

# Development of the Mother-Child Health Improvement Teaching Manual for the Training of Trainees in Uganda

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## Abstract

*Purpose: The purpose of this study was to develop a manual for Training of Trainees as midwives, to improve mother and child health in Uganda. Method: We conducted a wide literature review and met with various experts in Korea and Uganda. Results: A total of 11 topics were identified: 6 on maternal health family planning, pre-conception care, antenatal care, labor and delivery care, postnatal care, and nutrition) and 5 on child health (breastfeeding, immunization, elimination of mother-to-child transmission, HIV/AIDS, and childhood illness). Conclusion: This manual must be implemented nationwide to improve the quality of life in Uganda.*

**Keywords:** *Mother, Child, Health Improvement, Manual*

## 1. Introduction

Globally, maternal and child health promotion is a major contributor to the decline in maternal and child mortality rates [1]. The toll of under-five deaths over the past two decades is staggering; worldwide, between 1990 and 2013, 223 million children died before their fifth birthday [2].

Women in Uganda face health concerns because they often live in remote and resource limited environments where the quality of help they need to save their own and their babies' lives is not available. Maternal and child care is an objective of primary health care, and investment in maternal and child health will lead to a strong and more effective labor force, which will help boost the economy in Africa and particularly in Uganda.

In Uganda, maternal deaths are classified into two groups: direct obstetrics and indirect obstetrics. Direct obstetric deaths are those resulting from obstetric complications during pregnancy, labor, and puerperium, which may be caused by interventions, omissions, incorrect treatment, or a chain of events resulting from any of the above. Indirect obstetric deaths are those resulting from previously existing diseases or diseases that developed during pregnancy, which were not due to direct obstetric causes, but were aggravated by the physiological effects of pregnancy [3].

One study conducted in Uganda [4] indicated that 21.1% of the participants had experienced an abortion, and reported that the most commonly used contraceptive method was Depo-Provera (41.5%). And male condom 31.0%, oral contraceptives 23.2% were followed. According to a Luwero District Council Report [5], every year 5.2% of women of reproductive age (15–49 years) are expected to get pregnant at least once.

According to the World Health Organization (WHO), infections, birth defects, malaria, HIV, malnutrition, and accidents most often cause child mortality [6]. With reference to the fourth Millennium Development Goal (MDG), the WHO promotes four main strategies for reducing child mortality rates globally, which include appropriate home care and timely treatment of complications for newborns, integrated management of childhood illness for all children under the age of five years, expanded immunization programs, and

infant and young child breastfeeding [7]. Nine and a half percent of mothers disagree that even a healthy child requires immunization [4].

The infant mortality rate per 1,000 live births was 67 in the Luwero district, compared to the national rate of 76, while child mortality rate per 1,000 live births (0–5 years) was 129, compared to the national rate of 137 [8]. Among those aged 15–49 years, the HIV prevalence rate was 6.5% in the Luwero district, compared to the national rate of 6.4%. With reference to the prevalence of using contraceptives, 30% of the women in the Luwero district used modern methods, compared to the national rate of 18 %.

The fourth and fifth MDGs aim to reduce child mortality and improve maternal health, respectively, by 2015, through education and training [9]. Therefore, one of the objectives of the Ministry of Health in Uganda was to improve the quality of care for mothers and newborns [9].

Consequently, according to contents developed [10] the challenge is to develop an appropriate manual for training trainees health care professionals (TOT) to help health workers, and the community move towards improved maternal and child health, and to reduce maternal and child mortality rates. Therefore, the present study aimed to develop a TOT manual on mother and child health improvement.

## **2. Research Method**

### **2.1. Research Design**

This was a methodological study to develop a TOT manual on mother-child health improvement in Uganda.

### **2.2. Research Process**

(1) First step: Search for literature

To develop the Mother Child Health Improvement (MCHI) program for TOT, a wide literature review, including a website search, was conducted. Domestic and foreign materials were used.

(2) Second step: Meeting with experts in Korea and Uganda

Meetings were held in Korea and Uganda, with nursing professors, community health physicians, midwives, and local expert physicians in maternal and pediatric health.

(3) Third step: Choose topics and build specific behavioral objectives

Using the information collected from Steps 1 and 2, specific behavioral objectives were established based on the selected educational content.

(4) Fourth step: Allotment of time to teach each topic

Time was allotted depending on the priority and length of each topic. Simultaneously, appropriate teaching aids were identified for each topic.

## **3. Results**

### **3.1. Contents of the MCHI Program**

The program comprised 11 topics: 6 on maternal health (family planning, pre-conception care, antenatal care, labor and delivery care, postnatal care, and nutrition) and 5 on child health (breastfeeding, immunization, elimination of mother-to-child transmission, HIV/AIDS, and childhood illness).

Each topic had 3–12 specific behavioral objectives. For example, the topic of family planning had three behavioral objectives: to state the meaning of family planning, to explain the benefits of family planning and child spacing to the mother/partners of the infant, and to describe the family planning methods used in Uganda.

The topics were allotted the following time periods: 60 minutes for each of family planning, pre-conception care, antenatal care, and HIV/AIDS, and 30 minutes for each of labor and delivery care, postnatal care, nutrition, breastfeeding, immunization, elimination of mother-to-child transmission, and childhood illnesses. Therefore, the amount of training totaled 7.5 hours. Trainees will need to use this manual for teaching in the community for 2 hours a day, over 4 days, to complete the program (Table 1).

**Table 1. The Topics and Specific Behavioral Objectives of the Maternal and Child Health Improvement Program**

Topic	Day	Time (Min)	Special Behavioral Objectives
Family planning	1	60	<ul style="list-style-type: none"> <li>• State the meaning of family planning.</li> <li>• Explain the benefits of family planning and child spacing to the mother/parents of the infant.</li> <li>• Describe the family planning methods used in Uganda.</li> </ul>
Pre-conception care	1	60	<ul style="list-style-type: none"> <li>• Definition of pre-conception care.</li> <li>• Discuss the purposes of pre-conception care.</li> <li>• Explain the services offered during pre-pregnancy care.</li> <li>• Discuss where pre-pregnancy care can be provided</li> </ul>
Antenatal care	2	60	<ul style="list-style-type: none"> <li>• Explain when a woman is said to be pregnant.</li> <li>• Explain the signs of pregnancy.</li> <li>• Explain the care to be provided to a woman during pregnancy.</li> <li>• Discuss what a pregnant woman should do to protect her and the child's health.</li> <li>• Explain what a pregnant woman should eat.</li> <li>• Discuss how a pregnant woman should keep herself clean.</li> <li>• Explain what a pregnant woman should avoid.</li> <li>• Discuss some of the problems a woman may experience during pregnancy and how to tackle them.</li> <li>• Explain the conditions that can lead a woman to have problems during pregnancy.</li> <li>• Explain the danger signs during pregnancy.</li> <li>• Discuss the birth plan.</li> </ul>
Labor and delivery care	2	30	<ul style="list-style-type: none"> <li>• Define labor.</li> <li>• Mention the services offered during labor.</li> <li>• Mention the importance of the health care provided to a newborn during the first 24 hours of life.</li> </ul>

Postnatal care	2	30	<ul style="list-style-type: none"> <li>• Mention the delivery service points.</li> </ul>
			<ul style="list-style-type: none"> <li>• Explain what postnatal care is.</li> <li>• Explain the purpose of postnatal care.</li> <li>• Explain the messages given to mothers about Vitamin A.</li> <li>• Explain the danger signs of conditions that may necessitate the mother and baby to see a health worker immediately.</li> <li>• Explain the services offered to the mother and baby during the postnatal visit.</li> </ul>
Nutrition	3	30	<ul style="list-style-type: none"> <li>• Describe what nutrition is.</li> <li>• Mention the importance of good nutrition.</li> <li>• Discuss the effects of poor nutrition.</li> <li>• Discuss the recommended diet for healthy living.</li> <li>• Mention the important points to consider while planning family meals.</li> <li>• Mention key nutrition messages.</li> </ul>
			<ul style="list-style-type: none"> <li>• Define breastfeeding.</li> <li>• Define exclusive breastfeeding.</li> <li>• Mention the importance of breastfeeding for the mother and baby.</li> <li>• Discuss the key messages related to breast feeding a baby aged 0 to 24 months of age and optimal breastfeeding, including micronutrients.</li> </ul>
Breastfeeding	3	30	<ul style="list-style-type: none"> <li>• Explain what immunization is.</li> <li>• Explain immunity.</li> <li>• Mention the immunizable childhood diseases and their vaccines.</li> <li>• Explain the target groups for immunization.</li> </ul>
			<ul style="list-style-type: none"> <li>• Explain how mother-to-child transmission (MTCT) occurs.</li> <li>• Explain EMTCT</li> <li>• Explain EMTCT of HIV.</li> </ul>
Immunization	3	30	<ul style="list-style-type: none"> <li>• Define what AIDS is.</li> <li>• Explain the causes of AIDS.</li> <li>• Explain how someone can become infected with HIV.</li> <li>• Explain what the HIV does when it enters the body.</li> <li>• Explain how someone transmits an HIV infection.</li> <li>• Mention the signs of someone with AIDS.</li> <li>• Explain how one can prevent HIV infection.</li> <li>• Explain what to do if someone is suspected to have AIDS.</li> </ul>
Elimination of mother to child transmission (EMTCT)	3	30	
HIV/AIDS	4	60	

			<ul style="list-style-type: none"> <li>• Explain when a person should undergo an HIV Test.</li> <li>• Explain what one should do or not do if it is confirmed that a person has HIV.</li> <li>• Explain how one can live positively with HIV/AIDS.</li> <li>• Discuss how family members and friends can take care of a person suffering from AIDS.</li> </ul>
Childhood illnesses	4	30	<ul style="list-style-type: none"> <li>• List some of the common childhood illnesses.</li> <li>• Explain the causes, signs, and symptoms of each disease.</li> <li>• Explain what a caretaker should do when the child is sick.</li> <li>• Explain steps to prevent malaria.</li> <li>• Explain what can happen if malaria is not treated on time.</li> </ul>

### 3.2. Teaching Aids and Methods for each Topic

The teaching aids and educational methods recommended for each topic are presented in Table 2.

**Table 2. Teaching Aids and Educational Methods according to Topics**

Topics	Teaching aids	Educational methods
Family Planning	Calendar, Implants, IUD, Injectables, Pills, Patch, Vaginal Ring, Condom, Diaphragm, Female condoms, Spermicides, etc.	
Pre-conception care	Calendar, Screen	
Antenatal care	Blood pressure meter, Body weight scale, Syringe, 4 pairs of gloves, Plastic sheet (Ekiveera), 3 pieces of string (about 20 cm each), Razor blade, Basin, Gauze (material for dressing that can be bought from a pharmacy), Cord ligatures, Tetracycline eye ointment tube, Immunization card, 1 towel, etc.	Lecture, Demonstration, Role-play, Simulation, Practice, Group discussion,
Labor and delivery care	Model of a new born baby, Tetracycline eye ointment, Body weight scale, Cord ligature, BCG and Polio vaccine, etc.	Presentation, etc.
Post natal care	Baby model, Vitamin A capsule, Female breast model, etc.	
Nutrition	Nutrition facts labels	
Breastfeeding	Female breast model, Baby model	
Immunization	Body weight scale, Injection, Vaccines	

Elimination of mother to child transmission	Breastfeeding guidelines, HIV/AIDS transmission model, Baby model, Woman breast model
HIV/AIDS	Syringe needle, ARV, Bed, Towels, Soap
Childhood illnesses	Thermometer, Blanket, Medicines, Mosquito nets, Disinfectant, Vaccine

### 3.3. Examples of TOT Manual

#### 1) Maternal Part



Figure 1. Family Planning



Figure 2. Pre-conception Care

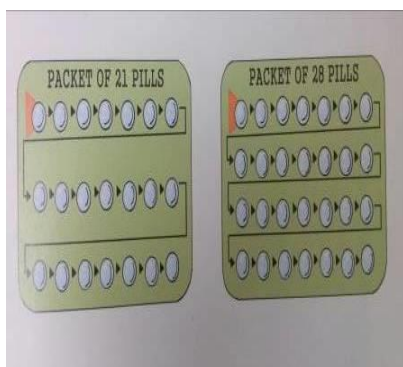


Figure 3. Birth Control Pills



Figure 4. Pre-conception Care



Figure 5. Postnatal care

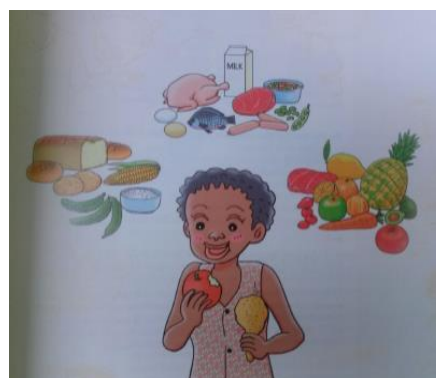


Figure 6. Nutrition

## 2) Child Part



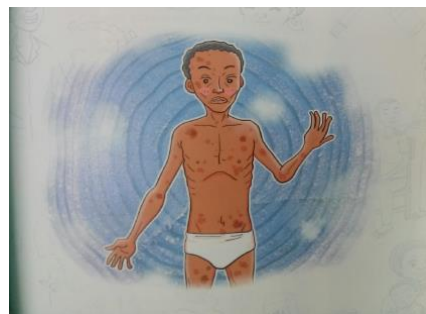
**Figure 7. Breastfeeding**



**Figure 8. Immunization**



**Figure 9. Elimination of mother-to-child**



**Figure 10. HIV/AIDS Transmission**



**Figure 11. Childhood Illness**



**Figure 12. Illness Signs**

## 4. Discussion

In Uganda, maternal and child health conditions are the largest contributors to the total disease burden (accounting for 20.4%) [9]. When a new mother dies, not only does her baby face greater risk of death, malnourishment, and lifelong disadvantage, but the whole family's well-being is also affected [11]. Uganda's maternal mortality rate is 360 per 100,000 live births [12]. This is increasingly becoming a major problem in Uganda, and there is a need to develop strategies to reduce maternal mortalities.

Abortions threaten maternal health; 21.1% of women in Uganda have received an abortion [4].

The challenge, therefore, is to help midwives and community health workers move towards improved maternal and child health and reduce maternal and child mortality rates through education and training.

Education is a very powerful method for changing the knowledge, attitudes, and behavior of mothers. A healthy pregnancy begins before conception and continues with appropriate prenatal care and timely response to problems that may arise. It is important for all women of reproductive age to adopt health behaviors: taking folic acid, maintaining a healthy diet and weight, being physically active, quitting tobacco use, and avoiding excessive consumption of alcohol. Additionally, it is necessary to use contraceptive methods correctly and consistently to avoid pregnancy, in order to ensure a healthy family life [13].

Therefore, the TOT manual developed in this study should be implemented. Additionally, when people in the community may not have adequate time to participate in the training, the trainers can regulate the contents conveniently.

## References

- [1] C. H. Geneva, "World Health Organization. Newborns: reducing mortality", (2012). Available from: <http://www.who.int/mediacentre/factsheets/fs333/en/>
- [2] UNICEF, WHO, The World Bank, United Nations Population Division. The Inter agency Group for child Mortality Estimation (UN IGME), Levels and Trends in Child 3. Mortality, Report 2013, New York, USA, UNICEF, (2013).
- [3] Ministry of Health, Maternal and perinatal death review guidelines, 3rd ed., Republic Of Uganda, (2010). <http://www.oecd.org/unitedstates/Health-at-a-Glance-2013-Press-Release-USA.pdf>
- [4] M. S. Koh, E. J. Song, E. H. Cha, and Cha MH, Baseline survey for mother child health improvement training program development for Africa. Information: An International Interdisciplinary Journal, vol. 18, no. 5B, (2015), pp. 2157-2161.
- [5] M. D. Kikabi, "Health Sector Report to Council, Programme Performance. Luwero district council", (2013).
- [6] C. H. Geneva, "World Health Organization. Maternal mortality", (2014). Available from: <http://www.who.int/mediacentre/factsheets/fs348/en/>
- [7] C. H. Geneva, "World Health Organization. MDG 4: reduce child mortality", (2015). Available from: [http://www.who.int/topics/millennium\\_development\\_goals/child\\_mortality/en/](http://www.who.int/topics/millennium_development_goals/child_mortality/en/)
- [8] USAID, 2012, Uganda Health System Assessment 2011.
- [9] Ministry of Health, HSSIP: Health Sector Strategic & Investment Plan (2010/11 ~ 2014/15), Uganda (2010).
- [10] M. S. Koh and E. J. Song, "Development for Mother-child Health Improvement teaching contents for the community of Uganda. Advanced Science and Technology Letters, vol. 116, (2015), pp. 99-103. <http://dx.org/10.14257/astl.2015.116.21>
- [11] C. H. Geneva, "World Health Organization. Blood Donor Day 2014: Safe blood needed to save mothers", (2014). Available from: WHO | World Blood Donor Day 2014: Safe blood needed to save mothers.
- [12] WHO, UNICEF, UNFPA, and United Nations Population Division Maternal Mortality Estimation Inter-Agency Group Uganda, Maternal mortality in", (2015), pp. 1990-2013.
- [13] Ventura, S. J. Curtin, S. C., Abma, J. C., Division of Vital Statistics, Stanley K, The Guttmacher Institute. Estimate Pregnancy Rates and Rates of Pregnancy Outcomes for the United States. National Vital Statistics Reports, vol. 60, no. 7, (2012), pp. 1-2.