my standards I think it lacks explaining. Every parent that takes a child home should have a full understanding of the signs and symptoms and possible complications and how to prevent it.</p> <p>At the end of the day parents or caregiver should feel empowered when they leave the hospital.</p>                                                                                                                                                                             |
| <b>Adaptability</b>                    | <p><b>What part of the content needs to be adjusted to improve the current patient education guideline?</b></p> <p>I would think that we would need to concentrate on bleeding, on the current education leaflet it refers to hemorrhaging, a lot of people does not understand this word, and they do not have access to internet so there is no way that they would be able get a better understanding. The word bleeding is a better choice as everyone understands it.</p> <p>It should explain what parents and caregivers should look for in an emergency situation.</p> <p>Food- two to three days' soft diet and after that more solid food and roughage</p> |

**Outer setting (the hospital)**

|                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Patients' needs and available resources</b> | <p><b>What information is needed by parents/caregivers, and do you think that these needs can be met in a day care setting?</b></p> <p>Yes, I do think the needs are met. Parents must know what to look for. The nurses should go depth when they explain health education. It is easy to say look for bleeding but parents don't know what bleeding looks like so the nurses should tell parents what symptoms the child will have when they bleed</p> <p><b>How should nurses adjust the patient education to suit the needs of the patients/parents/caregivers?</b></p> <p>Nurses need to explain to the patient, parent or caregiver in an understandable language it doesn't help if you explain something in to high terms. Go down to the level of the patient and explain health education on that level.</p> |
|------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p><b>How should nursing care policies be adjusted to support quality patient education?</b><br/>Nursing care policies need to include every possible scenario. The patient needs to be protected by the nursing staff and after health education the parent or caregiver should be fully equipped to look after a patient at home.</p> <p><b>Please share with me your perspectives about quality patient education.</b><br/>When the patient leaves the hospital they should know exactly what would be normal and what is abnormal. When there is something wrong with the patient a parent should know when to contact the doctor.</p> |
|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### Inner setting (the ward in the hospital)

|                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Culture</b>                | <p><b>Do you think the organizations norms, values and beliefs are reflected in the current patient education?</b><br/>No I don't think so</p> <p><b>What changes need to be implemented to reflect the organizations norms, values and beliefs? Please motivate your answer.</b><br/>Health education should be easy to understand<br/>It doesn't help if you have norms, values and beliefs but it is not reflecting in your parent education. We as nurses are there to look after our patients so we need to give them proper health education when they go home.</p>                                           |
| <b>Implementation climate</b> | <p><b>Do you think that the ward environment is conducive for patient education?</b><br/>Yes, in a way it is.</p> <p><b>What makes a ward conducive for patient education? Please motivate your answer.</b><br/>When the patient, parent or caregiver is in a ward for a specific procedure they are more relaxed. Give health education to the parent or caregiver when the child is in theatre, then you will have their full attention. When that child comes out of theatre there is no way that the parent or caregiver will focus on health education.</p>                                                    |
| <b>Learning climate</b>       | <p><b>Is patient education a priority in the ward?</b><br/>I do think so, and I do think that the nurses do their utmost, but sometimes we need to spend a little time with parents or caregivers</p> <p><b>What does a conducive learning environment look like? Please motivate your answer.</b><br/>To me a conducive learning environment should be quiet, relaxing and calming then people will understand and take in what you are telling them. If there are children around them or just too much traffic it might be distracting and they will not be able to focus on what you are trying to explain.</p> |

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Tension for change</b> | <p><b>Do you think that the nurses will easily accept changes in the patient education?</b><br/>I think they will except changes</p> <p><b>What changes are required? Please motivate your answer.</b><br/>I think that nurses should give health education at the bed side before patients leave the ward.<br/>Do not give health education at the nurse's station where a patient is signing out to be discharged, there is a lot of people there and patient is not focusing and his privacy is compromised.<br/>If you give health education at the nurses station you might as well leave it. (On the spot at the bedside training while the child is in theatre so that the parent or caregiver can focus on the information).</p> |
|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### Characteristics of Individuals

|                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Knowledge &amp; beliefs about the intervention</b> | <p><b>According to your knowledge, what information should be included in a revised tonsillectomy guideline for pediatric patients and their parents/caregivers? Why and how should it be improved?</b><br/>The word hemorrhage should be replaced with the word bleeding as not everyone will understand the term. It should be done by explaining health education at the level of the patient.</p>                                                                                                                                                             |
| <b>Self-efficacy</b>                                  | <p><b>How should the adjusted patient education be implemented?</b><br/>It should be implemented through direct communication in the ward and parents should be allowed to ask questions throughout their stay in hospital</p> <p><b>Do you think that the nurses would be willing to adjust the way patient education is done?</b><br/>Yes, I think that they would be willing to adapt and a way in adapting health education is by actually showing parents or caregivers how the child's throat should look like and then allowing them to ask questions.</p> |

### GUIDE FOR INTERVIEWS WITH PARENTS/CARE GIVERS **Parent 1**

#### Intervention Characteristics

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Intervention source</b> | <p><b>Who should develop the material for the patient education of the parents/caregivers of a child following a tonsillectomy?</b><br/><b>Should it be the surgeon, or the nurses, or the surgeon and the nurses?</b><br/>It should be the doctors and nurses and they should focus on preparing parents more with detailed explanations<br/><b>Do you think that parents/caregivers need to be involved when patient education is revised?</b><br/>Yes<br/><b>Who should decide how the patient education should be done?</b></p> |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                        | <p>It should be the doctors and nurses and they should focus on preparing parents more with detailed explanations</p> <p><b>What methods do you think should be used in patient education?</b></p> <p>Printed out material that explain what to expect from the operation.</p> <p>Internet sources should be given that parents can go and look at.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Evidence strength &amp; quality</b> | <p><b>What according to you makes patient education user friendly? Did you receive patient education that you could use?</b></p> <p>The fact that nurses gave options on what to eat, my children does not like chips and are not bread eaters so the fact that I was told I could give them cracker bread made my life much easier.</p> <p><b>What improvements in the material and process of patient education are necessary?</b></p> <p>To implement or create a pamphlet that give you as a parent a better idea what to expect each day. EG Day one this, Day two that. I do understand that each child is different but today I am on day ten and I thought by this time my children would be better. No one told me anything about bleeding, I was not shown how to look in my children's through. Mouth spray does not work My children are three years old they don't want to open their mouths for me to check and spay their throats.</p> <p><b>What information that you received did you use and what did you not use?</b></p> <p>I did not use the Andolex throat spray. I did encourage fluid intake the food advice did not help me.</p> <p><b>What information do you think should be added in the material?</b></p> <p>What to expect each day and maybe what food should be suitable for each day. I personally used the trial and error method.</p> |

## Outer Setting

|               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Patient needs | <p><b>What patient education did you expect from the nurses before, during and after the tonsillectomy procedure?</b></p> <p>Before I did not expect anything in particular, I asked questions very quickly because I was a first time tonsillectomy mother. I did not know what exactly to expect when we go home for e.g. the bleeding I did not get enough information about it.</p> <p><b>What can nurses do to improve the patient education?</b></p> <p>The nurses in the ward did not explain to me that I should prepare myself and my children for a recovery period longer than ten days. I thought after ten days everything would be back to normal. They should tell you that healing might take this long. Follow up phone calls from nurses just to check if you as a parent are coping.</p> <p><b>How did you prepare yourself and your child for the tonsillectomy procedure?</b></p> <p>I did not say much to them I told them that are going to remove these small little balls from their mouths. I prepared myself for ten days of recovery but now I realize I should maybe have prepared myself for a little bit longer. I prepared myself to be patient during this process. I had a lot of snacks.</p> <p><b>Did you receive information from the surgeon's rooms, perform internet searches or get information from friends and family members?</b></p> <p>I did not receive any information from the surgeon's rooms, I did receive information from other mothers and the internet.</p> |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Inner Setting

|                            |                                                                                                                                                                                                                                                                                                                                                                                                        |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Structural characteristics | <p><b>Where you orientated to the layout of the ward?</b></p> <p>Not really because the nurses are very busy. If you don't know then you ask</p> <p><b>Is the ward a comfortable environment?</b></p> <p>Yes, for sure. I would suggest that on admission the nurses give an indication how long the procedure will take. E.G. 45 min.</p> <p><b>Is the ward a learning conducive environment?</b></p> |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|  |                                                                                                               |
|--|---------------------------------------------------------------------------------------------------------------|
|  | <p>Yes, it is</p> <p><b>What changes do you recommend?</b></p> <p>More detailed information on discharge.</p> |
|--|---------------------------------------------------------------------------------------------------------------|

### Characteristics of Individuals

|                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|--------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Knowledge &amp; beliefs about the intervention</b></p> | <p><b>Did the patient education that was provided help you in taking care of your child?</b></p> <p>Not really my children did not want to eat, I did not use the andolex throat spray on my children they are too small to understand that it will make them feel better. I did not know how it would look like if my children bled.</p> <p><b>Were you confident that you could deliver the required care?</b></p> <p>I prepared myself with information from friends and google surges. For the first ten days I felt confident but now on day ten seeing how they are still struggling I feel less confident.</p> <p><b>Did you know what complications could develop?</b></p> <p>Yes, but I did not know how to look for it.</p> <p><b>Did you know how to observe your child for complications?</b></p> <p>No I did not</p> <p><b>Did you know what to do when complications develop?</b></p> <p>Not sure, phone doctor's rooms</p> |
|--------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

# **ADDENDUM I**

## **ETHICAL COMMITTEE APPROVAL**



## ADDENDUM I – ETHICAL COMMITTEE APPROVAL



UNIVERSITEIT VAN PRETORIA  
UNIVERSITY OF PRETORIA  
YUNIBESITHI YA PRETORIA

Faculty of Health Sciences

**Institution:** The Research Ethics Committee, Faculty Health Sciences, University of Pretoria complies with ICH-GCP guidelines and has US Federal wide Assurance.

- FWA 00002567, Approved dd 22 May 2002 and Expires 03/20/2022.
- IORG #: IORG0001762; OMB No. 0990-0279 Approved for use through February 28, 2022 and Expires: 03/04/2023.

Faculty of Health Sciences Research Ethics Committee

17 March 2022

**Approval Certificate  
Annual Renewal**

Dear Mrs C Duvenage,

**Ethics Reference No.: 111/2020 – Line 3**  
**Title: A RAPID-CYCLE EVALUATION AND ADJUSTMENT OF PAEDIATRIC TONSILLECTOMY PRIMARY CAREGIVER EDUCATION: APPLYING THE CONSOLIDATED FRAMEWORK FOR IMPLEMENTATION RESEARCH**

The **Annual Renewal** as supported by documents received between 2022-02-16 and 2022-03-16 for your research, was approved by the Faculty of Health Sciences Research Ethics Committee on 2022-03-16 as resolved by its quorate meeting.

Please note the following about your ethics approval:

- Renewal of ethics approval is valid for 1 year, subsequent annual renewal will become due on 2023-03-17.
- Please remember to use your protocol number (111/2020) on any documents or correspondence with the Research Ethics Committee regarding your research.
- Please note that the Research Ethics Committee may ask further questions, seek additional information, require further modification, monitor the conduct of your research, or suspend or withdraw ethics approval.

**Ethics approval is subject to the following:**

- The ethics approval is conditional on the research being conducted as stipulated by the details of all documents submitted to the Committee. In the event that a further need arises to change who the investigators are, the methods or any other aspect, such changes must be submitted as an Amendment for approval by the Committee.

We wish you the best with your research.

Yours sincerely



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On behalf of the FHS REC, Dr R Sommers  
 MBChB, MMed (Int), MPharmMed, PhD  
**Deputy Chairperson of the Faculty of Health Sciences Research Ethics Committee, University of Pretoria**

The Faculty of Health Sciences Research Ethics Committee complies with the SA National Act 61 of 2003 as it pertains to health research and the United States Code of Federal Regulations Title 45 and 46. This committee abides by the ethical norms and principles for research, established by the Declaration of Helsinki, the South African Medical Research Council Guidelines as well as the Guidelines for Ethical Research: Principles Structures and Processes, Second Edition 2015 (Department of Health)

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