NURSES' KNOWLEDGE OF THE RECOMMENDATIONS OF THE WHO INTERNATIONAL CODE OF MARKETING BREAST MILK SUBSTITUTES IN GENEVA

by

JOYCE WITHERSPOON

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SUPERVISOR: PROF S P HUMAN

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DEDICATION

To my children, Laud Brendan and Loyce Beryl.

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I wish to thank the following persons for their respective contributions to this dissertation:

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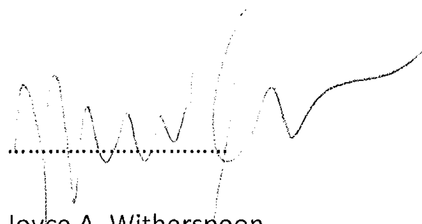
- Last but not the least, to the Almighty God for enabling and strengthening me in this academic quest.

Student number: 3676-316-0

DECLARATION

I declare that the Nurses' Knowledge of the Recommendations of WHO International Code of Marketing Breast milk Substitutes in Geneva is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references and that this work has not been submitted before for any other degree at any other institution.



Joyce A. Witherspoon
Date: 30 November 2012

NURSES' KNOWLEDGE OF THE RECOMMENDATIONS OF THE WHO INTERNATIONAL CODE OF MARKETING BREAST-MILK SUBSTITUTES IN GENEVA

STUDENT NUMBER: 3676 -316-0
STUDENT: JOYCE ADOMAH WITHERSPOON
DEGREE: MASTER OF PUBLIC HEALTH (MPH)
DEPARTMENT: HEALTH STUDIES, UNIVERSITY OF SOUTH AFRICA
SUPERVISOR: PROFESSOR SP HUMAN

ABSTRACT

The WHO Code of Marketing of Breast Milk Substitute is a public health recommendation to reduce preventable causes of infant morbidity and mortality associated with malnutrition. Irresponsible marketing of infant formula in hospitals is a threat to exclusive breastfeeding. Nurses are mandated to support, encourage and protect breastfeeding and to familiarize themselves with their responsibilities under this Code.

The researcher explored Geneva nurses' knowledge of the Code and its impact in practice. Eighty seven point seven percent of the participating nurses had poor level of knowledge of the Code. Poor knowledge of the Code impacts on the quality and consistency of information given to mothers in hospitals. Inadvertent violations of the Code were observed among a minority of the respondents: 7.3% indicated that they received gifts; 2.4% received sponsorships to conferences.

Training about the Code and its application in counseling is recommended to complement the baby-friendly initiative at hospitals to improve nutrition outcomes.

KEY CONCEPTS

The International code of marketing breast milk substitutes; member states; malnutrition; knowledge; infant nutrition; breast milk; complementary food nurses; mothers; hospitals; counseling, baby friendly initiative.

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CHAPTER 1: ORIENTATION OF THE STUDY

1.1 INTRODUCTION

Malnutrition is the leading cause of death worldwide in children below 1 year and a major underlying cause of death in children under 5 years of age (Black et al 2008:243). Breast milk, as the optimal nutrition, is the gold standard for feeding infants during the first 6 months of life. The use of breast milk substitutes such as infant formula in place of breast milk in the first six months has reportedly resulted in greater incidents of malnutrition, diarrheal diseases, infections, impaired growth and death (Lauwers and Swisher 2011:10).

The Maternal, Infant and Young Child Nutrition Implementation Plan report (WHO 2012:5) released in preparation for the 2012 World Health Assembly included the objective of increasing exclusive breastfeeding rates by 50% as one of the key global targets to alleviate the burden of malnutrition-related morbidity and mortality in infants and young children. Nutrition is therefore a major determinant of health and disease and a focus for member states, civil society and the World Health Organization.

Children who are not optimally fed with breast milk have a lower chance of survival compared to children who are well nourished (UNICEF 2009:12). According to the World Health Organization, optimal nutrition during the first two years of life is important because it leads to a reduction in morbidity, mortality, and also to reduced risk of chronic diseases. Malnutrition is a threat to the health of children globally (WHO 2009: 75).

The International Code of Marketing Breast Milk Substitutes of 1981 (hereafter referred to as the Code) is one of the key resolutions adopted by the World Health Assembly to protect, promote and support breast feeding and the proper use of infant formula when necessary, provided adequate information is made available to mothers. The Code recommends that appropriate marketing and distribution of formula is followed by infant formula companies and distributors (WHO 1981:8).

The Code provides guidance to regulate advertising, promotions and labeling of Infant Formula to promote breastfeeding. It does not prohibit the sale of formula, but regulates marketing practices of companies. Under the Code, member states, infant formula companies, health care facilities, health care workers, and the general public are all key stakeholders and have responsibilities to comply with the Code.

The Code is relevant to nursing practice because it recognizes the superiority of breast milk

compared to substitutes. Health care workers therefore require knowledge of the International Code to protect, promote and support breastfeeding at the hospital level and in community where they live and thereby, contribute to the global efforts in improving the nutritional status, growth and development of infants and young children. Effective infant feeding counseling is a determinant of breastfeeding (Heird 2007:500S).

The International Code in effect is a health policy that recommends guidelines for breastfeeding promotion, the dissemination of relevant information on infant feeding, recommends appropriate measures to be taken in health care systems, recommends guidelines on the marketing of infant formula which is a breast milk substitute at health care facilities, its implementation and monitoring (WHO1981:10-15). As a health policy recommendation, it is also a determinant of breastfeeding because it aims to limit or reduce commercial pressures such as advertising and formula promotion in hospitals that threaten mothers' decision to exclusively breastfeed (Heird 2007:500S).

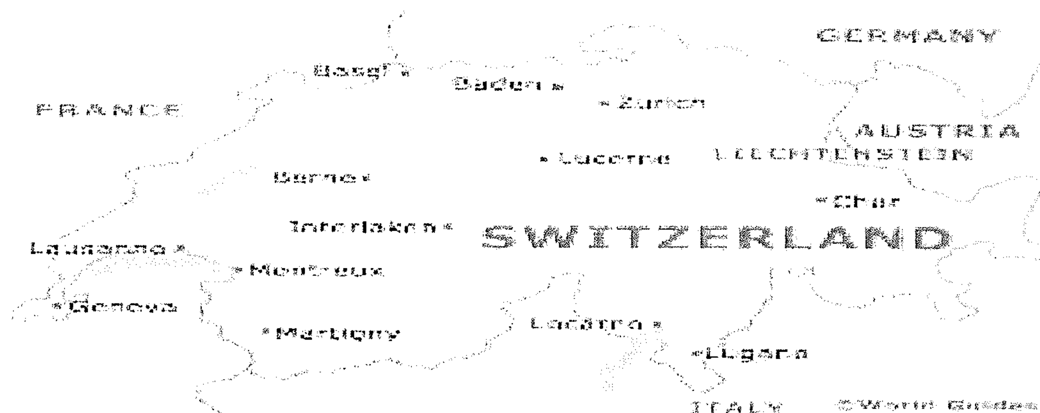
It is well established that breast milk is the optimal nutrition for the health, growth and development of infants (Insel, Turner, and Ross 2010:537). Breast milk provides adequate nourishment for the first six months builds the infant with immunity and provides a variety of necessary hormones. According to Koletzko (2011:59), evidence suggests that exclusive breast feeding for the first six months is associated with outcomes such as reduced incidence of respiratory, gastrointestinal and ear infections, allergies, diarrhea and bacterial meningitis. Breastfeeding also provides long-term outcomes such as cognitive development and reduced risk of obesity.

Hospitals as part of the health care system are encouraged to provide opportunities for mothers of newborn babies to be confident in breastfeeding before discharge and professional nurses should be available at hospitals to offer professional breastfeeding support (Insel et al 2010:545). The World Health Organization supports this view. Hospitals and health care professionals working in health institutions have an essential role to play in guiding infant feeding practices and counseling mothers about the superiority of breast feeding, however, where needed, professional advice should be given to mothers on the proper use of infant formula (WHO 1981: 11).

1.2 BACKGROUND INFORMATION TO THE PROBLEM

Switzerland is a World Health Organization member state, situated in Western Europe and bordered by Germany, France, Austria, Italy and Liechtenstein.

Figure 1.2.2 Map of Switzerland



It has a population of about 7.9 million people and is one of the richest countries in the world by per capita gross domestic product (Swiss Federal Department of Foreign Affairs 2011). The World Bank classifies Switzerland as a high-income country with life expectancy at birth of 82 years (World Bank 2012). It is home to many international organizations, such as the World Health Organization and the United Nations. Based in Switzerland is the largest infant food company in the world, Nestle (Swiss info 2012).

In Switzerland, voluntary legislation to put the Code into effect was introduced in 1995 (WHO 1998:10). Information on infant formula targeting mothers are to include the importance of consulting a health worker on infant feeding and it should emphasize the importance of breast milk as the preferred baby nutrition, especially in the first six months of life.
The breast-feeding survey in Geneva conducted by Bouvier and Rougemont (1998:116) showed exclusive breast-feeding rates as follows: 1 day, 87.3%; 3 months, 37.5%; 4 months, 19.4%; 6 months, 3.8% and a median duration 2.4 months. The duration of breast-feeding is longer in Swiss hospitals that encourage breastfeeding practice (Guttmacher Institute 2006). The Baby-Friendly Hospital Initiative adopted in 1996 has improved breastfeeding duration from 22 weeks to 31 weeks as a result of specific practices to promote breastfeeding on maternity wards and BHFI certification status. Hospital's level of compliance to the initiative was associated with an elevated likelihood of breast-feeding (Guttmacher Institute 2006).

Early human development is associated with rapid growth and as such optimal nutrition is more important during this period because of its effect on the brain, nervous system, general growth and development as well as the child's future health. Malnutrition results in many irreversible

damages and therefore its prevention is an important global public health objective (UNICEF 2012c).

Infants and young children are entirely dependent on their mothers or caregivers for nourishment. Mothers in turn rely on professional nurses at hospitals for competent advice on appropriate infant nutrition and therefore nurses have a unique opportunity to influence mothers feeding decisions by providing appropriate nutrition information as recommended by the International Code.

The ability to influence mothers on appropriate infant feeding requires nurses to be knowledgeable about the Code recommendations and an understanding of their role at the hospital level. Lack of knowledge about the International Code is a barrier to effective infant feeding counseling and breastfeeding promotion (Renfrew et al 2009:1-146).

1.2.1 The Global Nutrition Challenge

Governments of the United Nations have committed themselves to the Millennium Development Goals, commonly known as the MDGs. The MDGs are a set of targets to address urgent needs of the world. Malnutrition and mortality of children are the focus of 2 of the MDGs:

MDG 1: To eradicate extreme poverty and hunger by 2015.
Governments have committed to reduce the proportion of people around the world who suffer from hunger by half by 2015.
MDG 4: To reduce by two-thirds the number of children who die before the age of five.

According to the World Health Organization (2012), infant and young child feeding is an important strategy to achieve goal 4. To achieve this goal, the UN has identified a number of crucial measures including encouraging exclusive breastfeeding up to six months and breastfeeding in addition to complementary foods from 6 months to two years, and targeting the underlying socioeconomic causes of infant mortality such as mothers' access to reproductive health, education and employment. Risk factors related to nutrition are responsible for 35% of total deaths of infant and young children (WHO 2011).

Three years remain before 2015 for the achievement of the MDGs and therefore urgent actions are needed to ensure the reduction of child malnutrition. The achievement of the MDGs relating to child malnutrition was included in the 2010 Quadrennial Report of the progress on the nutrition of infants and young children (WHO 2009:1), and was adopted by the World Health Assembly in May 2010. It called on Member States to "scale up interventions to improve nutrition of infants and young children, including the protection and promotion of breastfeeding

and timely safe and appropriate complementary feeding" (WHO 2009:7).

Between birth and age two, nutrition plays a crucial role in achieving an optimal state of health, yet during this period, poor feeding practices remain one of the main direct causes of malnutrition (WHO 2012). Nurses working in maternity wards have an opportunity to contribute towards the achievement of the MDGs, goals 1 and 4 in particular by influencing feeding decisions and practices.

1.2.2 The World Health Assembly

Figure 1.2.2 **Palais de Nation, Geneva. Venue of the World Health Assembly**

The decision making body of the WHO is the World Health Assembly (WHA). WHO's head office is in Geneva, Switzerland, and in May of every year representatives of member states assemble at the Palais de Nations to determine global health policies. Dr. Margaret Chan is the current Director General and the head of the organization.

The researcher had the opportunity to attend the World Health Assembly (WHA) in May 2010 and 2012, and was therefore able to witness first-hand the process of how resolutions on infant and young child nutrition were discussed and agreed upon by member states and civil society, after which the WHA recommends resolutions to member states for implementation in their respective countries.

Every other year, the WHO issues a report on the status of infant and young child feeding. The Infant and young child nutrition quadrennial progress report was the focus of the Nutrition discussions during the 2010 World Health Assembly. The report addressed health-related MDGs in the context malnutrition, and focused on interventions that will help to improve the implementation of the global strategy for infant and young child feeding, including complementary feeding, discussed at the Executive Board in January 2010 and led to the writing

of the draft Resolution proposed for adoption at the May 2010 WHA. The Report recommended a "wider application of the principles of the Code of Marketing of Breast milk Substitute would facilitate the improvement of breastfeeding rates" (WHO 2009).

While attending the 63rd WHA in May 2010, the researcher observed the high level of importance accorded to infant and young child nutrition by member states, International organizations and civil society including the International Council of Nurses, Confederation of Midwives, the International Lactation Consultants Association and the Infant food industry. The draft resolution introduced by the member state Peru was eventually adopted after intense negotiations among concerned parties. The presence of the Infant Food Industry at the Assembly and the nature of their contributions to the discussions illustrated their commitment to the International Code.

This particular agenda item provoked diverse views and passionate reactions from member states and organizations present, some reporting repeated violations of the International Code by companies in the way in which infant formula is marketed in countries. The direct link between child nutrition and the achievement of the millennium development goal 1 and goal 4 resulted in advocacy for stricter monitoring of marketing practices and a plea for the companies to respect the provisions in the International Code pertaining to them.

The role of health professionals in adhering to the aims and principles of the Code was also emphasized by concerned member states and civil society during the discussions, which led the researcher to question the knowledge of the International Code by nurses and the extent of their commitment to the Code in practice at local Swiss hospitals.

At the 65th World Health Assembly in May 2012, Infant and young child nutrition remained an important issue for member states and civil society. The implementation plan of the maternal, infant and young child nutrition, agenda 13.3, was of interest to all assembled. The draft resolution called upon the WHO to "provide clarification and guidance on the inappropriate promotion of foods for infants and young children cited in resolution WHA 63.23, taking into consideration the ongoing work of the Codex Alimentarius Commission"(WHA 2012:1).

The draft resolution was sponsored by Swaziland and Uganda, and focused on imposing restrictions on the marketing of complementary foods. Several member states aligned themselves to the Swaziland position. India stressed the need to stipulate what inappropriate promotion is and that the resolution needs to include guidelines on the distribution of free samples of breast-milk substitutes. Bangladesh emphasized the need to encourage the consumption of home-made foods during the weaning period and to discourage the consumption of so-called nutritious industrially-prepared complementary foods.

Canada sponsored the draft decision on the Implementation plan and considered the effort that went into the development of the plan. Member states such as the US, Peru, UK, Tanzania, Mozambique, and Mexico were co-sponsors. Denmark also commended the cooperation plan between WHO and Scaling Up Nutrition (SUN) initiative and expressed support for the endorsement of the Plan.

Switzerland intervened during this discussion by suggesting an amendment to the draft plan, to consider the work of CODEX Alimentarius in guiding appropriate promotion of foods for infant and young children. CODEX is backed by the United Nations, WHO and the Food and Agricultural Organization (FAO), and focuses on consumer health protection. It is the global reference point for consumers, food manufacturers and Governmental food control agencies. All governments are encouraged to adopt the CODEX standard for consumer protection (CODEX Alimentarius International Food Standards 2012).

Other member states like Paraguay, Chile, Morocco, Malaysia, Mongolia, Ghana and Mozambique highlighted the progress made in their respective countries in terms of developing and implementing national nutrition policies and programs that translated into nutrition improvements.

Following the observations at the WHA, the researcher assumed that without the knowledge of the International Code and its relevance to infant and young child nutrition counseling, a task nurses perform in hospitals and in the community in which they live, nurses are likely to inadvertently condone some of the marketing practices of companies and distributers at their place of work. Nurses' knowledge of the Code is therefore a prerequisite to its effective implementation in nutrition counseling at local hospitals in order to contribute to local and global efforts at improving nutrition outcomes in infants and young children.

1.3. PROBLEM STATEMENT AND RESEARCH QUESTIONS

Houser (2008:113) defines a problem statement as a statement of disparity between what is known and what needs to be known and addressed by the research question.

1.3.1 Problem Statement

Knowledge of the recommendations of the International Code for infant and young child nutrition counseling is a professional obligation for nurses to guide the feeding-decision of

mothers and to adhere to the recommendations of the International Code, thereby, contribute to improving infant nutrition outcomes.

The research problem is based on the lack of evidence about the knowledge of the recommendations of the International Code on Breast Milk Substitutes by nurses in Geneva responsible for counseling mothers of newborn babies on infant and young child nutrition.

1.3.2 Research Question

The research question is thus:

What is the level of knowledge of the International Code of Marketing Breast Milk substitutes among nurses in Geneva hospitals?

1.4 AIM OF THE STUDY

The aim of the study is to determine nurses' knowledge level of the recommendations of the International Code of Marketing Breast milk substitutes in Geneva hospitals and how this knowledge translates in their daily practice.

1.5. OBJECTIVES OF THE STUDY

The objectives of the study are:

1. To assess the knowledge level of the International Code of marketing breast milk substitute among nurses in a Swiss hospital.
2. To determine whether there is a gap in the interpretation of the knowledge of the Code in nursing practice.

1.6. ASSUMPTIONS UNDERLYING THE STUDY

Assumptions are untested statements considered to be true. According to Houser (2008:187) when designing a research, the researcher must state the assumptions she has made regarding the nature of knowledge needed to answer the question.

The researcher has the following assumptions:

i. Nursing practice is informed by, among other sources, knowledge of global health policies recommended by the World Health Organization (WHO). Knowledge of the International Code and Infant and young child nutrition as recommended by the WHO is relevant to child health and should influence nursing practice.

ii. Knowledge of global health recommendations may occur at any category of the nursing, from a student nurse to a nursing manager or supervisor.

iii. The educational background, number of years in nursing practice and training within the hospital influence the acquisition of knowledge, which impacts on practice.

iv. Nurses are uniquely placed in hospitals to convey knowledge of health information, empower and encourage mothers of infants and young to follow the recommendations of the International Code among other appropriate global health recommendations.

v. Mothers will typically choose the best nutrition option for their infants and young children based on the support received from nurses who they trust.

1.7 SIGNIFICANCE OF THE STUDY

Member states of the WHO, International organizations and Civil Society have presented strong statements and arguments, expressing concern over reported violations of the Code by companies and distributers with regard to contacting health workers and mothers during the World Health Assembly. The World Health Assembly and its member states have implicated healthcare workers in the inappropriate marketing of breast milk substitutes in health care facilities.

In the final resolution of WHA 2012, the Assembly called for an end to inappropriate marketing of foods for infants and young children, and has called upon companies and distributors to fully comply with the responsibilities as set out in the Code (WHA 63.23:2). Stipulated in the articles of the International Code are the responsibilities for member states/governments, manufacturers, communities and health care professionals. To promote, protect and support appropriate nutrition for infant and young children, nurses have a responsibility to know their obligation under the Code.

For the purpose of restricting inappropriate promotion of formula that can interfere with breastfeeding, the International Code was adopted. Nurses can contribute to local and global efforts to fight malnutrition and improve child survival. Inappropriate marketing of infant formula in the hospital setting undermines the breastfeeding decision of the mother

(Edelstein and Sharlin 2009:75). This includes the provision of discharge packages containing formula, bottles and teats, a task often undertaken by nurses in maternity care settings. According to Arnold (2010:274), such nursing activity is a method of direct and inappropriate advertisement of artificial feeding to mothers, sending a message that hospitals and nurses endorse infant formula and particular brands.

The nursing profession has an ethical obligation to ensure the protection of mothers of newborn babies from undue influence from inappropriate marketing in hospital settings and therefore need to equip them with the knowledge of the International Code in order to implement the recommendations and to not inadvertently become Code violators in hospitals.

1.8 CONTEXT OF THE STUDY FIELD

This study will be conducted in two hospitals located in Canton of Geneva. Participants will include professional nurses, midwives and nursing managers and other nursing staff involved in or responsible for nutrition counseling of mothers of infant in the hospitals.

1.9 PERSPECTIVE/FRAMEWORK

According to Polit and Beck (2009a:198) a framework is the underpinnings of a study. The World Health Organizations' International Code of marketing of breast milk substitutes serves as the framework to guide the study and upon which a questionnaire will be designed to address the research question. Relevant Articles of the Code pertaining to health care workers and their relationship with distributors and company staff, and Articles concerning nutrition information for counseling will be used as the basis for assessing nurses' knowledge. The key points in the articles are as follows:

i. The health care facilities should not allow advertising of breast milk substitutes.
ii. No samples of breast milk substitutes should be given to pregnant women or to mothers in the hospital.
iii. Infant formula companies or distributers should not offer free or subsidized equipment or supplies to the hospital.
iv. The marketing personnel of infant formula companies should not make contact with mothers.
v. Materials for mothers should bear full information and warnings.
vi. Health care workers should not accept any gift from infant formula companies.

vii. Free samples of formula may be accepted by health workers for professional evaluation at the hospital.

viii. Materials for health workers given by infant formula companies should contain only factual and scientific information.

ix. Formula products labels should not display photos of babies or images, which help to idealize formula. Labels should provide pertinent information needed for the appropriate use of formula.

The researcher developed and linked the flow diagrams below in figure 1.1 to the key points listed above to guide the study. The diagram represents the International Code as the framework for the study, showing infant nutrition as a global public health problem which the WHO aims to address through its member states, civil society and the infant food industry. Implementation of the Code at the macro, mid and micro levels is displayed.

Nurses require knowledge of the Code to implement and to adherence to the guidelines contained in the International Code. The knowledge of the content of the International Code is an important pre-requisite to its implementation at the micro-level, which is the level where the professional nurse practices and has the opportunity to influence mothers' infant feeding decision through appropriate nutrition counseling, based on the recommendations of the International Code.

The assessment could provide an insight into the present state of nurses' knowledge of the International Code. It could also demonstrate whether there is a gap between the actual recommendations of the International Code and its interpretation by nurses, who under the Code are mandated as stakeholders to play a key role in implementation of the recommendations.

Figure 1.1 Flow diagram on the International Code as framework

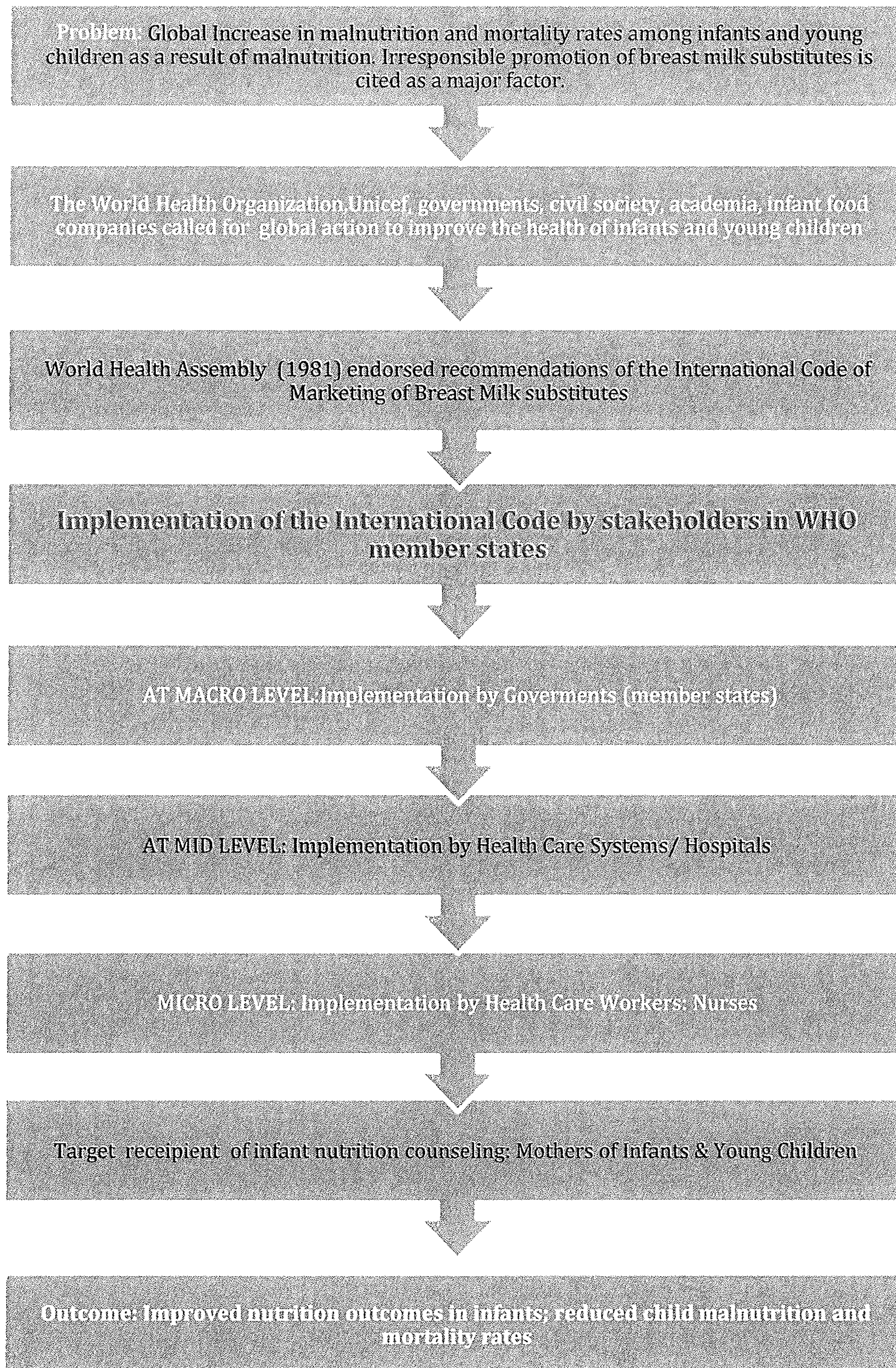


Figure 1.2 Map/Plan for the Study

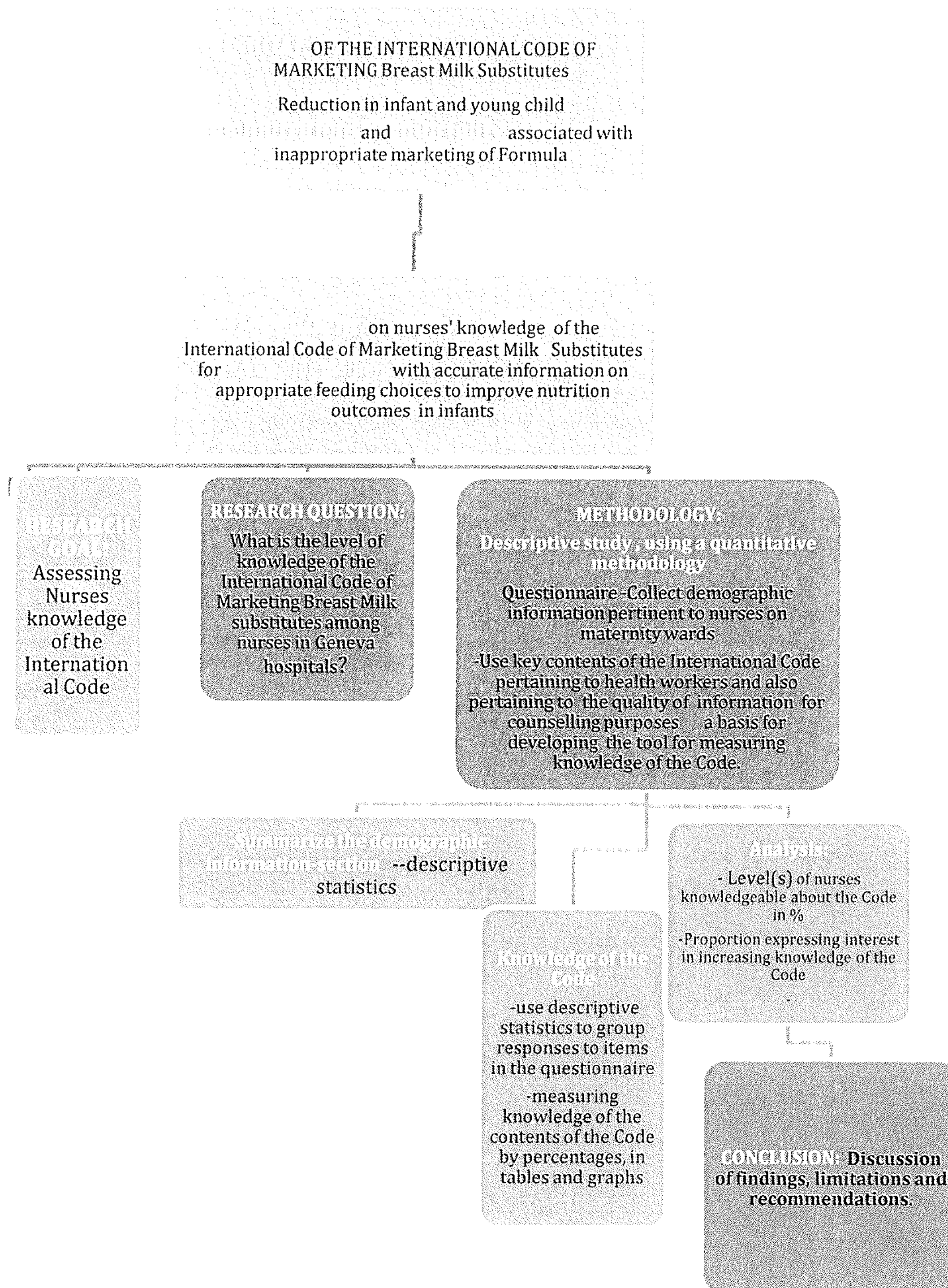


Figure 1.2 above was also designed by the researcher to serve as a plan or map for the study. The figure shows the overall goal of the International Code. The attainment of the goal at hospitals is dependent on nurses' knowledge of the recommendations to guide infant feeding

decisions of mothers. The research goal, question and methodology are described. The process for presentation and analysis of the collected data as well the conclusion are also described.

1.10. RESEARCH METHODOLOGY

1.10.1 Introduction

Loiselle, Prefetto-Macgrath, Polit and Beck (2010:12) state that research methodology is the technique selected by the researcher to structure a study, gather data and to analyze information relevant to the research question.

1.10.2 Research Design

To explore and describe the phenomenon of nurses' knowledge of the International Code and how this impacts on their practice, the researcher will use a quantitative approach. The researcher will present in chapter 3, a detailed discussion of the methodology for this study.

1.10.3 Study Population

According to Polit and Beck (2008:306) the study population is the entire aggregate of cases in which the phenomenon under study could be present. For this study, the population includes all maternity nurses in Swiss cantonal hospitals tasked with or responsible for counseling mothers on infant and young child nutrition.

The OECD reviews of health systems (2006:49) reports 78'000 professional nurses working in Swiss hospitals. Of these, 3'410 are registered as mid wives (Swiss Federation of Midwives 2012). The accessible population is nurses assigned to the maternity wards at the Cantonal and La Tour hospitals in Geneva. 87 professional nurses were available to participate in the study The inclusion criteria are nurses tasked with or responsible for nutrition counseling of mothers of newborn infants, working on the maternity ward of a baby-friendly hospital.

1.10.4 Study Sample

A sample, according to Polit and Beck (2008:306), is the subset of the population elements. For this study, the element is a nurse who is actively involved in any aspect related to counseling on infant nutrition and young child nutrition.
Purposive sampling will be used to select nurses who counsel or are responsible for counseling mothers on infant and young child nutrition on the maternity wards in both hospitals.

1.10.5 Data Collection Approach

Data will be collected by means of a survey questionnaire, consisting of open and fixed-choice questions from nurses on the maternity wards from both hospitals.

Section one of the questionnaire consists of demographic and background information of the participants. Section two and three are nursing practice questions on infant nutrition relevant to the knowledge of the International Code.

A knowledge level scale was designed by the researcher to categorize nurses' level of knowledge of the Code, based on accurate responses in the practice-related questions.

Level 5.	No knowledge of the Code	(0%)
Level 4.	Poor Code knowledge	(1-49%)
Level 3.	Fair Code knowledge	(50-69%)
Level 2.	Good Code knowledge	(70-84%)
Level 1.	Excellent Code knowledge	(85-100%)

Each participating nurse will be provided with a questionnaire accompanied by a cover letter explaining the purpose of the study. The completed questionnaires will be returned to their supervisors at their respective wards and collected by the researcher.

1.10.6. Validity Reliability

An instrument cannot be valid if it is not reliable. According to Polit and Beck, validity is the ability of an instrument to measure what it is supposed to measure (2008:458). Reliability refers to the consistency in which the instruments used to collect data produces the same results.

The researcher will develop her own questionnaire, based on the recommendations and guidelines from the WHO Code. To improve reliability, a pilot study will be conducted at the La Tour hospital maternity ward to ensure that the questionnaire is clear, unambiguous and to correct or amend the questionnaire as necessary.

The researcher will also seek the opinion of a statistician to ensure that the items in the questionnaire are likely to elicit feedback to address the research question. Based on the feedback from the pilot study and statistician, revisions to the questionnaire will be done.

1.10.7 Data Analysis Approach

Data analysis, according to Polit and Beck, is to organize, provide structure and to describe the collected data (2009b:392). The researcher will consult a statistician prior to data collection to

review and advice on the approach. Upon his approval of the approach, data collection will commence.

Data collected from the questionnaires will be entered on a spreadsheet and sent to the statistician for analysis. Descriptive statistics will be used to present and describe the data, using appropriate graphs, tables and diagrams, calculation of percentages and averages to give the data meaning and insight.

1.10.8 Permission to do the research

Permission will be sought from the La Tour Hospital, Cantonal Hospital (Nursing Services) and from the Department of Health Studies at UNISA. After obtaining permission, the researcher will inform the participating nurses the purpose of the research and seek their informed consent. Their right to participate or not to participate in the study will be respected by the researcher. This study did will not involve the participation of patients at the hospitals.

1.11 ETHICAL CONSIDERATIONS

According to Watson, McKenna, Cowman and Keady (2008:117), ethical approval is achieved after submission of detailed proposal to a local ethics committee. The researcher will obtain permission from UNISA and from the Nursing Services Administration of both hospitals.

Participants will be provided with information about the study to enable them to make an informed decision on whether they want to participate or not. They will be assured of their right to confidentiality and their freedom to withdraw from participation at any time. Maternity ward nurses at both hospitals will be approached to participate in the study on a voluntary basis.

Autonomy is the ethical principle underlying self-determination and informed consent. The researcher will respect the wishes of the participants. Polit and Beck (2008:180) state that autonomy is the most secure means of protecting confidentiality. This occurs when the researcher is unable to link the participants to their data.

Participants will be assured of their anonymity and the researcher will avail herself for clarifying any concerns they might have had about the study.

The researcher will obtain permission from UNISA and from the Nursing Service Administration of both hospitals.

1.12. LIMITATIONS OF THE STUDY

According to Polit and Beck (2009:456), limitations are problems or constraints encountered by a researcher in a study. A researcher is responsible for informing the readers about the difficulties encountered.

This research will be based on data collected from maternity ward nurses from the 2 hospitals in Geneva. The size of the sample may be a potential limitation.

Time and budget might be potential constraints as the researcher is self-funding this study and is a full time employee.

1.13. OPERATIONAL DEFINITION OF TERMS

Knowledge: Facts and information obtained through formal education or nursing experience.

The Code: The international code of marketing breast milk substitutes

Nutrition Counseling: Professional guidance on infant offered by a nurse

Mother-Infant pair: Mother and child duo in a ward at the hospital as a result of delivery or pediatric hospitalization

WHO Member States: Countries who are members of the United Nations and accept the Constitution of the World Health Organization

WHA Resolution: A formal statement of a decision adopted by the members of World Health Organization, having taken into account the views of civil society and other stakeholders

Health Policy: An adopted global health recommendation with plan of action for implementation by member states and other stakeholders

Implementation: Actions by stakeholders to achieve policy aims and objectives

Baby Friendly Initiative: A breast feeding promotion program of WHO and UNICEF at maternity health facilities

1.14 SUMMARY

Chapter one is an introduction to the study. Nurses as health workers have clear responsibilities in the implementation of the Code in order to contribute to local and global efforts among WHO member states to encourage mothers to breast feed to improve child survival. The objective of the study is to assess the level of knowledge of the International Code among nurses in Geneva, Switzerland where the head quarters of World Health Organization is located. Karacam and Kitis (2005:61-67) stated that nurses play an important role in imparting knowledge to mothers about appropriate infant feeding and are therefore expected to be knowledgeable with policy recommendations such the International Code to achieve optimal nutrition outcomes.

Promotion of appropriate infant feeding is constrained when knowledge is deficient (Smith, Dunstone and Elliot-Rudder 2009:350-8). Nurses are likely to comply with the International Code if they are knowledgeable about specific actions in current practice that violate it. One of the many factors influencing exclusive breastfeeding and duration is commercial hospital discharge packages distributed to mothers in hospitals (Rosenberg 2008:290-5). According to Rosenberg, distribution of commercial hospital discharge package to mothers is a marketing strategy used by manufacturers to seek endorsement of infant formula from health professionals.

Switzerland is a member state of the World Health Organization and where the researcher resides. The results of the study could contribute to the body of knowledge about what Geneva nurses know about the Code. The methodology and data collection method have been described. The potential limitations of the study were described and key terms were defined.

Chapter 2

LITERATURE REVIEW

2.1 INTRODUCTION

Chapter two is dedicated to the review of literature about the study field. The researcher reviewed a variety of sources for studies, research publications, articles from journals related to the International Code and its implementation in WHO member states, with a focus on nurses and hospitals and their interactions with infant formula companies staff and distributers.

The knowledge of the Code among nurses in Switzerland was not reviewed in isolation; available research on the Code in WHO member states including Switzerland were reviewed, presented and compared. Empirical literature was consulted. The sources for the literature review included the UNISA Library, Internet, Pubmed, Journal of Obstetrics, Gynecologic and Neonatal Nursing, Journal of nutrition science, World Health Organization publications on the topic and other sources. The researcher conducted the literature review before data was collected.

The purpose of this study is to assess nurses' knowledge of the International Code in Geneva hospitals. Sokol, Clark and Aguayo (2008:159-63) stated that inappropriate marketing of formula has contributed to lower rates of breastfeeding and to an increase in child morbidity and mortality in the developing countries. The recommendations of the International Code are for the benefit of all infants and young children, irrespective of whether they live in developed or developing countries.

Switzerland is a developed country and a member state of the World Health Organization, and therefore global health recommendations such as the International Code of Marketing Breast milk substitutes should be known by nurses here who are also mandated to implement their responsibilities under the Code as well as to help monitor non-compliance within the health care system where they are employed.

2.2 PURPOSE OF THE LITERATURE REVIEW

According to Polit and Beck (2010:170), literature review provides useful background for understanding the current knowledge on a topic. The researcher included historical literature to give context to the topic, refine the research problem and methodology and to identify concepts related to the topic.

Literature review also involves familiarizing oneself with the latest trends, developments and research findings on the relevant research topics (Polit and Beck 2009:181). There are many studies available concerning nurses and breastfeeding and the baby-friendly initiative which is now in place in hospitals of many member states including Switzerland, however studies available on nurses' knowledge of the International Code in relation to infant feeding counseling at hospitals in Switzerland are limited. The few available studies were published over 5 years ago, however they will be included in the review.

For the review, key words were derived from the title of the study to assist with the search:

- The International Code
- Nurses' knowledge
- Hospital
- Breast milk substitutes, i.e. formula, bottles and teats
- Mothers of newborn infants
- Midwives, Nurses, health care workers

Other related concepts utilized in the search were:

- Breastfeeding
- Infant feeding counseling
- Marketing, inappropriate promotion of formula
- Complementary foods

The inclusion criteria for the literature search are studies published in English about the International Code and Nurses or health workers in World Health Organization member countries within the last five years. Some studies published more than 5 years ago are included to provide historical context to the review.

The second criteria are studies about nurses and knowledge for professional practice within the last five years. Using the identified key words, searches were conducted in Pubmed central database, Swiss Medical Weekly, UNISA Library, Nursing text books, NLM Gate way, and Google Scholar.

2.3. SCOPE OF LITERATURE REVIEW

The researcher conducted the review of literature to ascertain the existing body of knowledge relevant to the topic, consulting sources such as research and published reports from WHO member states from developed and developing countries and regions. Legislations governing the International Code in selected member states were included in the review.

Relevant journals and textbooks were also consulted for information on infant and young nutrition.

2.4 BREAST MILK SUBSTITUTES

Infant formula is an alternative feeding method to breast milk for mothers who decide not to breast feed. Article 2 of the Code (1981:8) defines infant formula as:

> "Breast milk substitute formulated industrially in accordance with applicable Codex Alimentarius standards, to satisfy the normal nutritional requirements of infants up to between four and six months of age, and adapted to their physiological characteristics."

Wolf (2003:158) traces the use of breast milk substitutes to the early 1800's. Mothers who bottle-fed their infants had three main options:

- Canned Cow's Milk
- Proprietary infant food to be mixed with cow's milk or water
- Fresh cow's milk

Cow milk was available in raw, certified, pasteurized, sterilized or modified form. Infants were also fed with other breast milk substitutes such as pap and panada, a mélange of meat and rice broth, cow milk, sugar and water in nursing bottles or sucking rags. Canned condensed and canned evaporated milk have also been offered to infants as breast milk substitutes. Pharmacies sold commercially manufactured powders to be mixed with water or cow's milk or both (Wolf 2003:159).

Beginning in the industrial revolution, safer water supply and sewerage systems, pasteurization of milk, availability of refrigeration and separation of mom from baby after birth contributed to the declining of breastfeeding, according to Riodjan and Countryman (1980:207-210). By the 1900's, besides commercial breast milk substitutes, many recipes of homemade substitutes were based on condensed milk. Evaporated milk had become the most common form of infant nutrition. Anderson, Cornwall, Jack and Gibson (2008:146-159) stated that 50% of toddlers received rice porridge before 6 months as well as diluted sweetened condensed milk.

SMA was introduced in 1919, Lactogen in 1920, Similac in 1924 and Enfamil in 1959. These became known as commercial formulas. Infant formula is superior to other breast milk substitutes such as canned cow's milk, fresh cow's milk and proprietary infant foods, however it is inferior to breast milk (Fomon 2001:409S-20S).

The recommendations of the Code state that breast milk can be replaced by infant formula during the first four to six months, and describes formula as a bona fide substitute (WHO

1981:23). The marketing of Infant formula as suitable for partial or total replacement of breast milk by companies and distributors is prohibited by the International Code and stipulated under the Scope in Article two (WHO1981).

Cow milk and other foods such as fruit juices and cereals are not considered bona fide substitutes. According to Barenness, Latthaphasavang, Anderson and Sour (2008:a1379) products such as Bear Brand coffee creamer used in Laos are not considered a bona fide breast milk substitute. The WHO states that cow milk, vegetables, fluids, fruit juices, semi solids and solids given after six months are not considered breast milk substitutes but rather complementary foods (1981:23). These foods cannot be marketed for use by infants below six months and should not be marketed to undermine exclusive and continued breastfeeding.
With the exception of the ready-to-feed type, infant formula requires dilution with clean water and a mother or caregiver who is able to follow the instructions provided. Over-dilution leads to inadequate intake of nutrients and calories, where as dilution with little water leads to dehydration, diarrhea and intake of excess calories. Good hygiene practices are essential as powdered formula is not sterile and once reconstituted, it is an excellent medium for bacteria growth (Lawson 2007:45). Professional nursing counseling is necessary in educating mothers who decide to formula-feed to promote food safety and to prevent morbidities and mortality associated with infant feeding.

It is noted that infants with medical conditions such as galactosemia, maple syrup urine disease and phenylketonuria should not be fed with breast milk but rather specialized infant formula (WHO 2009). Infant formula is a bona fide breast milk substitute, according to the International Code and is an important source of nutrition for infants who are not breastfed. Lawson (2007:39) stated that infant formula is a safe alternative to breast milk for mothers who are unable or do not wish to breastfeed, provided it is safely prepared and handled.

In Switzerland, 100% of the population has access to improved drinking water. Tap water quality is as pure as bottled mineral water (Swiss Federal department of Foreign Affairs 2012). Improved water and good sanitation reduce potential risk factors for formula contamination. Table 2.1 shows the basic indicators relevant to infant formula use in Switzerland.

Table 2.1 Basic Swiss Indicators

Under 5 mortality rank, 2010	5/1000 live births
Annual number of births	76’000
GNI per capita, 2010	$70’350
Life expectancy at birth	82 years

% of population using improved drinking water, 2008	100%
% of population using improved sanitation facilities, 2008	100%
Secondary School participation, net enrollment ratio, 2007-2012, female	82%
Total Population (thousands), 2012	7664

Compared to neighboring countries such as France, Germany and Italy with an IMR of 4 per 1000 live births respectively, professional nurses in Switzerland have a basis for contributing to improving child health. Nutrition plays a role in health and disease, and is an important part of public health promotion efforts.

2.5 HISTORICAL CONTEXT

According to Sterken (1990:1546), the WHO responded to the global decline in breastfeeding initiation and duration by producing several policies and global health recommendations. The International Code is one of the policy recommendations aimed at addressing the influence of the marketing methods used by formula companies and distributers on breastfeeding. Nurses as health workers play a critical role in breastfeeding advocacy and are mandated by the International Code to protect, promote and support breastfeeding (WHO 1981:11).

Recent studies about the International Code in member states available in English were explored. The International Code is a recommendation to all member states, with a focus on the inappropriate marketing of infant formula in a way that interferes with breastfeeding. The preamble of the International Code refers to the vulnerability of infants in the first few months and as such the usual marketing practices are rather unsuitable for infant formula as a commercial product.

According to the WHA (1992:123), advertising to mothers of infants up to six months of age is inappropriate for the following reasons:

> *'Advertising of infant formula as breast milk substitute for breast milk competes unfairly with normal healthy breastfeeding, which is not subject to advertising, yet which is the safest and lowest cost method of nourishing an infant, and advertising infant formula as a substitute for breast milk favors uninformed decision making, bypassing the necessary advice and supervision of the mother's physician or health worker'.*

Marketing is defined in the International Code as the promotion, distribution, selling, advertising of formula, product public relations and information services (WHO 1981:15). According to Brady (2012:529), companies market infant formula aggressively to boost sales and profits. Health workers as well as company sales women dressed as professional nurses have provided samples of formula and advice mothers on infant feeding. Health workers in return receive gifts for their cooperation. Three factors contributed to the rise in infant morbidity and mortality as a result of inappropriate formula use: lack of hygiene, high cost of formula, and the inferiority of the formula compared to breast milk.

Appropriate marketing of infant food is the central theme of the International Code. The promotion of infant formula in hospitals has been documented in many studies emanating from member states. Bartick et al (2009:S31-9) stated that inappropriate promotion of formula is common in US hospitals, despite evidence that inappropriate marketing is a threat to breastfeeding. The International Code is very clear about how inappropriate marketing of breast milk substitutes violate the Code. When infant formula is marketed as suitable for partial or total replacement of breast milk, it constitutes a violation (WHO 1981:23). Nurses' knowledge of the International Code is therefore a professional responsibility to assist mothers with informed decision-making.

According to Stang, Hoss and Story (2010:16-25), pregnant women and mothers are primary targets of formula marketing which often contain health statements or claims such as improvement in brain development, which may influence a mother's infant feeding decision. Wright, Coverston, Tiedman Abegglen (2006:112) reviewed results of randomized controlled trials on infant formula supplemented with Docosahexaenoic acid (DHA), a fatty acid, and concluded that the addition of DHA have no significant effect on infant development.

Five hundred violations of the Code by companies and health workers have been reported globally in 46 countries (Brady 2012:529). In developed countries such as Switzerland, many infant formula companies have been reported to provide free meals, research grants as well as financial support to health care workers to attend conferences. Koletzko (2011:71) reported on a company accused of distributing free packages containing feeding bottle and teat to mothers of four to six week old infants. The implementation of the Code is the responsibility of not only

governments or member states and the infant formula companies, but also the responsibility of health care systems and health care workers such as nurses. Chung, Kim and Nam (2008:229) in South Korea, recommended the education and campaigning of the importance of breastfeeding to health workers in maternity units. For this study, infant morbidity and mortality are outcome measures of inappropriate infant feeding practices. McKinzie, Pinger and Kotecki (2008:192) stated that breast milk is the ideal form of nourishment for infants up to 6 months of age. It contains substances that help infants to resist infections and other diseases. Breastfeeding lowers infant mortality by reducing the ingestion of infectious pathogens (Edmond et al 2007:1126-1131).

Exclusive breastfeeding is a global public health intervention as it has been shown to reduce both infant morbidity and mortality. Steube (2009:222) stated that health outcomes vary greatly for infants in developed countries who formula-feed when compared to those who breastfeed. Infants who are not breastfed are associated with a high incidence of infectious morbidity including gastroenteritis, otitis media, and pneumonia, risk of obesity, diabetes, leukaemia, and sudden infant death syndrome. The differences in health outcomes between children fed with breast milk versus formula can be partly attributed to the immune factors present in breast milk.

2.5.1 Infant Morbidity, Mortality and the Code

The urgency for member states, civil society and the World Health Organization to develop an International Code of marketing originated in the early 1970's. At the 27th World Health Assembly, a global decline in breastfeeding rates with rising morbidity and mortality was noted by many member states, and among factors cited as contributing to this decline was the inappropriate promotion of manufactured breast milk substitutes (WHO 1980:4).

Brady (2011:1136) stated that the International Code stemmed from the association of the rise in infant morbidity and mortality with the aggressive marketing of formula by companies in the developing world, where they sought new markets. Poverty, illiteracy and poor sanitation contributed to improper formula preparation and use, which resulted in mortality in infants from malnutrition, diarrhea, and pneumonia.

The Baby Killer, a famous report on infant malnutrition and deaths as a consequence of inappropriate use of infant formula, highlighted health consequences associated with formula feeding in developing countries where mothers without the knowledge, resources or the facilities (clean water supply, proper hygiene, fuel, clean utensils, storage facilities) prepare

formula for their infants and young (Muller 1974). The report raised concern globally about morbidity and mortality as a result of inappropriate use of infant formula in developing countries. Many infant formula companies were sued for libel. The regulation of the marketing practices of the infant food industry was consequently advocated for by civil society organizations and member states.
The WHO and UNICEF in 1979, held a global meeting on Infant and Young child Nutrition and it was agreed that there should be an International Code of Marketing of infant formula and other breast milk substitutes. After consultation by the Director General of WHO with member states and all concerned parties in 1979, the International Code was adopted (WHO1981:5).

Member states are in turn expected to promote, protect and support breastfeeding by adopting and implementing the recommendations of the Code according to their individual legislative framework to ensure that breast milk substitutes are not marketed irresponsibly in countries and that accurate information is given to mothers on appropriate infant nutrition.

2.5.2 Impact of the Marketing of Formula on Breastfeeding in Member States

Infants in the developed world have a right to the best nutrition outcomes as those in developing countries and should enjoy equal right to protection from inappropriate marketing practices that has been shown to impact on mothers' feeding decisions. All infants who are not breastfed are placed at risk for increased morbidity (Wright and Waterson 2006:383).

The impact of marketing of formula through the media and how it affects mothers' infant feeding decisions has been studied. Formula is advertised as the elite choice of infant feeding, often associated with modernity. Advertising and health workers attitude have been shown to influence mothers' infant feeding decision. Mothers' exposure to commercial advertisement of infant formula increases the risk of breast feeding cessation in the first two weeks (Kaplan and Graff 2008:505).
The opportunity to distribute free infant formula packages to mothers of new born at hospitals prior to discharge is a marketing strategy. Rosenberg et al (2008:290-295) stated in their study that mothers of newborn who have initiated breastfeeding while at the hospital have been provided with formula packages before discharge. This marketing strategy discourages mothers from exclusive breastfeeding.
Merwood et al (2010:363) noted that 91% US hospitals distribute infant formula samples in violation of the International Code. Partnerships with hospitals and their staff create brand loyalty; some of the marketing efforts include providing free formula for hospital use, gifts to staff in the form of fellowships and conferences as well as funds to support supplies.

Similarly in Hong Kong, Asia, Pls (2006:400-401) noted that hospitals receive free supplies of formula, and that commercial materials with promotional messages can be seen in hospitals and clinics. Similarly, McInnes, Wright, Haq and McGranachan (2007) in Glasgow stated that products were present in health care premises, although, contact with staff was minimal. Evidence of inappropriate marketing has been reported in Brazil. Monteiro (2006) called on all stakeholders including health professionals to commit to enforcing the Brazilian guidelines of marketing of baby food, pacifiers and bottles, as the law is not always observed.

2.5.3 Nurses and the International Code

Cattaneo et al (2010:751) in their assessment of the progress of the protection, promotion and support of breastfeeding in Europe noted little improvement in the implementation of the International Code. Breast feeding rates in Europe are falling short of global recommendations. Nurses are stakeholders in the implementation of Code (WHO 2008:9). Their knowledge of the recommendations of the Code has a direct impact on both local efforts at country level and global efforts in improving the survival of infants and young children. Knowledge underpins nursing practice and defines the profession.

Article seven of the International Code is about health workers encouraging and protecting breastfeeding. Cattaneo (2008:13) stated that public health care policies and the health care systems are determinants of breastfeeding. Health care systems provide access to antenatal care, quality assistance during delivery and in the first few days afterwards and professional support for counseling and lactation support.

The International Council of Nurses based in Geneva (ICN), in its position statement on the Code in 2004, strongly supports the International Code and states that breast-fed infants have a 'significantly increased chance of survival and a decreased incidence of morbidity'. Nurses, according to ICN, have a professional responsibility to actively promote the provisions of the Code. Switzerland Nurses Association is a member of the International Council of Nurses.

Heird (2007:499S-502S) stated that the determinants of a mother's decision on infant feeding are based on information and support received during the periods of pregnancy, child birth and postpartum. The International Code forbids company employees from advising mothers about infant feeding as it undermines exclusive breastfeeding (WHO 1981:11).

A health care worker who distributes promotion materials, such as discharge packages, is "inadvertently strengthening the formula promotion message, potentially at the expense of a mother's plan to breast feed" (Kaplan and Graft 2008:486-504).

Several studies have shown that nurses' knowledge of the Code in member states is inadequate to protect breastfeeding. McInnes, Wright, Haq and McGranachan (2007:719-725) stated that one-third of health facilities in Glasgow surveyed displayed non-compliant materials from manufacturers. Likewise, Battersby in her evaluation of midwives knowledge of formula feeding also noted that many midwives lacked the knowledge of formula milks and that there is limited support available for mothers who decide to formula-feed (2010:192-197).

Similarly, Laksman, Oglivie and Ong (2009:601) in their systematic review of studies focusing on mothers' experiences of bottle feeding in the United Kingdom, stated that while breast milk is the gold standard for infant feeding and should be encouraged, for mothers who decide to bottle-feed, there is inadequate provision of information and support, which may put the health of their infants at risk. In Scottland, Cairney and Barbour noted that for a large number of women, access to health professionals for support and information about formula feeding is restricted, which contributes to poor infant feeding decisions (2007:34).

In the United States, Grossman et al (2009:59) noted that although mothers' decision regarding infant feeding may be influenced by health care practitioners, knowledge of breast feeding among them is often lacking.

In Australia, Fetherston (2007:26) stated that the majority of mothers did not follow recommended guidelines for exclusive breastfeeding nor the appropriate timing of introducing complementary foods. Formula feeding was the reason cited for the discontinuation of breastfeeding, and infant cues and behavior were the reasons for early introduction of solid foods.
Muzino et al (2006:12) in Japan stated that health care providers have low level of knowledge of the Code and low level of support for breastfeeding, based on responses to a questionnaire developed by the International Board of Certified Lactation Consultants on the Code and compliance in hospitals. Only 18% of obstetricians had ever heard about the Code. The study recommended a need for health care providers to increase their knowledge of the International Code in order to promote breastfeeding.

Similarly in Pakistan, Salasibew, Kiani, Faragher and Garner (2008:24) stated that 79.8% of the health care workers were not aware of the International Code and 70.5% were not knowledgeable of the national breastfeeding law. What the researchers found interesting was

that the minority who knew of the national law was more likely to report receiving promotional gifts from distributers.

In South Africa, Chopra and Rollins (2007:2) in the assessment of infant feeding policies and programs in four African countries noted that health workers reported receiving free formula samples in violation to the International Code. Recently this year, the Department of Health of South Africa released draft regulations on foods for infant and young children(No R184) for public comments. The purpose of the draft regulations is to promote safe foods by setting standards and by restricting the use of inappropriate marketing practices. According to the Department of Health, the regulations will benefit the public by reducing conflict of interest by health care workers and ensuring that parents receive objective information to enable them to make informed decisions about infant nutrition.

Aguayo, Ross, Kanon and Quedraogo (2003:127) in West Africa noted that companies were violating the Code by giving free samples and donations to mothers. Eighty five percent of the health workers in Togo did not know about the existence of the International Code. In 2008, Sokol, Clark, Aguayo returned to West and Central Africa to monitor progress and noted that 50% of the 24 countries have laws, decrees or regulations that implemented most of the provisions of the Code (2008:161).

Nurses' knowledge of the International Code is therefore a professional responsibility to protect mothers from misinformation about appropriate infant feeding to enable informed decision-making.

2.6 INTERNATIONAL TRENDS WITH REGARDS TO THE IMPLEMENTATION OF THE RECOMMENDATIONS OF THE CODE

According to the World Health Organization (2008:6), each member state should act on the Code through legislations, regulations, measures such as national policies or codes. Member states are to ensure that processes for implementation, monitoring and reporting of violations are in place. Published information on the state of the implementation of the Code in countries permitted the researcher to appreciate the extent to which countries have complied with the Code. For over 30 years since the Code was adopted at the World Health Assembly, it has not been enacted into national laws or provisions by all member states. The Code is enforced by some member states, despite the fact that infant malnutrition and mortality remain a public health priority and a major component of the Millennium Development Goals.

Of the 194 member states, 37 countries have enacted legislation on the Code. 47 countries have enacted legislation on many of the provisions of the Code; the majority of these are developing countries. 19 countries have enacted legislations on a few of the provisions. Switzerland and 7 other member states have adopted some of the provisions through non-binding measures. 14 member states have adopted all the provisions however they remain non-binding. The remaining 46 countries have not yet enacted the Code. For instance in Iran, Olang et al (2009.4:8) stated that the WHO Code is highly favored by the Iranian Government. Iran has adopted many of the provisions including no gift or samples of formula to health workers, no advertising of formula to the public, and no direct or indirect free samples or gifts to mothers or relatives. The study showed a downward trend with exclusive breastfeeding at four and six months, far from meeting the recommendations of WHO.

2.7 THE IMPLEMENTATION OF THE INTERNATIONAL CODE IN SWITZERLAND

The International Code calls on member states to implement the recommendations according to their own legislative frameworks. Switzerland adopted the International Code in 1995 on a voluntary basis in a form of a Code of Conduct, to govern the marketing of breast milk substitutes, dealing with labeling, contact with mothers, physicians and health workers (WHO: 1998). Under the Swiss code of conduct:

- Information about formula should emphasize the superiority of breastfeeding and the need to contact a health specialist.
- Information must not deter mothers from breastfeeding.
- Media advertising is permitted in scientific, child rearing publications, or others supplied by qualified health workers in hospitals.
- No advertising or promotional offers at the retail level
- Samples provided to mothers by companies are for counseling purposes only and are to be supplied against specific request
- Monitoring for compliance is the responsibility of a panel of stakeholders who drafted the code of conduct.

In comparison, the key aspects of the International Code's recommendations are as follows:

- No advertisement of formula and other products under the Code to the public (Article 5).
- No free samples of formula/products to mothers (Article 5)

- No promotional activities related to marketing of formula in health facilities (Article 6)
- Health Facilities should not be used to promote products (Article 6)
- No personnel from manufacturers or distributers are permitted to counsel mothers (Article 5)
- No pictures of infants idealizing formula are permitted on labels of products (Article 4)
- Information provided to health workers concerning formula must be factual and scientific (Article 7)
- No financial or material inducement to promote products should be offered by manufacturers or distributers to health workers (Article 7)
- Information on artificial feeding must include benefits of breastfeeding and dangers and cost of formula feeding on the labels (Article 4).
- Health workers should encourage and protect breastfeeding and make themselves familiar with their responsibilities under the Code (Article 7)
- Manufacturers should disclose to institutions which health workers they have sponsored to attend conferences, given research grants, etc (Article 7).

The Swiss Code of Conduct compares well with the International Code, although there are differences between the International Code and the Swiss code. The Swiss Code of conduct is voluntary in nature and not based on legal regulation as in other WHO member states. It is known as the Swiss Codex Panel and it promotes and supports breastfeeding by monitoring compliance of companies according to the International Code and also by monitoring advertising (Codex Panel Portrait 2002:6). It takes into account the specific situation of Switzerland, as mothers have access improved drinking tap water and good sanitary conditions. It is important to also note that Switzerland is home to infant formula manufacturers.

Some civil society organizations have criticized the Swiss Code as not respecting the aims and principles of the International Code and that it permits the advertisement of infant formula and follow-on formula (The Swiss Codex Panel 2002:16). Permitting advertisement is contrary to the principles of the Code as it could impact on mothers' feeding decision.
According to the Code, when companies market infant formula as suitable for partial or total replacement of breast milk, it constitutes a violation (WHO: 1981).
In Switzerland, Merten, Dratva, and Ackerman-Liebrich (2005:e702) stated that since 1994, breastfeeding rates have improved as a result of the baby-friendly health facilities that

encourage mothers to breast-feed. Schwappach et al (2004:103-9) stated that one of the top three concerns that new mothers were likely to report was about alternatives of infant feeding. Practices of nurses in maternity wards can be viewed as either facilitating or threatening to breastfeeding promotion. According to the Code, inappropriate feeding practices lead to infant malnutrition, morbidity and mortality in all countries (WHO 1981: 6). The respect of a patient's right to self-determination is an important ethical consideration, however as infants are vulnerable and entirely dependent on mothers for appropriate choice of nourishment, nurses have an obligation under the Code to offer skilled support, guide the feeding decision, encourage and to facilitate breastfeeding (WHO 1981:6-7).

Childbirth in Geneva mostly occurs in hospitals, and as such the nursing profession has a unique opportunity to exert a strong influence on mothers on infant nutrition. The World Health Organization (2003:25) places responsibility on professional health workers to equip themselves with education and training that cover topics such as exclusive and continued breast feeding, feeding in difficult circumstances, nutritional needs of infants fed on breast milk substitutes, the International Code of Marketing Breast Milk Substitutes, and the skills to support breast feeding.

2.8 COMPLEMENTARY FOODS

WHO (2011) recommends that after six months of exclusive breastfeeding, infants should be fed with adequate, appropriate and safe complementary foods while continuing with breastfeeding. This recommendation is supported by ESPGHAN, the European Society for the Pediatric Gastroenterology, Hepatology and Nutrition and the North American Society for Pediatric Gastroenterology, Hepatology and Nutrition (2008:99).

The recommended timing of the introduction of complementary foods in Switzerland does not conform to WHO recommendations (Dratva et al 2006:818-25). Similarly, Rebhan et al (2009:467-73) noted that complementary foods are introduced early in Switzerland, which affects the duration of exclusive breast-feeding.

Early introduction of complementary food to infants affects the duration of breastfeeding. Schwappach et al (2004:103) noted that one of the top three concerns that new mothers in Switzerland were likely to report was about alternatives of infant feeding. The World Health Organization states that complementary food should be introduced when breast milk alone is insufficient to meet the nutritional requirements of infants between 6-23 months. As such, other foods and liquids are needed, in addition to continued breastfeeding, for energy and appropriate nutrition. These foods should be nutritionally adequate, safe, appropriately fed to infants.

2.9 STUDIES ON NURSES' KNOWLEDGE ASSESSMENT FOR PROFESSIONAL PRACTICE

Knowledge of the International Code, for the purpose of this study, is defined as the acquisition of facts and information about the International Code obtained either through formal nursing education or professional experience for use in infant nutrition counseling. Bastable (2008:4) stated that the focus of teaching is on outcomes that demonstrate how much nurses have acquired 'up-to date knowledge and skills to competently and confidently render care in a variety of settings'.

Nursing knowledge for professional practice has been assessed in various studies. Bonner and Lloyd (2011:1213) in their study on 'what information counts at the moment of practice' described nursing knowledge as a contested area. The ability of a nurse to make an informed judgment is dependent on the ability to identify relevant sources of information that informs professional nursing practice. The study was philosophically framed from a practice perspective and purposive sampling was used to select participants for interview to collect data. Information for practice was noted to emanate from epistemic, social and corporeal sources.

The descriptive and exploratory study measuring nurses' knowledge on pressure ulcer prevention by Miyakazi, Caliri and dos Santos (2010:1203-11) used a knowledge questionnaire to collect data from nurses with different educational backgrounds. Knowledge deficit was used to guide the adoption of preventive measures. Similarly, Roethler, Adelman and Parsons (2011:132) in assessing nurses' knowledge, used a questionnaire made up of a knowledge section and a practice assessment section, utilizing a likert scale. The study revealed inconsistencies in the actual knowledge and the perception of their ability to provide care.

2.10 SUMMARY

The Literature search was conducted to provide the researcher with understanding of the International Code and its implementation in WHO member states including Switzerland.

The implementation of the International Code varies across WHO member states. A comparison of the Code in Switzerland to the WHO Code highlights similarities and also differences, attributable to the situation of Switzerland. The review has shown that formula is marketed in a way that interferes with exclusive breastfeeding in some member states and that the baby friendly initiative in place in many Swiss hospitals is associated with improved breast feeding initiation and duration.

Cooperation between health care workers, formula companies exist in hospitals. Marketing activities relating to the promotion of breast milk substitutes have also been shown to exist and

health workers willingly or inadvertently assist in the promotion of formula to mothers at hospitals. Complementary foods are introduced earlier than the six months period recommended by WHO in Switzerland, which affects exclusive breastfeeding duration.

Given the limited adherence to the International Code in member states where these studies have emanated from, the researcher is interested in the state of knowledge of the Code among nurses in Geneva hospitals in particular.

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

3.1 INTRODUCTION

This chapter focuses on the design and methodology followed to conduct the study. The researcher describes how the study was conducted, noting the research approach, sample, sampling and data collection method. The chapter addresses ethical principles associated with the collection of data.

The purpose of research is to answer questions relevant to the nursing profession (Polit and Beck. 2008:19). The purpose of this study was to assess the knowledge level of the International Code among nurses in Geneva and how this impacts on their practice. The Code requires nurses from all WHO member states to adhere to the recommendations regarding counseling of mothers about infant and young child nutrition.

The researcher's interest is in assessing the knowledge level of the Code among nurses in Geneva who reside at the seat of World Health Organization headquarters where this global health policy recommendation was crafted and the application of the Code in nursing practice. WHO Member States implement the Code according to their own legislative framework (WHO 1981:14). The study would generate new knowledge about the current state of the knowledge of the Code among Geneva nurses.

3.2 FRAMEWORK

According to Polit and Beck, a framework is the underpinnings of a study (2009:198). The researcher selected the WHO's International Code of Marketing Breast Milk Substitute to guide this study and to assess the knowledge level of the Code among nurses. The researcher developed her own questionnaire to collect data, based on the terms, conditions and guidelines pertinent to nurses from the International Code.

Article seven of the International Code describes the responsibilities of health workers in implementing the Code. Article four pertains to information and education to be provided to mothers which does not undermine breastfeeding. Articles five and six concerning the responsibilities for health care systems and the general public were considered. Article eight pertaining to employees of manufacturers and distributors and their relationship with health care workers at hospitals was also considered and included in the assessment.

3.3 RESEARCH METHODOLOGY

Loiselle et al (2010:12) describe research methodology as a technique selected by the researcher to structure the study, gather data and to analyze information relevant to the research question. The method and approach of the research form the overall plan of the study.

The researcher has selected a descriptive design to answer the research question. The study will help to determine the current knowledge level of the International Code among nurses living in Geneva.

3.3.1 Descriptive study

A descriptive research is the study of a phenomenon as it naturally occurs in real life situations. The purpose of a descriptive study is to describe and document aspects of a situation (Polit and Beck (2009:236). The researcher described the characteristics of the phenomenon in terms of context, frequency and distribution of the situation, with a focus on measuring nurses' level of knowledge of the Code. A feature of descriptive study is that there is no manipulation of variables. Data may be collected in the form of words or numbers, using observation, questionnaires, surveys or an appropriate form of measurement (Houser 2007:325).

A descriptive design has been applied to this study because the researcher will answer the research question by collecting information on the attributes, characteristics and experiences of nurses working in nursing-practice environments for mothers and babies in Geneva. Quantitative data will be presented in the form of descriptive statistics in chapter FOUR.

3.4. STUDY POPULATION

The study population is a sub-set of the target population and will form the basis from where the sample for the study will be taken (Gerrish and Lacey 2010:143). In this study, the target population was all nurses working in maternity wards in Geneva hospitals because of their responsibility for counseling mothers on infant nutrition. The study population was comprised of nurses working in the maternity wards of the La Tour Hospital de and University of Genève Hospital (Cantonal). La Tour hospital is a private hospital, and Cantonal is a public hospital.

The Canton of Geneva has 15 hospitals and clinics (Office Cantonal de la Statistique 2010). According to Health Statistics, Switzerland has 10.7 nurses per 1000 people. The two hospitals that were included in this study are both Baby-Friendly facilities. This initiative has been responsible for increasing breastfeeding rates in Switzerland (Brown and Isaacs 2008:177).

The researcher selected Baby- Friendly facilities because these hospitals are associated with improved breastfeeding rates and nurses working in these facilities should be knowledgeable about appropriate infant nutrition counseling and breastfeeding promotion practices.

3.4.1 SAMPLING

A sample, according to Polit and Beck (2008:339) is the subset of the elements represented in the study. For this study, the sample consisted of nurses who met the following inclusion criteria:

i. All professional nurses and midwives working on the maternity wards of La Tour Hospital University of Geneva Hospital.
ii. All professional nurses and midwives in the two hospitals involved with infant nutrition counseling
iii. All professional nurses and midwives in the two hospitals with at least six months experience in infant nutrition counseling.
iv. All professional nurses and midwives employed in the two hospitals which have Baby-Friendly accreditation.

Nurses meeting all these criteria have been requested to participate in the study. The management from both hospitals confirmed to the researcher that all professional nurses and midwives on the maternity ward provide infant nutrition counseling services to mothers of newborn babies. Eighty-seven nurses who met the criteria were invited to participate on a voluntary basis. The sample consisted of forty-nine nurses and midwives.

Purposive sampling method was applied to ensure that the context of maternity care, knowledge and experience about infant nutrition have been included in the study sample. Polit and Beck (2008:341) stated that purposeful sampling, a non-probability sampling method is appropriate in a descriptive study, which is quantitative in nature. It is used to ensure that the appropriate attributes embedded in the study are represented in the sample (Polit and Beck 2009:312).

3.4.2 INSTRUMENT FOR DATA COLLECTION

Houser (2007:274) stated that a survey is the most common method of collecting data directly from subjects about their perceptions, knowledge and behavior.
In order to capture specific information about the knowledge of nurses about the Code, the researcher designed a questionnaire based on the WHO International Code.
Researchers have a choice of using an existing instrument or developing one more specific to the study, according to Moule and Goodman (2009:124).

The researcher has developed her own questionnaire to collect specific information about nurses' knowledge based on relevant articles from the International Code. Information was sought on the guidelines provided in Article seven of the Code which describes health workers' responsibilities under the Code; article six which describes the responsibilities of the health care system and article four which describes infant feeding information and education (WHO 1981:10-12). Aspects related to Article eight concerning relations between employees of manufacturers and distributers were also included in the survey.

Each participating nurse was provided a questionnaire with accompanying instructions to complete and return to their respective ward supervisors. The questionnaire contained 28 items and was divided in three sections. Section 1 was intended to solicit the demographic information of each participant. Sections two and three were made up of nursing practice-related items that assess knowledge about and application of the Code for nutrition counseling, based on key elements from the International Code. The elements from the relevant articles of the International Code used for developing the items in the questionnaire are as follows:

i. Health workers should protect, encourage breast feeding, and should familiarize themselves with their responsibilities under the Code;
ii. There should be no promotion of infant formula in health care facilities;
iii. Information given to health workers about formula should be restricted to scientific and factual information;
iv. Information on infant formula should explain the superiority of breast feeding, cost and dangers of improper use of infant formula and other breast milk substitutes;
v. There should be no donations or low-cost supplies of formula in health care facilities;
vi. There should be no display of products within the scope of the Code in health care facilities;
vii. Infant formula feeding should be demonstrated by health workers to mothers who need to use it. Information on hazards of improper use should be included;
viii. No gifts or personal samples should be given to health workers from representatives of distributors or manufacturers. Health workers should not pass samples to mothers;
ix. There should be no direct or indirect contact with mothers by representatives of infant formula manufacturers or distributers.
x. There should be no financial or material inducements should be offered to health workers.

xi. There should be no pictures of infants or words idealizing artificial feeding on labels (WHO: 1981).

3.5. DATA ANALYSIS

Responses to open and closed-ended questions were compared to the key elements identified from the Code and used to develop the questionnaire. With the open-ended questions in section three, participants were given an opportunity to respond in their own words. The researcher used content analysis to find common themes from the responses.
The rational for including open-ended items was to permit the participants to freely include additional responses related to the Code not envisaged by the researcher.

The researcher used a spreadsheet to enter responses and involved a statistician for the analysis of the data. Knowledge was measured according to the following scale:

Knowledge of the specific aspects of the Code	Corresponding level	Percentage Score
No knowledge	Level 5	(0%)
Poor knowledge	Level 4	(1-49%)
Fair knowledge	Level 3	(50-69%)
Good knowledge	Level 2	(70-84%)
Excellent knowledge	Level 1	(85-100%)

A nurse's level of knowledge of the International Code was defined as the number of correct responses given by each participant. In total, five knowledge levels were established. Each time a participant responded to a knowledge-related question that did not indicate knowledge of the Code, a score of zero was recorded. A total score of zero indicates no knowledge of the Code, level five, and a participant with the total score of 85 to100 indicates the highest level of knowledge of the Code, level one.

3.6 VALIDITY RELIABILITY

The instrument was assessed for reliability and validity prior to its utilization in the study. Reliability and validity are statistical properties of the quality of an instrument. According to Polit and Beck, validity is the ability of an instrument to measure what it is supposed to measure (2008:458). Content and face validity are relevant to this study.

Content validity relates to how the items in the questionnaire measure the concept described. Gliner and Morgan (2009:320) state that the contents of the instrument must be representative of the concept being measured. The researcher ensured content validity of the instrument by formulating items based on relevant articles and guidelines from the International Code.

Face validity refers to whether the questionnaire appears to be measuring the appropriate construct (Polit and Beck 2008:458). Face validity was established through consultation with the Maternity ward manager, lactation consultants and midwives at the Hospital de La Tour. The criteria for face validity were technical soundness, clarity of the items and of the instructions.

The researcher presented the survey in a legible, easy to read and understand format, provided information on the objective of the study and included clear instructions.

Expert opinion was sought from the heads of maternity service at La Tour and the University hospitals, experienced midwives and lactation specialists about the questionnaire. Their responses and comments on the questionnaire were used to improve the standard of the questionnaire in content, format and presentation.

To improve validity, the researcher piloted the questionnaire. Piloting is the stage where the instrument is pre-tested before the main study (Gerrish and Lacey 2010:378). The researcher's purpose of piloting was to evaluate the questionnaire in answering the research question.

The procedure for piloting involved identifying a small number of experienced nurses. These four nurses were excluded from the main study and were instructed not to discuss their participation with other maternity nurses on the ward. The questionnaires were sent to the nursing manager of the La Tour Maternity ward for distribution to nurses and collection once completed.

The researcher explained the purpose of the study to the nursing ward manager. As the nurses work on different shifts, the nursing manager took the responsibility to present the pilot questionnaires to the nurses. A cover note was attached to the questionnaire to explain the purpose of the study. Nurses were informed to contact the researcher should the need for clarification arise.

Prior to the administration of the questionnaire, the researcher ensured reliability and validity. Feedback received through the managers from the majority of the participants was that the instructions were mostly clear, easily understood and acceptable. The questionnaire was found to be self-explanatory and did not require more information to adequately respond. On one of

the responses, it was noted that two of the questions were not clear. The key words in the sentences were changed to provide more clarity and to promote understanding.

Reliability, according to Polit and Beck (2008: 471) is the degree of accuracy of an instrument in measuring an attribute. The instrument was accurate, based on the International Code and nursing practice. The researcher constructed clear and unambiguous questions.

Loiselle, Profetto-McGrath, Polit and Beck (2010:263) stated that sample heterogeneity is related to the reliability of the instrument. To improve reliability, the sample for the study was taken from two hospitals in Geneva. La Tour is a private hospital, and Cantonal is a large public hospital.

The questionnaire consisted of 28 items. Questionnaires with more items tend to have higher reliability than short ones (Loiselle et al. 2010:263).

3.7. DATA COLLECTION

Houser (2008:271) describes data collection as the systematic gathering of information, guided by the research question. To determine the level of knowledge of the Code, the researcher constructed a questionnaire based on the content of selected articles of Code relevant to nurses.

The researcher used a self-administered questionnaire as the data collection tool. The questionnaires were given to the maternity ward managers at each hospital for distribution as nurses' work on different shifts. Forty-nine nurses participated in the study. Each questionnaire was accompanied by a cover letter explaining the purpose of the research, instructions for completing the questionnaire, and assurance of anonymity and confidentiality. The researcher availed herself to provide any complimentary information required by the participants.

The completed questionnaires were returned to the ward managers for collection by the researcher.

3.8 ETHICAL CONSIDERATIONS

According to Moule and Goodman (2009:123), the researcher must ensure that participants are informed about what the study is about, ensure that their confidentiality and anonymity are protected and measures put in place to ensure protection from harm.

3.8.1 Institutional Approval

The research proposal was reviewed by UNISA Health Studies Higher Degrees Committee (HSHDC) and an Ethical clearance certificate was issued to the researcher (see annexure C).

Permission was also sought from the Nursing Administrations of both La Tour Hospital Tour and the University Hospital.

3.8.2 Right to Full Disclosure

Nurses participating in the study have a right to full disclosure of what the study is about. The researcher described the nature of the study in the cover letter accompanying the questionnaire. Nurses were also informed of their right to refuse participation and informed consent was obtained.

3.8.3 Right to Confidentiality and Anonymity

Participants were informed that their names were not required for the purposes of the study and that their responses would not be linked to them in order to ensure confidentiality.

3.9 CONCLUSION

In this chapter, the researcher discussed the methodology and design for the assessment of nurses' knowledge of the International Code. A descriptive design was selected by the researcher to describe the level of nurses' knowledge of the Code. As the researcher was unable to find a satisfactory pre-existing tool to measure the level of knowledge, a questionnaire was developed using the International Code as the framework.

A pilot study was conducted to refine the questionnaire. Validity and reliability of the questionnaire were considered.

Ethical principles relevant to this study were considered to ensure the right to confidentiality, autonomy and of full disclosure of the purpose of the study. The researcher also described the method of data collection.

In the next chapter, the researcher will present the findings of the study.

CHAPTER 4

PRESENTATION, DESCRIPTION, ANALYSIS AND INTERPRETATION OF THE RESULTS

4.1. INTRODUCTION

In this chapter, the researcher presents data collected from 49 nurses from La Tour Hospital and University Hospital. The analysis and interpretation of the data are included in this section. The aim of the questionnaire was to explore the following research question:

What is the level of knowledge of the WHO International Code of Marketing of Breast milk substitutes among nurses in Geneva hospitals?

Data collection took place from January to March 2012. The researcher collected the completed questionnaires from the ward managers of the respective hospitals. Each completed questionnaire was numbered and the responses were entered on a computer spreadsheet. A statistician was consulted for the data analysis.

The results of the study are presented in three sections. Section 1 describes the demographic characteristics of the respondents. Section two and three describe the respondents' knowledge of the Code and responses to nursing practice-related questions about infant nutrition counseling.

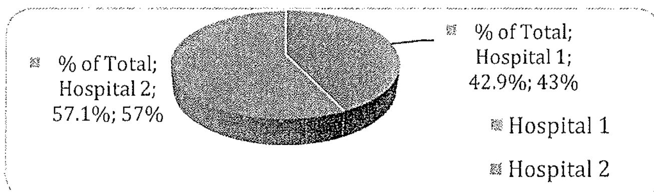
4.2 SECTION 1: Sample characteristics

Sample characteristics describe response rate and sample size, and the socio- demographic data of the respondents. The characteristics included the age, gender, education, current occupation, number of years in current position and duty station, number of mothers counseled weekly, the place where the International Code was learned from, the availability of information on the Code at work the place and hospital protocol on nutrition counseling, and opinion on patient education.

4.2.1 Response Rate and Sample Size

Forty nine nurses from both hospitals participated in the study. The response rate was 42.9% from the Cantonal hospital and 57.1% from La Tour Hospital.

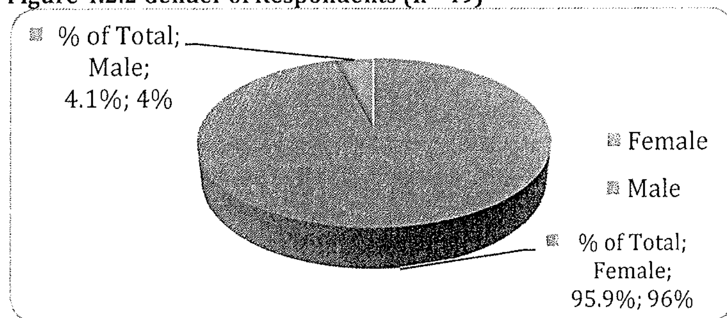
Figure 4.2.1 Response rate (n =49)



4.2.2 Gender of Respondents (n =49)

The majority of the nurses who participated in the study were females. Figure 4.2.2 shows that 95.9% were females (n=49) and 4.1% were men. According to the Work Group of European Nurse Researchers Country report (WENR), about 90% of the nurses in Switzerland are females. The gender of the majority of the participants is reflective of the gender distribution in the nursing profession in Switzerland. Women's personal experience with breastfeeding and infant nutrition increases their knowledge (Brodribb, Fallon, Jackson and Hegney 2008:422).

Figure 4.2.2 Gender of Respondents (n =49)



4.2.3 Age of Respondents (n= 49)

Table 4.2.3 below shows the distribution for the age categories. Out of 49 respondents, 65.3% were more than 35 years. Thirty four point seven percent of the respondents were 35 years of or less.

Table 4.2.3 Age of Respondents (n=49)

AGE	%
<=35 Years	34.7%
>35 Years	65.3%

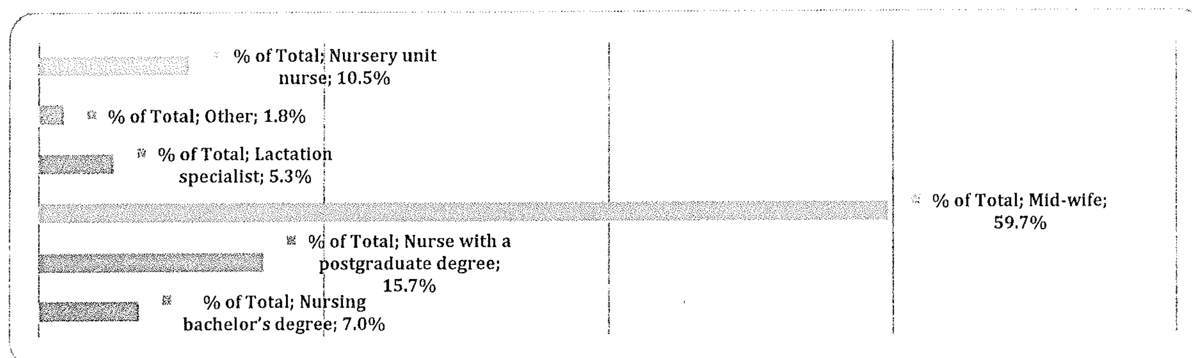
4.2.4 Educational qualification of respondents (n =49)

Figure 4.2.4 below shows the educational qualification of the respondents. The level of education of nurses varies from 'other' category to nurses with bachelor's degree, specialist training and postgraduate qualification. Seven percent (n=49) of the nurses have a bachelor's degree; 15.8% have a postgraduate qualification and 59.7% are qualified midwives. Five point three percent are qualified Lactation specialists and 10.5% are nursery-unit nurses.

Geneva is in the French-speaking part of Switzerland (Swiss Romande) and it has a higher proportion of university-educated nurses compared to the Italian and German speaking parts. The educational level of the respondents is consistent with those of nurses in the Swiss

Romande region. Fifty nine point seven percent of the respondents are midwives. There are 862 registered midwives country-wide (Statistique de Sage femme independent 2010). The educational backgrounds of the respondents are indicative of the high caliber of staff employed in both hospitals. It may also be an important factor in influencing the quality of infant nutrition counseling offered to mothers at hospitals.

Figure 4.2.4 Educational Qualification (n=49)



4.2.5 Current Occupation (n=49)

Despite the educational qualifications of the participants, nurses currently work in various capacities, as shown in table 4.2.5, and are all involved in infant nutrition counselling.

Table 4.2.5 below shows that 58.6% of the respondents currently work as professional nurses; 15.5% are midwives; 10.3% work as paediatric/nursery unit nurses, 6.9% are maternity ward managers. Only 5.2% of the respondents stated that they are nursing assistants who also counsel mothers on infant feeding. Three point five percent of the respondents indicated current occupation in the 'other category'.

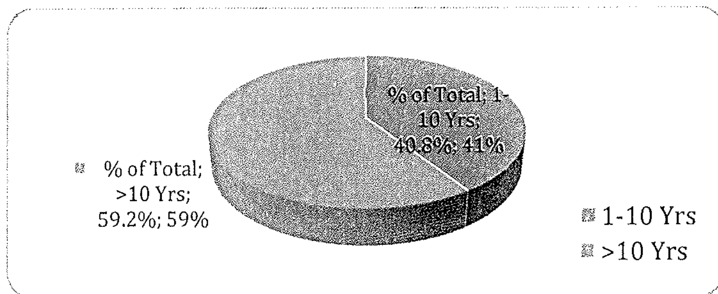
Table 4.2.5 Current Occupation (n = 49)

Current Occupation	%
Nursing ward manager	6.9%
Nursery unit nurse	10.3%
Mid-wife	15.5%
Nurse	58.6%
Nursing Assistant	5.2%
Other	3.5%

4.2.6 Number of years in Current Position (n = 49)

The majority of the respondents, 59.2%, have been in their current position for more than 10 years as shown in figure 4.2.6. Forty point eight percent have been in their current position for one to ten years. The number of years of professional experience provides the researcher with an insight into the established nutrition counseling routines and experience of nurses.

Figure 4.2.6 Number of years in current Position (n=49)



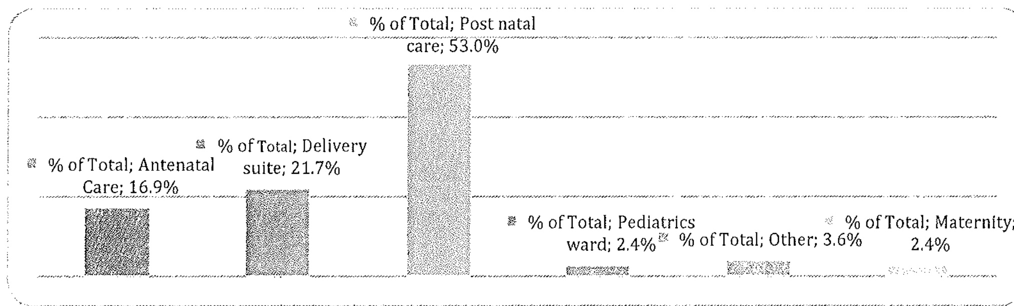
4.2.7 Current Duty Station (n=49)

The respondents indicated their actual duty station where they work. Fifty three percent of the respondents work in postnatal care and 21.7% work in the delivery suite. Sixteen point nine percent work in antenatal care; 2.4% work in maternity and pediatrics respectively.

Nutrition counseling opportunities exists at many stages during pregnancy and delivery. During antenatal care, health workers assess infant feeding decisions and take the opportunity to counsel mothers as required (Stuebe 2009:222-231). Breastfeeding initiation often takes place during the early postpartum phase, and nurses assigned to delivery suites carry out the feeding decision of the mother. Infant nutrition counseling support continues in the ward.

The current duty station of the majority of the participants is in postnatal care, as shown in table 4.2.7. Postpartum support to mothers is a useful intervention for increasing the prevalence of breastfeeding (Jang, Kinm and Jeong 2008:178), however, in Switzerland, concerted efforts are required by health professionals on maternity wards to provide mothers with adequate postpartum assistance to improve breastfeeding (Razurel et al 2011:242).

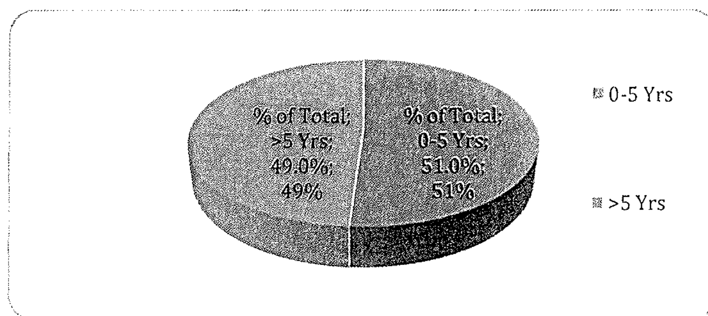
Figure 4.2.7 Current duty station (n=49)



4.2.8 Number of years in current duty place

The respondents indicated the number of years spent working in their current place of work. Fifty point one percent of the respondents have been in their present duty station for more than five years; 49% have been in their present place of work for 5 years or less.

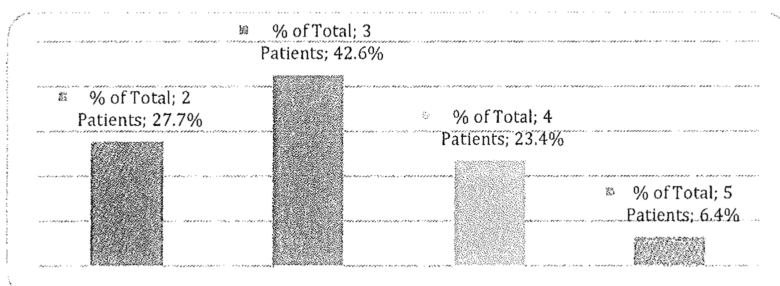
Figure 4.2.8 Years of Experience in current duty place



4.2.9 Number of women counseled weekly

All nurses in the study are involved in counseling mothers about infant nutrition and have varied workloads of counseling responsibilities. Forty two point six percent of the nurses counsel three mothers per week; 27. 7% counsel two mothers every week; 23.4% counsel two mothers per week; 6.4% of the nurses counsel five mothers per week, as shown in figure 4.2.9 below.

Figure 4.2.9 Number of women counseled weekly (n=49)



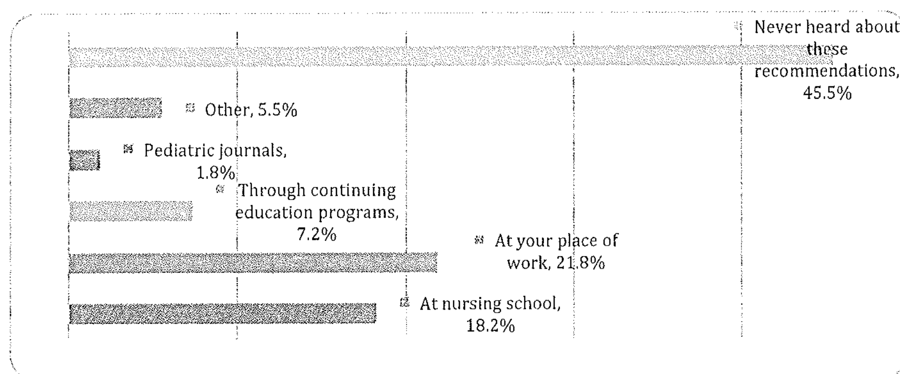
4.2.10 Where the recommendations of the International Code was learned

The respondents indicated the sources from where they learned about the Code. Forty five point five percent indicated that they have *never* heard about the International Code of Marketing breast milk substitutes. In contrast, 54.5% of the respondents learned about the Code from various sources. As shown in figure 4.2.10, 18.2% learned about the recommendations at their nursing schools; 21.8% learned about it at their places of work; 7.2% learned about it through continuing education while employed at their own expense. One point eight percent read about it in pediatric journals, and 5.5% of the nurses indicated they learned about it via other sources.

Nursing schools and universities, places of work, and journals have been cited as sources of information about the International Code. Although both Cantonal and La Tour hospitals have Baby-Friendly status, 45.5% have never heard about the Code. Baby-Friendly hospitals generally have higher breastfeeding initiation rates and support the principles of the International Code.

This finding is relevant to this study because nurses may not be knowledgeable about the relationship between the International Code and the baby-friendly initiative as far as breastfeeding promotion initiatives are concerned. One of the conditions of a hospital attaining the baby friendly status is by demonstrating that it does not accept donations of breast milk substitutes, teats and feeding bottles (UNICEF 2012b).

Figure 4.2.10 Where the recommendations of the Code was learned from (N =49)

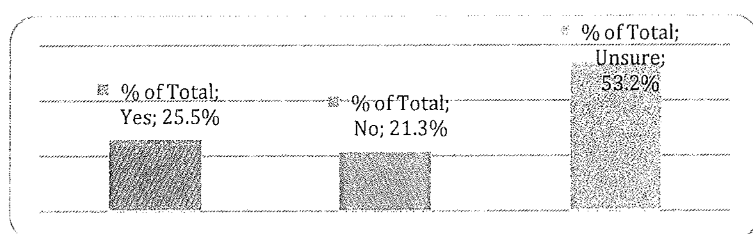


4.2.11 Availability of Information about the Code for nutrition counseling in the work place

The majority of the respondents were unsure or denied that information about the Code is available on the ward. The responses are conflicting; 53.2% of nurses indicated that they are *unsure* whether information on the Code is available.

Twenty one point three percent of the respondents indicated that there is no information available on the maternity ward about the Code. This finding is also relevant to the study as both hospitals are baby-friendly. Only 25.5% stated that information about the Code is available for counseling purposes. The International Code as a breastfeeding initiative calls on health workers and health care institutions to play key roles as stakeholders in the implementation of the Code. Ensuring that the recommendations pertaining to nurses are available and visible in their place of work may influence the acquisition of knowledge and use of the recommendations in nutrition counseling.

Figure 4.2.11 Availability of Information about the International Code (n=49)



4.2.12 Guideline or protocol for nutrition counseling followed on maternity ward

Ninety five point nine percent of respondents indicated that they follow a guideline or protocol for nutrition counseling. This response is appropriate and in line with the hospitals status in prioritizing infant nutrition and encouraging breastfeeding.

Only 4.1% of the respondents were unsure of the existence of a guideline in the ward, as indicated in table 4.2.12.

Table 4.2.12 Guideline or protocol followed for nutrition counseling (n= 49)

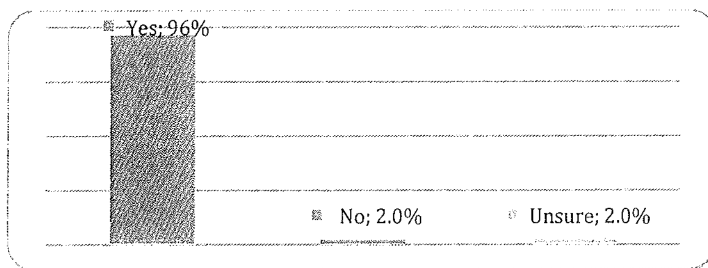
Yes	95.9%
Unsure	4.1%

4.2.13 Patient education as a core nursing function on your ward

Ninety five point nine percent of the respondents indicated that patient education is a core nursing function on their wards. The response of the majority supports professional nursing practice and is necessary for successful nutrition counseling.

Counseling mothers on appropriate infant nutrition requires nurses to assess what mothers know about appropriate infant nutrition and imparting guidelines to improve their knowledge to facilitate decision making. Article 4 of the international Code emphasizes the use of clear information to educate mothers about the benefits and superiority of breast feeding, the negative effect of introducing bottle feeding on breast feeding, the difficulty of reversing the decision not to breastfeed, and where necessary, the proper use of infant formula (WHO 1981:16).

Figure 4.2.13 Patient Education as core nursing function on ward (n =49)



4.3 SECTION 2

4.3.1 The role of a nurse in infant nutrition counseling

Eighty four point eight percent of respondents agreed with the statement that the role of a nurse in nutrition counseling is to support the feeding decision of the mother; 10.8% of the respondents disagreed with the statement.
Breastfeeding is the preferred method of infant feeding, however, the majority of the respondents recognize the importance of the mother being confident and comfortable with her decision. Four point four percent of the respondents were unsure about nurses supporting the feeding decision of the mother. Of these, respondents stated that they would support the decision if it were in the best interest of the child.

The implementation of the Code requires nurses to support mothers by being educators, by disseminating appropriate infant feeding information in order to encourage, protect and support breast feeding. The process of implementing the Code requires knowledge of the content of the recommendations and quality-counseling nurses to effectively communicate with mothers during the postnatal period (Ferguson et al 2009: 141).

Table 4.3.1 The role of a nurse in nutrition counseling (n=49)

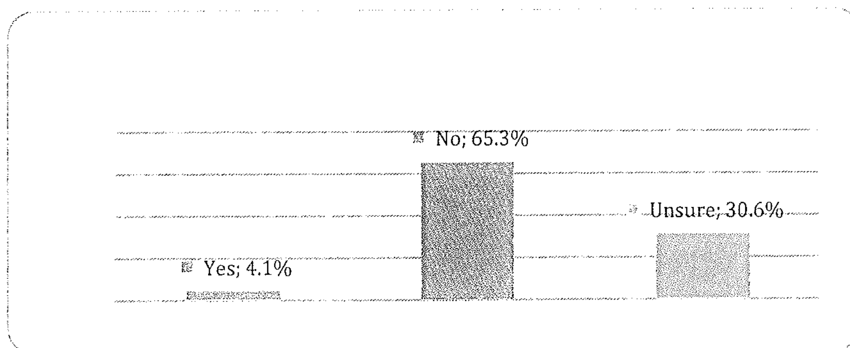
The role of a nurse in infant/young child nutrition counselling is to support the feeding decision of the mother/caregiver.	%
Yes	84.8%
No	10.8%
Unsure	4.4%

4.3.2 Knowledge about the hospital accepting donations of parenting and or nutrition education materials from manufacturers or distributers

Sixty five percent of respondents indicated that the hospitals where they are employed do not accept donations of materials produced or sponsored by companies or distributers. On the contrary, 4.1% responded that the hospitals accept donations, although the reasons for such donations were not provided.

Thirty point six percent were unsure of whether the hospital accepts donations of such materials. According to Article 4.3, donations of informational or educational equipment may be made 'only at the request of and with written approval of the government or within guidelines' (WHO 1981:16).

Figure 4.3.1 % of nurses who are knowledgeable about hospital accepting donations (n =49)



4.3.3 Knowledge of displays present on the ward about infant and young child nutrition

Conflicting responses on the displays present on the wards were elicited from respondents. Three point five percent of the respondents indicated that promotional advertisements from distributers or companies were displayed on their wards. Twenty nine point three percent stated that educational materials on infant nutrition were available, while 19% indicated that other types of displays were available. In contrast, 34.5% indicated that there were no displays relating to infant and young child nutrition on their wards.

Table 4.3.3 shows the responses from the remaining respondents. These included the presence of slogans promoting breastfeeding, hospital materials on infant food preparation, discharge

packs for mothers, discreet text, colored paintings, company weight cards, gift packs, preparation course and infant feeding advice.

Article 7.2 allows companies and distributors to provide scientific and factual information that do not promote infant formula as superior to breastfeeding (WHO 1981:19). Article 4.3 allows donated materials to bear the company's name but does not permit proprietary products within the scope of the Code (WHO 1981:16).

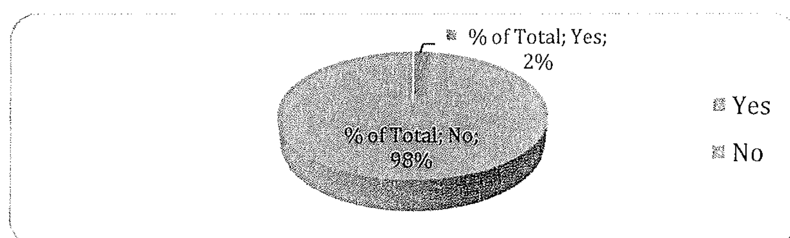
Table 4.3.3 Types of Displays (n=49)

Types of displays on ward	%
Educational infant nutrition related materials	29.3%
Promotional advertisements from distributors/manufacturers of infant and young child foods	3.5%
Other	19.0%
None	34.5%
Breast feeding advice, infant feeding advice.	1.7%
Discreet texts, colored paintings, info on bf	1.7%
Hospital documents for preparation, discharge packs	1.7%
Company sponsored weight cards, gift bags	1.7%
Not sure	1.7%
Preparation course	3.5%
Slogans in favour of breast milk	1.7%

4.3.4 Contact with infant formula manufacturers, their staff or distributers at the hospital

Ninety eight percent of respondents indicated that they have not been approached by staff of companies or distributers. Only 2% of the respondents indicated they have been approached as shown in figure 4.3.4. Article seven of the Code states that contact with manufacturers and distributers should be restricted to obtaining scientific and factual information about breast milk substitutes. Article 6.4 also states that the health care system should not permit personnel paid for by distributors and manufacturers.

Figure 4.3.2 Have you ever been approached by manufacturers, staff or distributors at the hospital? (n =49)



4.3.4.1 If yes, explain the purpose of the meeting with manufacturers and distributers

This item was applicable to only 4% of the respondents. Of these, 50% indicated that the purpose of the meeting was for presentation of new infant formulas and samples. Articles 7.4 International Code permits contact with manufacturers and distributers when necessary for the samples of formula for professional evaluation. The other 50% responded that they met with distributers when working in neighboring France, but not in Switzerland.

Table 4.3.4.1 Purpose of meeting (n=49)

If yes, explain the purpose of the meeting	%
N/A	96.0%
Presentation of new formulas, samples	2.0%
Yes, when working in France	2.0%

4.3.5 Gifts received from manufacturers or distributers

Eighty seven point nine percent of respondents indicated that they have not received gifts from companies or distributers; 7.3% however indicated that they have received gifts such as USB keys, pens, pencils, notepads, calendars, clocks, etc., which is a violation of the Code. In addition, 2.4% indicated that they have received sponsorships for training, meetings or conferences; another 2.4% indicated they have received samples of infant formula. Article 7.3 of the Code forbids financial or material inducements given by companies or distributers to promote products; nurses are also forbidden to accept inducements from companies.

Wright and Waterson (2006:383) stated that accepting sponsorships and gifts is a conflict of interest as it influences nurses' attitude to companies and their products. Acceptance of gifts and

sponsorships are violations of the Code and threats to breastfeeding promotion and protection because it creates a sense of obligation on nurses to reciprocate one way or another.

Table 4.3.5 Type of gift received (n=49)

Type of gift received	%
Gifts (USB keys, pens, pencils, notepads, calendars, clocks, etc.)	7.3%
None	87.9%
Sponsorship of training, meetings or conferences	2.4%
Samples of infant formula	2.4%

4.4 SECTION 3

4.4.1 Knowledge of appropriate advice to be given to a mother of a newborn baby on exclusive breastfeeding for the first six months.

Article 4.2 of the International Code states that information and educational materials intended for mothers should highlight the benefits and superiority of breast feeding, and where needed, the proper use of infant formula. Article four (WHO1981:10) of the Code focuses on the appropriate information required to educate or counsel mothers. It states that information should emphasize the superiority and benefits of breastfeeding. It should also stress the difficulty to reverse the decision not to breastfeed. Where needed, mothers should be educated about the proper use of infant formula. Nurses are to ensure that the health care facilities where they work are not used for activities that could undermine breastfeeding efforts.

Ninety eight percent of respondent indicated that they would advise a mother to exclusively breastfeed, but expressed different opinions on the recommended duration of breastfeeding. Of these, 20.4% indicated they would advise a mother to breast feed for six months as recommended by the World Health Organization. Respondents stated that breastfeeding is best for the mother and baby as it is natural, easy and simple to nourish the baby and promotes bonding between mother and child. Breast milk protects against illnesses, allergies and infections, and helps to build immunity in the infant.

Nurses indicated that exclusive breastfeeding is recommended during nutrition counseling, however for four and not six months, especially if the mother has to return to work. Mothers' return to work has been cited in many studies as a constraint to the minimum recommended duration of breastfeeding. In Switzerland, the duration of breastfeeding is 31 weeks at national

level and it is largely associated with the Baby Friendly Initiative (Merten et al 2006). In comparison, in Brazil, Carrascoza et al (2011:4139) stated that mother's work is associated with exclusive breastfeeding abandonment. Likewise, Agunbiade and Ogunieze (2012:5) also noted that 24% of mothers in South West Nigeria cited return to work as a major constraint to exclusive breastfeeding.

Nurses also stated that the decision to exclusively breastfeed depends upon the mother. They indicated that they will *not force* a mother to exclusively breast feed for six months but will rather advise them to do so. The Pediatrician's advice and the evolution of the breastfeeding were also cited as determinants of exclusive and continued breastfeeding.

Content analysis was used to identify key words and phrases from the responses in this section to add meaning and depth to the findings.

(i) Advice mothers to exclusively breastfeed (BF) for six months, if possible

(ii) As per WHO recommendations, will advise to exclusively breastfeed

(iii) Some mothers work and paid-maternity leave is only for four months

(iv) Breastfeeding is a mother's choice. If she decides to, then support her.

(v) Encourage Exclusive Breastfeeding Feeding without imposing or forcing mother

(vi) Breastfeeding prevents allergies

(vii) Yes to Exclusive Breastfeeding for six months. Hospital is baby-friendly.

(viii) Breastfeeding depends on the Pediatrician and the evolution of breastfeeding

(ix) Supplementation (complimentary feeding) after four months

4.4.2 Knowledge of advice to be given to a mother who wishes to feed her child with formula

Respondents expressed varied opinions about the advice they will give to a mother on formula feeding. The key words and phrases identified from the responses are the following:

i. Explain the advantages and disadvantages of formula feeding but without imposing breastfeeding.

ii. Respect the mother's decision on formula feeding and advice on sterilization, preparation and quantity.

iii. If the mother's decision is informed, then she is given all the necessary support.

iv. Inform the mother on the best brands available and introduce solids after four months.

v. Be non-judgmental; respect the mothers' choice

Breastfeeding should be supplemented with solids after four months was the advice given to mothers. Nurses indicated that although six months of breastfeeding is recommended by the WHO, mothers are rather encouraged to exclusively breastfeed for four months as most return to work. Early return to work can influence mothers' infant feeding decisions and can interfere with establishing and sustaining exclusive breastfeeding for six months (Huang and Yang 2011:2).

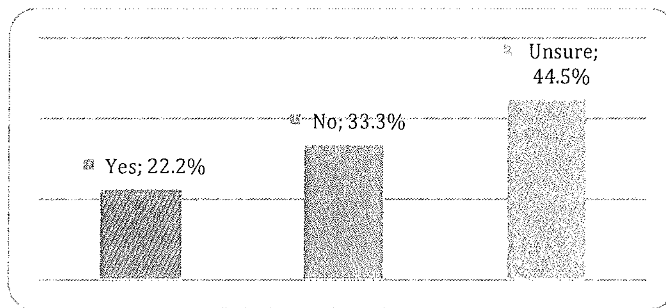
Swiss labor law allows 16 weeks of paid maternity leave in the Canton of Geneva (Swiss Federal Department of Foreign Affairs 2012). In comparison, Sweden provides sixteen months of paid maternity-leave. In the United Kingdom, maternity leave is 52 weeks, of which 39 weeks is paid. The WHO recognizes paid maternity leave as 'minimum enabling condition' for women in paid employment to continue breastfeeding (WHO 2003:8).

The WHO's recommendation for complementary feeding is that it is timely, introduced at the appropriate age; adequate in terms of the energy and nutrient needs of the child; safe, hygienically stored, prepared, and fed; properly fed with age-appropriate feeding frequency and methods (WHO 2003:8). Nurses stated that they recommend it to commence after four months, however according to Dratva et al (2006:818), in Switzerland, complementary foods are introduced between five and six months in line with local Swiss guidelines, but not as recommended by WHO.

4.4.3 Knowledge of how essential and useful the International Code is when counseling mothers about the superiority of breastfeeding.

Forty four point five percent of respondents were unsure whether the knowledge of the International Code is essential and useful for infant nutrition counseling, however, 33.3% responded that knowledge of the Code was neither essential nor useful for breastfeeding counseling. Only 22.2% of respondents agreed that the knowledge of the International Code is essential and useful when counseling mothers on the superiority of breastfeeding, as shown in figure 4.3.3. There is thus a knowledge gap among the majority of nurses about how essential and useful the International Code is in counseling.

Figure 4.4.1 Is Knowledge of the International Code essential and useful when counseling mothers on the superiority of breastfeeding? (n=49)



4.4.3.1 If yes, describe how knowledge of the International Code helps to promote breastfeeding

This question is intended to find out specifically what nurses know about the content of the Code in relation to breastfeeding. Eighty one point six percent of the participants did not respond to the item. This is likely to confirm a knowledge gap among the majority of the participants. Only 18.4% of the nurses responded on how the knowledge of the Code helps promote breastfeeding, and the responses included other Articles from the Code. The researcher did not anticipate the responses indicated by some of the respondents who are knowledgeable about the Code. The responses are as follows:

i. The WHO Code legitimizes the breastfeeding recommendation.
The World Health Organization is recognized by the nurses as the authority on global health policy recommendations for its member states and therefore this response is in line with its mission.

ii. The International Code helps to avoid being trapped by the information on the formula packaging.
Although this response was not envisaged by the researcher, the response refers to Article 9 of the Code which concerns labeling of infant formula containers. Article 9 states that the containers of infant formula should not contain pictures of babies or text that may 'idealize the use of formula' (WHO1981:13).

iii. The Code helps nurses in advising mothers about the proper nutrition of breastfeeding.

iv. Although breastfeeding is a natural method of feeding an infant, there is a huge effort to market formula milk, feeding bottles and teats.

This response is indicative of an understanding of purpose of the Code in terms of inappropriate marketing of infant formula.

4.4.3.2 If not, why is the knowledge of the International Code not essential to counseling?

Most of the respondents' opinion indicated they are not knowledgeable of the International Code. The following opinions were expressed by some of the respondents:

i. The WHO is not essential since the desirability of breastfeeding is common knowledge.
   This response is in conflict with the response recognizing the legitimacy of the authority of the WHO. It is likely to indicate a gap in knowledge of the Code and its implementation in hospitals.

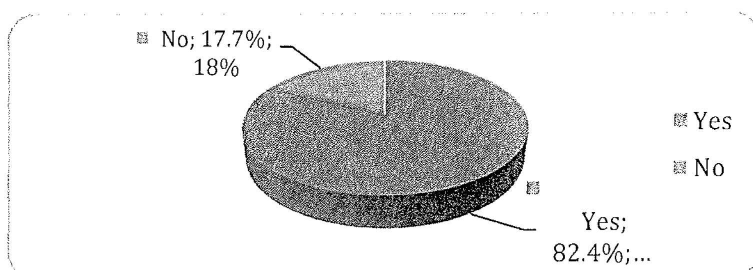
ii. Formula feeding is acceptable and a nutritional alternative for breastfeeding. Although the International Code states that infant formula is a bona fide substitute, nurses as health workers are mandated to encourage, protect and support breastfeeding by providing advice on the superior value of breastfeeding for the first six months (WHO 1981:).

4.4.4 Respondents expression of interest in learning to improve knowledge of the International Code

As shown in figure 4.4.4 below, 82.4% of the respondents stated they are interested in learning more to improve their knowledge of the Code; 17.6% indicated that they are not interested in learning about the Code.

The interest expressed by the majority of the respondents could provide the basis for training nurses to improve the knowledge of the Code and its applications in nursing practice

Figure 4.4.2 Interest in learning more to improve knowledge of the Code (n=49)



4.4.5 Knowledge of how the International Code helps nurses to counsel mothers about the proper use of formula

The question above was intended to solicit detailed knowledge of the Code in relation to the proper use of infant formula. Eighty nine point eight percent of respondents were not knowledgeable about the Code in relation to infant formula and the implications for infant nutrition counseling.

Table 4.4.5 If familiar with the Code, describe how it helps you to teach mothers about proper use of formula (n=49)

If familiar with Code, describe how does it helps you to teach mothers about formula use	%
Do not know the code very well, only superficially	2.04%
Do not accept gifts from suppliers, encourage breast feeding, comprehensive info on package of formula	2.04%
I do not know enough about this part of the code	2.04%
It helps to promote breastfeeding	2.04%
Look for important information on packages	2.04%
Not familiar	89.80%

The following responses were stated on *how* the International Code helps to counsel mothers on infant and young child nutrition:

i. The International Code helps to promote breastfeeding.

Although the response is true, it does not address the question asked as it does not respond to how the Code helps to counsel on the proper use of infant formula. The Code helps by providing a framework for health professionals to be accountable for their role as stakeholders in the well-being of infants and young children through promotion of appropriate infant nutrition, devoid of commercial pressures within health care settings. There appears to be a gap in knowledge about the Code and its application in breastfeeding promotion.

ii. Do not accept gifts from suppliers; encourage breastfeeding; look for comprehensive information on package of formula.

The response is appropriate and reflects good knowledge of the Code.

iii. Look for important information on formula packages.

This response is also appropriate. Article 9 (WHO 1981:13) of Code describes important

statements that should be present on formula packages. It should stress the superiority of breastfeeding and include a statement that the product should be used only on the advice of a health worker about the need for its use and proper method of use. Instructions covering appropriate preparation and a warning on hazards of inappropriate formula use should also be included in the information on formula packages.

iv. I do not know enough about this part of the Code.

The statement is considered to be an admission of lack of knowledge about the Code.

v. I do not know the Code very well, only superficially.

Similarly, this statement represents a lack of knowledge of the Code.

4.4.6. Knowledge of the pertinence of the International Code to advising mothers on appropriate infant feeding choices (if familiar with the Code).

The researcher included the above question to solicit from nurses' knowledge of the relevance or pertinence of the Code in counseling mothers on infant feeding choices. Knowledge of the Code is relevant to counseling on feeding choices as mothers' decisions are influenced by the advice from health professionals (Abba, De Koninck and Hamelin 2010:8). Breastfeeding remains the infant feeding method except in situations previously explained.

Ninety one point eight percent of respondents were not familiar with the International Code in relation to appropriate feeding choices and did not respond to this item; 2% indicated that they have forgotten about the Code being pertinent to advising mothers on the appropriate infant feeding choices. Only 4.2 % of the respondents were familiar with the Code and agreed that it is pertinent to advising mothers on appropriate infant feeding choices. Two percent of the respondents also agreed that the Code is pertinent to advising mothers on choosing the best formula brand.

Table 4.4.6 Pertinence of the Code to advising mothers on appropriate infant feeding choices (N=49)

If Familiar, Is The Code Pertinent To Advising Mothers On Appropriate Infant Feeding Choices?	%
I Have Forgotten	2.0%
Not Familiar	91.8%
Yes	4.2%
Yes, For Choosing The Best Formula	2.0%

Ninety three point nine percent of the respondents were not knowledgeable about the International Code in relation to the marketing of formula, bottles and teats on their wards; 2%

of the respondents indicated that the Code is not relevant. Only 4.1% of the respondents indicated that it is relevant to marketing of formula, bottles and teats.

Although the sale of formula is not prohibited by the Code, marketing of formula, feeding bottles and teats 'in a way that interferes with the protection and promotion of breastfeeding' is the central message of the Code (WHO 1981:6). The majority of the respondents are not knowledgeable about the relevance of marketing activities in hospitals to the protection of breastfeeding. A gap in the knowledge and application of the Code therefore exist.

Table 4.4.6.1 Knowledge of the relevance of the Code on the marketing of formula, feeding bottles, teats (n=49)

The marketing of formula, feeding bottles, teats by manufacturers and distributors on your ward or hospital	%
No	2.0%
Not familiar	93.9%
Yes	4.1%

4.4.6.1 Knowledge of the pertinence of the International Code to appropriate preparation and use of formula

Only 4.1% of the respondents indicated that the International Code is pertinent to the appropriate preparation and use of formula. 2% of the respondents disagreed that the Code is pertinent to the appropriate preparation and use of formula. 93.9 % of the respondents were not knowledgeable about the International Code in this regard.

Inappropriate feeding practices lead to infant malnutrition and death (WHO 1981:6). Article 4.2 of the International Code is very explicit about the need for healthcare professionals to advice mothers who chose to formula feed with appropriate information on the proper use of formula and the health consequences of improper use of formula (WHO 1981:10).

Table 4.4.6.2 is the Code pertinent to the appropriate preparation and use of formula? (n= 49)

If familiar, is it pertinent to the appropriate preparation and use of formula?	%
No	2.0%
Not familiar	93.9%
Yes	4.1%

4.4.6.2 Knowledge of the pertinence of the Code to facilitating breastfeeding

Eighty seven point eight percent of the respondents were not knowledgeable of the International Code in relation to facilitating breastfeeding. Appropriate Infant nutrition counseling is a nursing activity that facilitates breastfeeding. Two percent of the respondents stated that the Code promotes breastfeeding; another 2% agreed that the International Code is pertinent to facilitating breastfeeding. Two percent of the respondents indicated that the mother and infant should be put together after birth, skin to skin contact maintained, and that no teat nor formula should be given to the infant unless under medical orders.

Table 4.4.6.3 The International Codes' pertinence to facilitating breastfeeding (n=49)

If familiar, is it pertinent to facilitating breast feeding	%
Mother and infant together after birth, skin to skin, no teat, no formula unless under medical orders	2.0%
No answer	4.2%
Not familiar	87.8%
Support bf except when contraindicated.	2.0%
The code promotes breast feeding	2.0%
Yes	2.0%

4.4.7 Knowledge of the other International Recommendations promoted at your hospital

The researcher included this question to gain an understanding of nurses' knowledge of global health policies relevant to infant nutrition. Fifty three percent of respondents named the Baby-Friendly Initiative as the International recommendation for breastfeeding promotion in force at their hospitals. Six point one percent named the WHO 10 steps to Successful Breast feeding; 6.1% named Rooming-in as the recommendation promoted at their hospital. The three main international initiatives stated by respondents are breastfeeding promotion initiatives to improve breastfeeding and are all linked to the baby friendly initiative.

Breast feeding day is an annual commemoration of the Innocenti Declaration, also an initiative to protect breastfeeding.

The following responses were also received from the remaining respondents. They are routine nursing activities provided to mothers in maternity care settings.

- Preparation for birthing course

- Education and training on breastfeeding
- Help and Observe
- Offer adequate advice
- Information and advice on feeding before, during and after birth
- Mentor and advise moms during their hospital stay
- Training on breast feeding advice
- Presence of breast feeding specialists
- Continuing Education

4.4.8 Knowledge of instances where the Code could be violated in nursing practice

The Code is violated in the nursing profession when threats to the support, promotion and protection of breastfeeding are permitted to occur in the health care setting, thereby undermining breastfeeding. Two percent of the respondents did not know an instance where the International Code could be violated. In contrast, only 4.1% indicated that the International Code could be violated when there are displays and publicity of formula milk on the ward. Another 4.1% stated that a violation could be caused by the separation of the mother and baby; Two percent indicated that hospitals that receive gifts from manufacturers violate the Code.

Two percent of the respondents indicated that a medical reason such as prematurity in the Neonatal Intensive Care Unit (NICU) is often associated with formula feeding. The majority of respondents (85.8%) did not respond to this item. One possible explanation could be that nurses may not be knowledgeable about the Code to recognize when violations take place. This lack of knowledge may represent a health policy recommendation-practice gap.

Table 4.4.8 Instances where the Code could be violated (n=49)

Name one or more instances where the Code could be violated	%
Do not know	2.0%
Hospitals that receive cash gifts from manufacturers	2.0%
Medical reasons, i.e., prematurity, NICU	2.0%
No response	85.8%
Displays and publicity of formula milk	4.1%
Separation of mother and baby	4.1%

4.4.9 Knowledge of how to manage a violation of the Code in practice

Health professionals have a responsibility to monitor the Code by drawing the attention of distributers and companies to marketing activities that do not comply with the aims and principles of the Code so that the appropriate action can be taken. Appropriate Government authorities are also to be notified about violations (WHO 1981:14).

Sixty seven point three percent of the respondents were not knowledgeable about the International Code and had no responses to this item; 4.08% indicated they would report the violation to the chief of nursing service. The remaining responses are shown in table 4.4.9. Knowledgeable about the appropriate management of a violation is lacking, although a minority indicated they would report it to their supervisors.

Table 4.4.9 Knowledge of how to manage a violation

In the event that you witness/detect a violation of the International Code on your ward, describe how you would manage the violation	%
Discuss with colleagues and inform supervisors	2.04%
Discuss with colleagues and supervisors	2.04%
Each person must make own conscious choice of feeding.	2.04%
I do not know	2.04%
I must therefore learn what it is	2.04%
I will speak to a lactation consultant	2.04%
If there is an advert, I remove it	2.04%
Inform head of nursing service	2.04%
Inform senior management	2.04%
No response	67.36%
Report to chief of service	4.08%
Report to supervisor	2.04%
Report to supervisor, IBCLC	2.04%
Speak with the staff to see where the problem is, report to superiors	2.04%

Violation? I can't imagine becoming a violator	2.04%
Will inform supervisors/superiors	2.04%

4.4.10 Knowledge of when and why a nurse would give discharge packs with formula to mothers

Article 6.6 of the International Code states that donations of infant formula and should not be used as sales inducement. According to Rosenberg, Eastham, Kasehagen and Sandoval (2008:295), package given to a mother containing formula on discharge is one of the factors that influence exclusive breastfeeding and its duration. Sixty six point eight percent of mothers in their study reported that they had received discharge packages. They were more likely to exclusively breastfeed for fewer than ten weeks.

In this study, 36.7% of the respondents stated that the hospitals do not keep nor provide discharge packs. Nurses stated that they would advise non-breastfeeding mothers on formula preparation and appropriate quantities to feed infants. Forty four point nine percent indicated that they would provide discharge packs if they were available on their wards, but only to mothers who are not breastfeeding.

Nurses' intention to provide discharge packs to mothers despite the fact that their hospitals are Baby Friendly Hospital Facilities is an indication of a knowledge gap on effect of discharge packs containing formula and breastfeeding promotion in a hospital setting.

Respondents stated that mothers choose not to breastfeed for various reasons as described below:

- Premature babies are fed with formula for weight-gaining purposes.
- Formula feeding may also be ordered or instructed by senior staff.
- Mothers may choose to not breast feed
- Low-income and single mothers may choose to formula feed
- Contra-indications or difficult breastfeeding
- The mother may choose to supplement breastfeeding with formula

Using the scale below in table 4.4.10, the researcher assessed the level of knowledge of the respondents. Table 4.4.11 shows the individual scores and the corresponding level of knowledg

Table 4.4.10 Level of Knowledge Scale

Knowledge of specific aspects of the Code	Corresponding level	Percentage Score
No knowledge of the Code	Level 5	(0%)
Poor Code knowledge	Level 4	(1-49%)
Fair Code knowledge	Level 3	(50-69%)
Good Code knowledge	Level 2	(70-84%)
Excellent Code knowledge	Level 1	(85-100%)

Table 4.4.11 Nurses' Level of Knowledge of the Code

Respondent	Raw Score	% Score	Level of Knowledge
01	08	34.8%	4
02	07	30.4%	4
03	12	52.2%	3
04	07	30.4%	4
05	12	52.2%	3
06	14	60.9%	3
07	07	30.4%	4
08	09	39.1%	4
09	10	43.5%	4
10	07	30.4%	4
11	08	34.8%	4
12	05	21.7%	4
13	06	26.1%	4
14	13	56.5%	3
15	07	30.4%	4

16	08	34.8%	4
17	13	56.5%	3
18	16	70.0%	2
19	14	60.9%	3
20	07	30.4%	4
21	07	30.4%	4
22	07	30.4%	4
23	07	30.4%	4
24	09	39.1%	4
25	07	30.4%	4
26	11	47.8%	4
27	06	26.1%	4
28	09	39.1%	4
29	08	34.8%	4
30	11	47.8%	4
31	09	39.1%	4
32	09	39.1%	4
33	10	43.5%	4
34	06	26.1%	4
35	08	34.8%	4
36	08	34.8%	4
37	09	39.1%	4
38	09	39.1%	4
39	08	34.8%	4
40	06	26.1%	4
41	06	26.1%	4

42	06	26.1%	4
43	08	34.8%	4
44	05	21.7%	4
45	06	26.1%	4
46	07	30.4%	4
47	06	26.1%	4
48	07	30.4%	4
49	06	26.1%	4

Eighty seven point seventy four percent of the nurses' scores corresponded to level four of the knowledge scale; the scores of 12.24% of the nurses corresponded to level three. Only 0.02% of the respondents' scores corresponded to level two. The level of knowledge the International Code among the majority of the nurses is therefore poor and consistent with the results obtained in West Africa by Aguayo et al (2003:127).

4.5 SUMMARY

The results, analysis and interpretation of the assessment of nurses' knowledge of the International Code in relation to infant nutrition counseling were presented and discussed in this chapter. The results showed that 95.9% of the respondents were female nurses; 65% were over 35 years of age and nearly 60% were midwives. The respondents also included specialists' nurses in lactation support, nursery and pediatric nurses. The educational qualifications were at a high professional standard. 59% have been in their current position for more than 10 years.

Nurses counsel two to five mothers per week. 45.5% stated that they have never learned about the Code; 53.2% were unsure about the availability of information on the Code at their place of work; 21% stated that information was not available on their wards for counseling. Nearly all the respondents, 96%, stated that there is a protocol in their respective wards for nutrition counseling and that patient education is a core nursing function at the hospital.

Seventeen point three percent of the respondents received gifts from company staff and distributors; 2% received sponsorships for meetings and conferences and another 2% received samples of infant formula. In addition, 4.1% of the respondents stated that their hospitals accept

donations of parenting and nutrition-education materials from companies; 3.5% stated that company advertisements are displayed on their wards. Two percent have been approached for the presentation of new formulas and samples.

Exclusive breastfeeding is supported by 98% of respondents. The decision to breast feed or bottle feed is mostly the choice of the mother, and her feeding decision is respected by the nurses. Four months of exclusive breastfeeding is recommended to mothers during counseling, rather than the six months recommended by the WHO. Infant formula is an acceptable method of feeding an infant and complementary feeding is recommended by the nurses to start at 4 months, not at six months as recommended by WHO.

Section three assessed detailed knowledge of the International Code relevant to nursing practice. The responses are as follows:

- Eighty nine point eight percent were not knowledgeable of how the Code helps to counsel about infant formula.
- Seventy seven point three percent of respondents were not knowledgeable of how essential and useful the Code is in nursing practice and were not knowledgeable about how the Code helps to counsel on the superiority of breast milk
- Eighty one percent did not respond on how the Code promotes breast feeding
- Ninety one point eight percent were not knowledgeable about the pertinence of the Code to counseling mothers on appropriate infant feeding choices
- Ninety three point nine percent were not knowledgeable about the pertinence of the Code to marketing of formula, bottles and teats
- Nurses' management of violations is not within the guidelines of the Code
- Although respondents indicated that their hospitals do not accept commercial discharge packs containing formula, bottles and teats, 44.9% expressed intention to distribute discharge packs to mothers if the packs were available on their wards, despite the fact that they work in baby-friendly hospitals.

Most nurses are aware of other global recommendations on breastfeeding promotion and 82.4% expressed interest in learning about the International Code.

The researcher will present limitations and conclusions of the study on nurses' knowledge of the International Code in Chapter five, based on the findings of the study. Recommendations on the improvement of nurses' knowledge of the Code will also be presented

Chapter 5

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

In this chapter, the researcher discusses the conclusions of the assessment of nurses' knowledge of the Code in line with the study objectives. The limitations and the recommendations are discussed and presented in three sections: section one discusses the limitations to the study; section two discusses the conclusions from the knowledge assessment, guided by the International Code guidelines and section three presents the recommendations.

5.2 SECTION 1

LIMITATIONS TO THE STUDY

The researcher had limited access to participants. The study was conducted in two of the fifteen hospitals and clinics in the Canton of Geneva and forty-nine nurses participated in the study. A larger sample comprising of all registered nurses, midwives and specialist nurses' involved infant and young child nutrition in Geneva hospitals would have contributed to answering the research question with greater depth.

The researcher coordinated the distribution and collection of the questionnaires through the maternity ward managers from both hospitals. The collection of completed questionnaires was therefore subject to the availability of the managers, which prolonged the data collection phase of the study.

Given the nature of responses received from the questionnaires, more in-depth information could have been obtained by conducting individual or focus group interviews to answer the research question.

5.3 SECTION 2 CONCLUSION OF THE ASSESSMENT OF GENEVA NURSES' KNOWLEDGE OF THE INTERNATIONAL CODE

The objectives of the study were to:

1. Assess the level of knowledge of the International Code of marketing breast milk substitutes among nurses in Geneva hospitals.

2. Determine whether there is a gap in the interpretation of the Code in nursing practice. Nurses' levels of knowledge of the Code were described in chapter 4. Based on the study framework, research question and objectives of the study, the researcher made the following conclusions.

5.3.1 Assessment of the level of knowledge of the International Code among nurses in Geneva hospitals

The scores of the majority of nurses, 87.74%, corresponded to level four (poor); 12.24% corresponded to level three (fair). Only 0.02% of the participants' scores corresponded to level two (good). The level of knowledge the International Code among the majority of the nurses is therefore generally poor and consistent with the results obtained in West Africa by Aguayo et al (2003:127).

The study also showed that nurses counsel two to five mothers weekly on infant feeding. The level of education and specialization in maternity care was high (98.2%) and the majority had more than ten years of experience.

Forty five point five percent stated they have *never learnt* about the recommendations of the Code. Of those who know about the Code, 21.8% learnt about the Code at their place of work while 18.2% learnt about it during nursing training. The majority confirmed that the recommendations of the Code are not available on the wards for use in infant nutrition counseling.

Based on the responses received, some violations of the International Code may exist in nursing practice and in hospitals without nurses' knowledge. Seven point three percent of the respondents indicated that they have received gifts such as USB keys, pens, pencils, notepads, clocks, etc., in violation of Article 7.3 of the Code. In addition, 2.4% have received sponsorships for meetings and training. Article 7.4 of the International Code forbids manufacturers and distributors offering financial or material inducements to health workers; health workers are also forbidden from accepting inducements.

Four point one percent of the respondents indicated that donations of company-sponsored parenting and nutrition-education materials are available in their wards. According to Article 4.3, donations of materials by manufacturers or distributers require a formal request and a written approval from the government. A follow up assessment in the near future could prove useful to assess the mechanisms in place at hospitals for the acquisition of materials from companies and distributers.

Three point five percent indicated that promotional materials are displayed on their wards; One point seven percent indicated that company weight cards and discharge packs are present; 2% indicated that they have been approached by staff of companies and distributors for presenting new samples of infant formula products and samples. Article 7.4 of the Code allows the evaluation of new products by health care professionals and therefore the presentation of new samples may not necessarily constitute a violation of the Code.

5.3.2 Determination of whether there is a gap in the interpretation of the Code in nursing practice

To determine whether there is a gap in the interpretation of the Code in nursing practice, the researcher utilized the responses to open-ended items from section three of the questionnaire.

Nurses' expressed how they conduct infant nutrition counseling in relation to the International Code recommendations. The majority of the nurses agreed to advising mothers to exclusively breastfeed, however, they expressed varied pro-vises.

Nurses indicated that although six months is the time period recommended by the World Health Organization, mothers are encouraged to exclusively breast feed for four months as most return to work.

Mothers are not 'forced' to breastfeed and they are not made to feel guilty about their choice of infant feeding. Nurses' advice to mothers place a high value on respect for mothers' infant feeding decision, however, the decision to formula feed *ought* to be based on objective and consistent advice on infant nutrition, ensuring that mothers receive the necessary support to make an informed choice. Respecting a mother's decision alone is insufficient to implement the aims and principles of the Code. An assessment of the basis for the decisions is a relevant step in the counseling process.

Early introduction of complementary feeding to infants as advised by nurses in this study is a threat to exclusive breastfeeding and not an appropriate message for infant nutrition counseling. Breast milk is sufficient nourishment for up to six months of age, as recommended by the WHO.

Only 22.2% of the respondents confirmed that the Code is essential and useful when counseling about the superiority of breastfeeding, in comparison to substitutes. The link between the International Code and breastfeeding promotion does not seem apparent to nurses.

Forty two percent of nurses expressed intentions to distribute discharge packages containing infant formula samples, bottles and teats sponsored by companies or distributers to low income or poor mothers, mothers who have decided to mix-feed and also to mothers with insufficient

breast milk if the packages were available at the hospitals, despite the fact that they work in baby-friendly hospitals; 10.2% confirmed that they distribute the packages on doctor's orders to mothers, in violation of the Code.

Based on the results of the survey, the majority of nurses have a poor level of knowledge of the Code and its relevance to infant nutrition counseling. Messages utilized by nurses in counseling are inconsistent. Furthermore, there is a gap in knowledge of how infant nutrition counseling is actually practiced and how it ought to be, based to the recommendations of the International Code.

5.4 SECTION 3 RECOMMENDATIONS

Based on the findings of this study, the following recommendations were made to improve nurses' knowledge and application of the International Code in infant nutrition counseling in hospitals.

5.4.1 Recommendation to improve nurses' knowledge of the Code

- As patient education is a core function on maternity wards, and 82.4% of the nurses expressed interest in learning about the Code to improve their knowledge, the development of a training program on infant nutrition counseling in relation to the guidelines of the Code is recommended. The program will focus on the contents of the recommendations of the Code relevant to nurses for guiding mothers' infant feeding decisions.

- Training nurses on the practical application of the International Code is necessary to address the knowledge gap. The training will emphasize practices that promote the aims and principles of the International Code. It will also help nurses recognize those practices that violate the Code including inappropriate marketing practices in hospitals. The distribution of discharge packs to mothers should be recognized as a practice that is inappropriate for the protection of breastfeeding, especially, by nurses working in baby-friendly hospitals. Such practices in hospitals are associated with reduced rates of breastfeeding initiation, duration and exclusivity (Kaplan and Graff 2008:505).

- The recommendations of the International Code pertinent to nurses should be available and visible on maternity wards. All nurses involved in infant nutrition counseling need to have access to the recommendations of the International Code at their places of work. The recommendations pertinent to nurses should be posted on the wards to remind nurses of potential threats in practice that negatively influence mothers' infant feeding

decisions. The hospital administration should ensure that the recommendations are available on the wards.

- Nurses need to recognize threats to breastfeeding promotion in hospitals. The study showed that some marketing practices still persist on maternity wards, despite the baby friendly status of hospitals.
    - The study showed that 7.3% of nurses received gifts from companies; 2.4% received sponsorships for meetings, and 2.4% received samples of formula. 44.9% indicated that they would distribute discharge packs if they were available. Inappropriate marketing of formula, acceptance of gifts and sponsorships for meetings and conferences by companies and distributers are threats to breastfeeding. Gift or discharge packages should also be recognized as a threat to breastfeeding initiation and duration.
    - Nurses need to recognize that advising mothers on early introduction of complementary foods to breastfeeding infants is a threat to exclusive breastfeeding as it influences the duration and exclusivity of breastfeeding.

5.4.2 Recommended Further Studies

The following studies are recommended to improve understanding of the International Code and its knowledge among nurses in Switzerland.

- An assessment of the reasons why nurses in maternity wards accept samples from companies and distributers. This study will help to understand the reasons nurses accept samples to determine whether nurses are practicing within the provisions of the Code or violating it. The study will also help to shape training needs of nurses.
- An assessment of the implementation of the International Code in maternity care settings in Switzerland. The study will help to evaluate compliance of hospitals in adhering to the aims and principles of the Code.

5.5 SUMMARY

Chapter five discussed the findings of the research based on the analysis and interpretation of the data presented in chapter four.

The findings showed a poor level of knowledge of the International Code among the majority of nurses who participated in the survey. The gap between the recommendations of the Code as it pertains to nurses and the actual counseling practice as it exists is likely to be associated with the poor levels of knowledge about the Code. The researcher discussed the limitations of the study. Recommendations were proposed to improve nurses' knowledge of the Code.

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ANNEXURE A

Survey Questionnaire in English/French and Consent Form

Dear Participant,

Good day. I am a post-graduate student registered at the University of South Africa. I am conducting this study to fulfill the requirements the masters' degree in public health.

The aim of this study is to assess what you know about the World Health Organization's International Code of Marketing Breast milk substitutes. Your input and participation in the study will be highly appreciated. All information will be strictly confidential and you as an individual will not be identifiable to any person except the researcher. Your responses will be used only for the purpose of this survey.

Participation is voluntary and you have the right to withdraw from the study at any time.

You are kindly requested to complete the enclosed questionnaire which will take approximately 15 minutes to complete. If you agree to the request, kindly sign below to indicate your consent for voluntary participation in the study and that you understand the purpose and nature of your participation.

When you have completed the questionnaire you can hand it to the head nurse. You are kindly requested to return the completed questionnaire not later than 3 days from the date you received the questionnaire.

Thank you for your kind consideration,

Joyce Witherspoon

Questionnaire ID number
For office use only

PLEASE PROVIDE YOUR HONEST RESPONSE TO THE FOLLOWING QUESTIONS AND STATEMENTS:

SECTION 1

1. Gender

M	F

2. Age.............................
3. Educational Qualification..................
   A. Nursing bachelor's degree...........
   B. Nurse with a postgraduate degree.............
   C. Mid-wife
   D. Lactation specialist
   E. Other..............................
4. Current Occupation: (Circle as appropriate)
   A. Nursing ward manager
   B. Mid-wife
   C. Nurse
   D. Nursing Assistant
   E. Other
5. Number of years (or months) of experience in present position

   ....years or ....months
6. Current Duty place
   A. Antenatal Care
   B. Delivery suite
   C. Post natal care
   D. Pediatrics ward
   E. Other ....

7. Number of years (or months) in the section (s) selected from number 5.

   ....years or ....months

8. How many women/mothers do you counsel about infant or young child nutrition each week?

A. None

B. 1-5

C. 6-10

D. 11-15

E. Above 15

9. Where did you learn about the recommendations of the International Code of Marketing Breast-milk substitutes?

A. At nursing school

B. At your place of work

C. Through continuing education programs while employed at my expense

D. Nursing journals

E. Pediatric journals

F. Other

G. Never heard about these recommendations

10. At your place work, is there information available on the International Code for infant/young child nutrition counseling?

A. Yes □

B. No □

C. Not sure □

11. On your ward, all staff follow a guideline or protocol for infant and young child nutrition counseling.

A. Yes □

B. No□

C. Not sure□

12. Patient education is a core nursing function on your ward

A. Yes□

B. No □

C. Not sure □

SECTION 2

13 The role of a nurse in infant/young child nutrition counseling is to support the feeding decision of the mother/caregiver.

A. Agree □

B. Disagree □

C. Not sure □

14. The hospital accepts donations of parenting and/or nutrition -education materials produced/sponsored by infant formula manufacturers/distributers?

A. Yes □

B. No □

C. Don't know □

15. What types of displays are present on your ward about infant and young child nutrition?

A. Educational infant nutrition related materials □

B. Posters of infant nutrition including formula and /or teats/bottles □

C. Promotional advertisements from distributors/manufacturers of infant and young child foods □

D. Other---

E. None □

16. Have you ever been approached by infant formula manufacturers/staff/ distributors at the hospital?

A. Yes □

B. No □

C. Not sure□

17. If yes, please explain briefly the reason for the meeting

………

……………………………………………………………………………-

18. Please select as appropriate, item(s) you have received from manufacturers and/or distributors of infant food

A. Gifts (USB keys, pens, pencils, notepads, calendars, clocks, etc) □
B. Free samples of infant formulas □
C. Free samples of teats, feeding bottles, toys □
D. Sponsorship of training, meetings or conferences□
E. Funding for research□
F. Cash grants, holiday packages □
G. Scholarships□
H. Educational materials on infant formula □
I. Other (Specify)...............................
J. None □

Section 3

19. Would you advise a mother of a newborn baby to exclusively breast- feed for the first 6 months?

Explain your response --

----

20. What would you advise a mother who wishes to feed her child with formula?..
....
....
....

21. In your opinion, is the knowledge of the International Code essential and useful when counseling mothers on the superiority of breast-feeding?

A. Yes □
B. No□
C. Not sure □

21.1. If yes, describe how knowledge of the International Code helps to promote breastfeeding.---
----

21.2. If no, please explain why you believe it may not be essential in infant and young child nutrition counseling.

....
....
....
....

22. If you are not sure, would you be interested in learning more to improve your knowledge of the International Code?

i. Yes □

ii No □

23. If you are familiar with the content of the International Code...please describe how knowledge of the International Code help nurses to teach mothers/caregivers about the proper use of formula.-----
----

------------------------- *If you are not familiar with the content of the International Code, please do not answer this question

24. If you are familiar with the content of the Code, in your opinion, is a nurse's knowledge of the Code relevant in:

i) Counseling mothers on appropriate infant feeding choices?--

--------------------------- --

----

ii) The marketing of formula, feeding bottles, teats and bottles by manufacturers and distributors on your ward or hospital?

----

iii) The appropriate preparation and use of formula?

----

iv.) Facilitating breast feeding---

-----------(If you do not know the content of the International Code, please do not answer question 24).

25. Name at least one other international recommendation or program which aims at improving breast feeding rates, and/or relevant to infant and young child nutrition, which is practiced in your hospital or ward.

----

26. If you are familiar with the content of the Code, state one or more instances in which the International Code could be violated in nursing practice. If you do not know the content of the Code, please do not answer this question

----

------

27. If you responded to question 26, in the event that you witness/detect a violation of the International Code on your ward, describe how you would manage the violation.--------------------------

----

----

28. Describe in which situation and why you would provide a mother upon discharge from your ward, a take-home package that contains samples of formula, feeding bottles or teats.

Annexure A: Consent form in French

Chere Madam, Cher Monsieur,

Bonjour. Je suis étudiante en troisième cycle à l'Université d'Afrique du Sud. J'effectue une étude afin de remplir les conditions du master en santé public.

Le but de cette étude est d'évaluer vos connaissances du Code International de commercialisation des substituts du lait maternel de l'Organisation Mondiale de la Santé. Votre contribution et votre participation dans cette étude seront hautement appréciées. Toute information sera strictement confidentielle et en tant qu'individu, vous ne serez pas identifié(e) à titre personnel mais en tant que chercheur. Vos réponses seront utilisées uniquement dans le cadre de ce questionnaire.

La participation est volontaire et vous pouvez vous retirer à tout moment de cette étude.

Je vous prie de bien vouloir remplir le questionnaire ci-joint, ce qui vous prendra approximativement 10 minutes.

Si vous acceptez cette demande, merci de signer ci-dessous afin d'indiquer que vous acceptez de participer volontairement à cette étude et que vous comprenez l'objet et la nature de votre participation.

Une fois que vous aurez complété le questionnaire, vous pourrez le remettre à la Responsable de Soin Maternité. Il vous est demandé de remplir le questionnaire dans les trois jours suivant sa réception. Merci.

Merci pour votre attention.

Je soussigné(e),…………………(nom), accepte par la présente de participer volontairement à l'étude :

La connaissance des infirmiers des recommandations du Code International sur la commercialisation des substituts du lait maternel à Genève, Suisse.

Je comprends que toutes les informations seront traitées comme hautement confidentielles et que je peux me retirer de cette étude à tout moment.

Signature………………………………… Date…………………………………………

Numéro d'identification
Réservé uniquement à l'usage du bureau

QUESTIONNAIRE

MERCI DE REPONDRE HONNETEMENT AUX QUESTIONS ET AUX DECLARATIONS SUIVANTES :

PARTIE 1

H	F

2. Age............

3. Éducation..............

   A. Baccalauréat

   B. Soins infirmiers, certificat

   C. Soins infirmiers, diplôme universitaire

   D. Infirmier(ière) avec un niveau de troisième cycle

   E. Sage-femme

   F. Spécialiste en lactation

   G. Autre.........................

4. Position actuelle (entourez la réponse)

   A. Infirmier (ière) Chef de service

   B. Sage-femme

   C. Infirmier (ière)

   D. Aide soignant(e)

   E. Autre

5. Nombre d'années (de mois) d'expérience dans votre position actuelle

………………. années ou ……………….mois

6. Service actuel

A. Soins prénatals
B. Bloc d'accouchement
C. Soins postnatals
D. Services pédiatriques
E. Autre…………………………….

7. Combien de femmes/mères conseillez-vous sur l'alimentation des nourrisson ou des jeunes enfants par semaine?

A. Aucune

B. 1-5

C. 6-10

D. 11-15

E. Plus de 15

8. Où avez-vous appris les recommandations du Code International de commercialisation des substituts du lait maternel ?

A. A l'école de soins infirmiers
B. A mon travail
C. En suivant une formation continue à ma charge, parallèlement à mon emploi
D. Revues infirmières
E. Revues pédiatriques
F. Autre
G. Je n'ai jamais entendu parler de ces recommandations

10. A votre travail, existe-t-il des informations disponibles sur le Code International concernant le conseil à l'alimentation du nourrisson / jeune enfant ?

A. Oui
B. Non

C. Ne sais pas

11. Dans votre service, le personnel suit une directive ou un protocole concernant le conseil à l'alimentation du nourrisson et du jeune enfant.

A. Oui

B. Non

C. Ne sais pas

12. L'information du patient est au cœur de la fonction d'infirmier (ière) dans votre service.

A. Oui

B. Non

C. Ne sais pas

PARTIE 2

13. Le rôle de l'infirmier (ière) dans le conseil à l'alimentation du nourrisson/jeune enfant est de soutenir la décision de la mère/du travailleur social dans son choix d'alimentation.

A. Je suis d 'accord................................

B. Je ne suis pas d'accord.........................

C. Je ne sais pas...................................

14. L'hôpital accepte les donations de matériaux d'éducation des enfants et/ou d'éducation sur l'alimentation, produits/sponsorisés par des fabricants/distributeurs de lait en poudre pour nourrissons ?

A. Oui

B. Non

C. Ne sais pas

15. Quels types de présentations sur l'alimentation du nourrisson / jeune enfant sont présentes dans votre service?

A. Des matériaux éducatifs relatifs à l'alimentation du nourrisson

B. Des affiches sur l'alimentation du nourrisson avec du lait en poudre / ou des tétines / biberons

C. Du matériel publicitaire provenant de distributeurs/fabricants de nourriture pour les nourrissons et jeunes enfants

D. Autre ....

E. Rien

16. Avez-vous déjà été approché(e) par des fabricants/du personnel / des distributeurs de lait en poudre pour nourrissons à l'hôpital ?

A. Oui
B. Non
C. Ne sais pas

17. Si oui, expliquez la raison de la réunion

……

……………………………………………

18. Sélectionnez les articles appropriés que vous avez reçus de la part des fabricants et/ou des distributeurs de nourriture pour nourrisson

1. Cadeaux (clés USB, stylos, crayons, cahiers, calendriers, réveils, etc)
2. Échantillons gratuits de laits en poudre pour nourrissons
3. Échantillons gratuits de tétines, biberons, jouets
4. Parrainage pour des stages, des réunions ou des conférences
5. Fonds pour la recherché
6. Subvention en espèces, voyages organisés
7. Bourse d'études
8. Matériaux éducationnels sur le lait en poudre pour nourrissons
9. Autre (spécifiez)……………………………………………….
10. Rien

PARTIE 3

19. Conseilleriez-vous à la mère d'un nouveau-né d'exclusivement l'allaiter pendant les 6 premiers mois ?

Expliquez votre réponse ……………………………………………………………………………………………

……

……

20. Que conseilleriez-vous à une mère qui souhaite nourrir son enfant avec du lait en poudre ?

....

....

....

20. Selon vous, la connaissance du Code International est-elle essentielle et utile lors du conseil fait aux mères sur l'importance d'allaiter ?

i. Oui

ii. Non

. iii. Ne sais pas

20.1. Si oui, décrivez comment la connaissance du Code International aide à promouvoir l'allaitement

....

....

20.1. Si non, expliquez pourquoi vous croyez que ce n'est pas essentiel au conseil sur la nutrition du nourrisson et du jeune enfant.

....

....

22. Si vous ne savez pas, seriez-vous intéressé(e) par en apprendre davantage pour améliorer vos connaissances du Code International ?

i. Oui

ii. Non

23. Décrivez comment la connaissance du Code International aide les infirmiers(ières) à apprendre aux mères l'utilisation correcte du lait en poudre.

....

....

....

24. Décrivez dans quelle situation et pourquoi vous fourniriez à une mère autorisée à quitter votre service, une trousse de maternité contenant du lait en poudre, des biberons ou des tétines.

....

....

....

25. Selon vous, qu'un(e) infirmier(ère) connaisse le Code International est pertinent pour:

i) conseiller les mères sur les choix appropriés de nourriture pour nourrisson ?

....

....

ii) la commercialisation de lait en poudre, biberons et tétines des fabricants et distributeurs de votre service ou hôpital ?

....

....

iii) pour la préparation et l'usage appropriés du lait en poudre ?

....

....

iv) pour faciliter l'allaitement

....

....

26. Si vous êtes familier avec le contenu du Code Internationale, nommez une autre recommandation internationale ou un programme mis en pratique dans votre hôpital ou service, dont le but est d'améliorer les taux d'allaitement et/ou qui est pertinent(e) pour l'alimentation du nourrisson et du jeune enfant.

....

....

27. Indiquez un ou plusieurs cas où le Code International pourrait être violé dans le cadre de l'exercice des soins infirmiers.

....

....

28. Si vous deviez assister ou détecter une violation du Code International au sein de votre service, décrivez comment vous traiteriez la violation

Annexure B1: Approval from Geneva Cantonale Hospital to conduct research

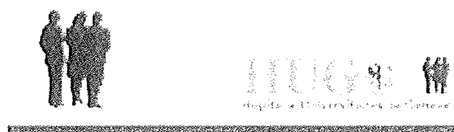
On Tue, Nov 22, 2011 at 5:20 PM, CITHERLET Catherine <Catherine.Citherlet@hcuge.ch> wrote:

Chère Madame,

Concernant votre questionnaire portant sur les connaissances du code international de la commercialisation des produits de substitution à l'allaitement maternel. Je vous autorise à prendre contact avec les responsables d'unité de l'obstétrique, sachant que nous n'avons pas de disponibilité pour prendre en charge ce type de démarche auprès des collaborateurs.

- Mme Gonzalez Chantal
- Mme Pierret Bérangère
- Mme Chilin Antonina
- Mme Montandon Lalonge Corine Yara

Meilleures salutations



Mme Catherine Citherlet

Responsable des soins

Departement de gynécologie et obstétrique

Bd de la cluse 30

CH-1205 Genève

Tel : 00.41.22.382.4213

Annexure B2: Approval from La Tour Hospital to conduct research

Odile Dandine <odile.dandine@latour.ch>

Madame Witherspoon,

Je vous confirme par ce message l'acceptation de votre étude au sein de notre Maternité.

Les questionnaires concernant les connaissances du code international de la commercialisation des produits de substitution à l'allaitement maternel ont été distribués aux sages-femmes et puéricultrices de notre équipe, ont été remplis de façon anonyme, et ce , afin de répondre aux différentes thématiques de votre mémoire.

Recevez, Madame, mes cordiales salutations et toux mes voeux de réussite dans ce projet.

Odile Dandine

Sage-femme responsable Maternité

Annexure C : UNISA Research and Ethics Committee Clearance

UNIVERSITY OF SOUTH AFRICA
Health Studies Higher Degrees Committee
(HSHDC)
College of Human Sciences
ETHICAL CLEARANCE CERTIFICATE

Date of meeting: 10 March 2011 Project No: 3676-316-0

Project Title: An assessment of the knowledge of the International code of marketing breast milk substitutes among nurses in Geneva, Switzerland

Researcher: Joyce Adomah Witherspoon

Degree: Masters of Public Health Code: DIS4986

Supervisor: Prof SP Human
Qualification: D Litt et Phil
Joint Supervisor: -

DECISION OF COMMITTEE

Approved √ **Conditionally Approved** ☐

Prof E Potgieter
RESEARCH COORDINATOR

Prof MC Bezuidenhout
ACADEMIC CHAIRPERSON: DEPARTMENT OF HEALTH STUDIES

PLEASE QUOTE THE PROJECT NUMBER IN ALL ENQUIRES