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**The Perceptions, Attitudes and Practices of
Postpartum Nurses Regarding the
Baby Friendly Hospital Initiative.**

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TABLE OF CONTENT

I. ABSTRACT	1
II. INTRODUCTION	2
BACKGROUND INFORMATION	2
BFHI IN ARMENIA.....	3
OBJECTIVES OF THE RESEARCH AND RESEARCH QUESTIONS	5
III. METHODS	6
BACKGROUND INFORMATION	6
STUDY POPULATION	7
DATA COLLECTION.....	7
<i>Initial exploratory in-depth interviews</i>	8
<i>Second phase of in-depth interviews</i>	8
<i>Free List Exercise</i>	9
<i>Pile Sorts</i>	10
<i>Direct Observation</i>	10
<i>Semi-structured interviews with mothers</i>	11
IV. RESULTS, FIRST PHASE	11
KEY INFORMANT INTERVIEWS RESULTS.....	11
FREE LIST EXERCISE RESULTS.....	12
PILE SORTS RESULTS	13
V. RESULTS, SECOND PHASE	14
KEY INFORMANT INTERVIEWS RESULTS.....	14
RESULTS OF DIRECT OBSERVATIONS.....	19
SEMI-STRUCTURED INTERVIEWS RESULTS.....	20
VI. DISCUSSION AND RECOMMENDATIONS	21
VII. CONCLUSION	22
REFERENCES	24
VIII. APPENDICES	25
APPENDIX I	26
ETHNOGRAPHIC FIELD GUIDE.....	26
APPENDIX II	28
ORAL CONSENT PROTOCOL	28
APPENDIX III	29
CODING SYSTEM FOR KEY INFORMANT INTERVIEWS.....	29
APPENDIX IV	30
SEMI-STRUCTURED INTERVIEWS WITH MOTHERS	30

I. ABSTRACT

At the end of 1993 in response to the results reported in a National Breastfeeding Survey the Ministry of Health (MoH) of Armenia implemented policy changes in postpartum practice regarding breastfeeding promotion. These changes included the implementation of five steps from the UNICEF/WHO Baby Friendly Hospital Initiative's (BFHI) Ten Steps to Successful Breastfeeding. Currently, although, the majority of mothers have rooming-in experience and on-demand feeding is encouraged in delivery hospitals and in pediatric polyclinics in Armenia, the rates of exclusively breastfeeding in Armenia are still low [1]. The purpose of this research study was to explore the perceptions, attitudes and practices of postpartum nurses regarding BFHI and postpartum practices in general, in order to get information about potential problems that are happening as a result of the new policies.

Two delivery hospitals in Yerevan were chosen based on the rates of the rooming-in practice from the National Breastfeeding Survey [1]. One hospital had a low rate (Hospital L-68.5 %), and the other hospital had the highest rate of rooming-in (Hospital H-100%). Qualitative research methodology has been selected. Study was done in 2 phases. The first phase was general and conducted in 4 delivery hospitals. The second phase focused specifically on 2 delivery hospitals with high and low rates of rooming-in. Qualitative research method included key informant interviews, free list and pile sort exercises, direct observations and semi-structured interviews with mothers. Data were collected from postpartum baby and mother nurses and mothers in delivery hospitals. Some variations in postpartum practices were discovered between hospitals L and H. There is a lack of training regarding BFHI among postpartum nurses. Attitudes of postpartum mother nurses in hospital L were negative regarding rooming-in and on demand breastfeeding practices. The presence of seven mothers with their infants in one mom's room in hospital L was too much. There is a need to increase health education of hospital staff, especially postpartum nurses through training regarding BFHI, because their role in the insuring of successful breastfeeding practices is crucial.

II. INTRODUCTION

Background Information

It is widely known that breast milk provides the ideal nutrients necessary for infants especially for the first 6 months of life. In order to encourage health care facilities to increase and support breastfeeding, UNICEF and WHO developed the Baby Friendly Hospital Initiative. The main part of this initiative, they recommend Ten Steps to Successful Breastfeeding. These ten steps address the issues of knowledgeable, supportive health care staff, a favorable environment, and practices that encourage breastfeeding [2].

The Ten Steps

Step 1. Have a written breastfeeding policy that is routinely communicated to all health care staff.

Step 2. Train all health care staff in skills necessary to implement this policy.

Step 3. Inform all pregnant women about the benefits and management of breastfeeding.

Step 4. Help mothers initiate breastfeeding within a half-hour of birth.

Step 5. Show mothers how to breastfeed, and how to maintain lactation even if they should be separated from their infants.

Step 6. Give newborn infants no food or drink other than breastmilk, unless medically indicated.

Step 7. Practice rooming-in - Allow mothers and infants to remain together-24 hours a day.

Step 8. Encourage breastfeeding on demand.

Step 9. Give no artificial teats or pacifiers to breastfeeding infants.

Step 10. Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic.

Some studies analyzed the effect of management of the Ten Steps on the success of breastfeeding milk secretion, mothers satisfaction etc. in Indonesia, South-Africa, Hungary, Italy, US, Armenia, etc.[1,3,4,5,6,7]. These studies discovered that some factors influence significantly to the successful breastfeeding. These factors are: postpartum hospital practices, knowledge and attitude of health care

providers and also mothers. Postpartum hospital practices include a) rooming-in practice, b) early initiation of first lactation, c) proper positioning and attachment of the baby, d) no use of bottle and nipple, e) breastfeeding on demand.

One research study has shown that particularly rooming-in, is the most favorable to the well-being of the mother-newborn relationship. Infants who stayed with their mothers breastfeed more frequently and gained weight more rapidly, than those who have only occasional contact with their mothers [8]. If baby can stay in the same room with mothers 24 hours, it will be likely for developing breastfeeding practice. The role of health care providers, especially postpartum nurses, is crucial to the successful initiation and maintenance of breastfeeding in delivery hospitals. Postpartum nurses can provide necessary support and advice not only to assist during staying in delivery hospital, but to establish foundation for continued breastfeeding after discharging from the hospital.

Other study examined the consequences of using artificial teats and pacifiers. Artificial teats and pacifiers are associated with increased frequency of breastfeeding problems. These problems are related to the diminished sucking strength or duration of breastfeeding [9].

Knowledge and attitude of health care providers and mothers regarding BFHI have an important meaning in promote successful breastfeeding. Mothers and health care providers both need to have skills and knowledge related to proper breastfeeding techniques, and health care organizations need policies in promote successful breastfeeding. However, some of these studies, documented lack of adequate knowledge of breastfeeding techniques and/or lack of counseling given to mothers regarding infant feeding choice and practices [10,11].

BFHI in Armenia

Low level of postpartum care practices, including separation of the mothers and babes, scheduled breastfeeding, late initiation of breastfeeding, supplementary feeds using bottles and nipples were the normal situation in delivery hospitals of Armenia before the fall 1993.

In 1993, UNICEF sponsored survey regarding infant breastfeeding situation in Armenia [12]. A typical hospital practice was to separate the baby from the mother for 24 hours after birth, feeding

him/her with water, tea or juice before first breastfeeding. Data have shown that infants were brought to the mothers by scheduled breastfeeds: every 3 hours with night break 6 hours. Infant formula or glucose water were given to the infants as a supplementary feeding due to mother's insufficient milk. Results from this survey have shown that " There was virtually no exclusive breastfeeding in Yerevan, Armenia, with only 24% predominant breastfeeding at 3 month, and 38% mixed feeding..."[12].

At the end of 1993 the Ministry of Health (MoH) of Armenia made changes in postpartum practice regarding breastfeeding promotion. Big intervention has been implemented in order to increase the percentage of breastfed infants. This implementation of five steps from the UNICEF/WHO BFHI's Ten Steps to Successful Breastfeeding. They are the following:

Step 1. Help mothers initiate breastfeeding within a half-hour of birth.

Step 2. Give newborn infants no food or drink other than breastmilk, unless medically indicated.

Step 3. Practice rooming-in - Allow mothers and infants to remain together-24 hours a day.

Step 4. Encourage breastfeeding on demand.

Step 5. Give no artificial teats or pacifiers to breastfeeding infants.

At the beginning of 1994 MoH of Armenia provided seminars and courses about breastfeeding promotion. Chief doctors and physicians (gynecologists, obstetricians) of delivery hospitals and pediatric polyclinics have been trained and participated in these seminars and courses. MoH also provided guidelines to the delivery hospitals and pediatric polyclinics to implement these five steps. Postpartum nurses and patronage nurses have not been trained at this time [1].

Implementation of the BFHI in Armenia was followed by radical policy changes, and now the majority of mothers have rooming-in experience; on-demand feeding is encouraged in delivery hospitals and at pediatric polyclinics in Armenia. Although American health professionals also trained local Armenian obstetricians, gynecologists, pediatricians, and nurses throughout the year on various topics which include BFHI, there seems to be a lack in the implementation of these steps.

In 1997 UNICEF again sponsored research study (INFANT FEEDING PRACTICE IN ARMENIA: Report on Comparative Study and National Survey) to determine the magnitude of the changes in the

sphere of breastfeeding promotion, to compare current infant feeding practices in Armenia with baseline data of 1993. Results from this survey have shown that there are significant changes in the current breastfeeding practice and postpartum hospital practices in Armenia.

Feeding practices: An increase in exclusive breastfeeding from 0.7% in 1993 to 20% in 1997
An increase in the combined rate of exclusive and predominant breastfeeding from 33% to over 60%.

Postpartum hospital practices:
An increase in rooming-in from 0% to over 78% in Yerevan, perhaps higher in regions.
An increase in immediate initiation from 0% in 1993 to 78% in 1997.
A decrease in reported prelacteal feeds from 70% in 1993 to 41% in 1997.

Although these changes are impressive, there is still some variation in the implementation of BFHI in delivery hospitals in Yerevan. Two delivery hospitals in Yerevan, that were very different in their rates of rooming-in were chosen for this research study.

Objectives of the Research and Research Questions

Having the variety of interventions and positive changes made in the area of breastfeeding the purpose of this research study is to explore the perceptions, attitudes and practices of postpartum nurses regarding BFHI in two delivery hospitals, where the rates of rooming-in were quite different.

The objectives and research questions for this research are the following:

Objective 1. To assess the differences between postpartum nursing practice in these two delivery hospitals.

Research question 1. What are the duties of postpartum baby and mother nurses?

Research question 2. What differences are there between duties of postpartum baby and mother nurses in two chosen delivery hospitals?

Objective 2. To explore attitudes, practices and perceptions of postpartum nurses regarding BFHI in two chosen delivery hospitals in Yerevan.

Research question 3. How do perceptions of postpartum baby and mother nurses regarding BFHI affect the postpartum practice?

Objective 3. To generate hypothesis regarding the reasons for the variation in rooming-in rates between two delivery hospitals.

Research question 4. What are the potential barriers and motivations for the implementation of BFHI ?

III. METHODS

Background Information

In order to attempt to answer research questions a combination of the qualitative research techniques (in-depth interview with key informants: mother and baby postpartum nurses; free lists; pile sorts; direct observation) have been selected to conduct this project. Qualitative research methodology has been selected in order to provide a greater depth of response and, therefore, greater understanding of the prior quantitative research.

The first phase of qualitative research method was conducted by the students from the Public Health department of the American University of Armenia. The site of data collection in 4 delivery hospitals in Yerevan, and the time period of the data collection was one month, July 1997.

Data collection included:

- 4 exploratory in-depth interviews with postpartum baby nurses
- 12 free list exercise
- 6 pile sorts

Following this preliminary data collection, the second phase of this research focused on two delivery hospitals in Yerevan. Two delivery hospitals were chosen based on the rates of the rooming-in practice from the "INFANT FEEDING PRACTICES IN ARMENIA: Report on Comparative Study and National Survey". One hospital had a low rate of the rooming-in (Hospital L-68.5 %), and the other hospital had the highest rate of rooming-in (Hospital H-100%) practice.

The data collection for the second phase included:

- 8 additional in-depth interviews with postpartum baby and mother nurses
- 2 direct (participant) observations

- 12 semi-structured interviews with mothers.

The second phase of this research study was conducted solely by the author of this research study during August-September, in 1997.

Study Population

In-depth interviews were conducted with informants. Informants are the people who have rich experience in a given sphere and can share information with researcher. The informants for this research study were postpartum baby and mother nurses. Informants for the first phase of the study were only postpartum baby nurses working in different delivery hospitals in Yerevan. Informants for the second phase were postpartum baby and mother nurses working in two chosen delivery hospitals. Purposive sampling was used to select informants from the delivery hospitals for conducting both phase of research. The inclusion criterion for the selection of nurses for conducting first phase was postpartum baby nurses who have experience working in the postpartum department. The inclusion criterion for the selection of nurses for conducting second phase was postpartum baby and mother nurses who have experience working in the postpartum department Demographic information (age, years of education, last time attended any training, attended UNICEF/MoH training) was collected about each nurse.

Data Collection

Data collection was conducted during July - September, in 1997. All of the informants were very easy in terms of contact, and it is necessary to indicate the willingness of the postpartum nurses to participate in the study and good communication between the study participants and researchers.

Table 1. Summary of the methods used for conducting qualitative research.

Method	Number Conducted	Time (phase) of conducting
Key Informant Interview	4 8	First phase Second phase
Free Listing	12	First phase
Pile Sorting	6	First phase
Direct Observation	2	Second phase

Semi-structured interviews with mothers	12	Second phase
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Initial exploratory in-depth interviews.

An interview guide was prepared for conducting in-depth interview with the postpartum nurses in order to make sure that essentially the same information was obtained from the postpartum nurses. The interview guide makes easier to explore, and ask questions that will explain, clarify and illuminate the particular subject. Ethnographic field guide includes a) opening (introduction) part that introduce researcher, explain the goal of interview; b) general information about postpartum nurses (job duties, work schedule, feelings about job, etc.); c) information about recent changes and new initiatives in postpartum practice (nurses' feelings about rooming-in, on-demand breastfeeding, etc.) [see appendix 1]. Oral consent protocol was read by the researchers to the postpartum nurses before starting interview [see appendix 2]. After getting agreement from the nurses to be interviewed, interviews were conducted. Key informant interviews were done by asking open-ended questions and recording the answers, then following up with additional questions. The researcher took extensive field notes for later translation and analyzing. All interviews were conducted in Armenian and then, translated into English. Interview reports were entered into a microcomputer and coded [see appendix 3]. The coded expanded notes were done at first for each key informant interview (it was more easy to find appropriate sections in key informant interviews and to search for particular items). The main significant domains were discussed after collecting all key informant interviews. *The duties of postpartum baby nurse* was selected by the investigators as the most significant domain, and was future used for conducting free list and pile sorts exercises.

Second phase of in-depth interviews.

Second phase of in-depth interviews was done by asking same questions as an initial in-depth interviews, and questions which were relevant to the recent changes (BFHI) in postpartum practices, perceptions, attitudes and practices of postpartum nurses to these changes. The purpose of depth interviewing of the postpartum nurses was to understand how they view the recent changes (BFHI) in

postpartum practices. Each interview lasted, on average, one hour. After interviewing, field notes were expanded into detail. All interviews were conducted in Armenian and then, translated into English. The coding system was developed for exploratory key informant interviews, according to the coding scheme of qualitative research method. Interview reports were entered into a microcomputer. The main significant domains were discussed after collecting all key informant interviews.

Free List Exercise.

Free listing interviews were conducted in different delivery hospitals in Yerevan. Free listing interviews were conducted in prenatal clinic within the hospital because that was the only place where they had free space. In addition, that room was empty and secured a confidential and an uninterrupted atmosphere. Free listing method was conducted in order to more thoroughly explore the domain of duties of postpartum baby nurses.

Free listing is a systematic (structured) data collection method in which an informant answers on particular questions by listing items relevant to these questions. Free listing interviews were conducted in delivery hospitals in Yerevan with postpartum baby nurses. For the free list exercise, the nurses were asked the following primary question "*List all the duties of postpartum baby nurse*". The "legal" probes which the team decided to use were: what else? and? aha..., what else can you add? After a list was generated, a secondary question was asked for each item of the list "*How long it takes to perform these duties?*" Answers to the secondary question help understand which duties take more time and are the most important for a postpartum baby nurse. All of the nurses were very cooperative and showed interest in the interview. The interviews were expecting a longer set of questions and were surprised when they were only asked two questions. This could be because they had heard that the other nurses were interviewed for a longer time and in more depth.

A special form was used for recording free list items. The results from the interviews were tabulated. Items that received the highest number of mentions were considered to be the most salient, and were further used for conducting pile sorts.

Pile Sorts.

Pile sorts, another systematic (structured) data collection method was used in order to explore domain, discover subdomains and identify salient items, and also, find linkage between them. Pile sorting was conducted in two delivery hospitals the same hospitals where some of free listing interviews were conducted. The pile sorting was conducted in a separate room within the hospital. A total of six nurses participated in the exercise within two days. All of the nurses were very cooperative and showed interest in the experience.

Pile sorts were done with cards. Each card had the name of a postpartum baby nurse duty written on the front and a unique number on the back. The duties were taken from the generated date of free listing exercise (the most salient items). Informants (postpartum baby nurses) were asked to sort the cards into piles by putting these cards that were similar together in a pile. Nurses sorted the cards into piles, according to whatever criteria made sense to them. Then the researcher asked the nurses to explain why they sorted the cards into particular piles. The technique seemed to be new and interesting for them. They learned the task very quickly and understood the pile sorting objectives. Pile sort data were recorded on a special form and analyzed using ANTHROPAC computer software program.

Direct Observation.

Two participant observations were conducted; one in delivery hospital L and one in delivery hospital H. The purpose of the observations was to observe the working environment of postpartum nurses from the perspective of a participating member rather than as an outsider. Each observation lasted about two hours. Three postpartum baby nurses were involved in the observation in delivery hospital L, and two postpartum baby nurses were involved in delivery hospital H. The observation in each delivery hospital was done during the nurse's rounds through the ward.

Participant observation provided greater understanding about actually occurring in the ward, and allowed the researcher to speak with confidence with the nurses about the meaning of some actions. One difficulty that was faced in terms of technically conducting the observation, was to determine the

part that the investigator should play. The nurses were a little suspicious about the presence of the investigator during the performance of their duties. After 10-15 min. of the observation they forgot their suspicions and conducted their jobs. There was some reactivity as an effect of the observation, but since the researcher was the same gender as the nurses and had a medical education, this may have helped to reduce reactivity somewhat. After observation, field notes were done in detail. Both observations were conducted in Armenian then translated into English, and were entered into microcomputer.

Semi-structured interviews with mothers.

Semi-structured interviews were conducted with mothers from delivery hospital L and H in order to obtain additional information about postpartum practices in these two hospitals. Semi-structured interviews were conducted using short questionnaire [see appendix 4]. A total of six mothers (within 24 hours after delivery) were interviewed in each delivery hospital. Mothers were asked questions regarding rooming-in and on demand breastfeeding.

IV. RESULTS, First Phase

Key Informant Interviews Results.

Data from the four key informant interviews showed that recent changes in postpartum practice influence on the duties of postpartum baby nurses. According to opinion of some baby nurses it is interesting to indicate that after the changes occurred their duties change to be more in the wards of the moms and they now do not have even place to keep babies if mother ask them to do that. One of postpartum baby nurses said:

I wanted to say that because now, all the newborns are in the same rooms as their mothers, so I always have to go to the wards. Before, however, when all the babies were kept in one room, we could take care of them without going to the wards.

During analysis of key informant interviews, three cultural domain models were used for each interview. Some domains were chosen by each investigator, for example *duties of postpartum baby nurse*, with included terms: to bathe infants, show position of breastfeeding, long last duty, feeding babies, swaddling babies; and *opinion about rooming-in practice* with included terms: good practice, close contact between mom and child, satisfaction of mom. Finally, it was decided to use cultural domain model for the *duties of postpartum baby nurse*, and was future used for conducting free list and pile sorts exercises.

Free List Exercise Results

Analysis of free list data showed the following thirteen items (duties) to be the most salient items for the group of informants (see Table 2).

Table 2. Duties of postpartum baby nurse (free lists results)

#	ITEM	FREQUENCY	RESP. PCT
1	Supplementary feeding of babies	12	100
2	Bathing babies	11	92
3	Swaddling babies	8	67
4	Giving enemas	7	58
5	Shift change	7	58
6	To explain and show the breastfeeding positions to mothers	6	50
7	To participate in morning rounds	5	42
8	To measure the baby's temperature	5	42
9	Hygienic procedures of babies	4	33
10	To maintain treatment	4	33
11	Injections	4	33
12	To help mother breastfeed	4	33
13	To perform doctor's recommendations	4	33

The most interesting thing that was found out were answers of all 12 postpartum baby nurses about *supplementary feeding of newborns*. They explained the necessity of additional food for infants by the fact, that sometimes mothers can not breastfeed as a result of the condition of their breasts, and in

cases of cesarean delivery. They also indicated the importance of health status of baby for breastfeeding, for example, the birth trauma or jaundice of newborns are the contraindication for breastfeeding. It is very helpful to mention the fact that high attention is given by baby nurses to primiparous mothers: *the breastfeeding positioning, help mothers to breastfeed, the swaddling of infant*, and to hygiene of infants.

Answer to the secondary question helps to understand which duties take more time and the most important for the postpartum baby nurse. Some duties, such as *swaddling, temperature measurement and injections* were very short, but were repeated many times a day. *Supplementary feeding* was one of the longest procedures and is a day-long activity.

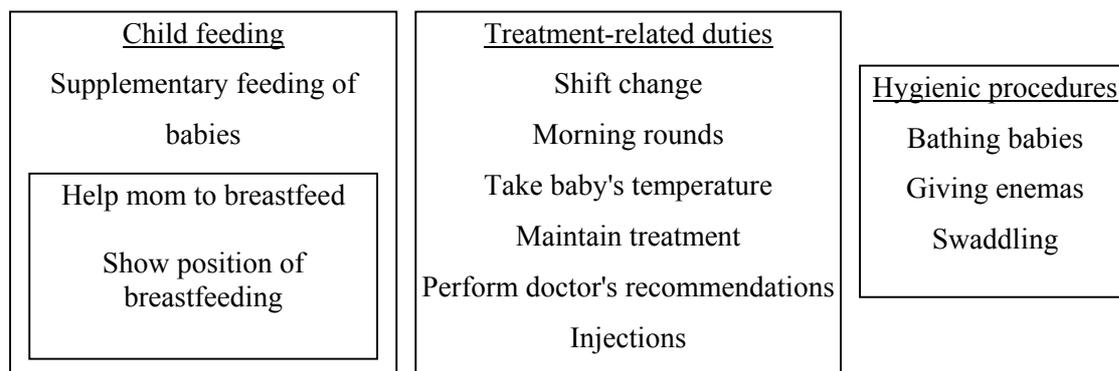
These 13 salient items were used for conducting pile sorts exercise.

Pile Sorts Results

Pile sorts results were analyzed using ANTROPAC computer software program. The multi-dimensional scale of postpartum baby nurses' duties showed very high consistency in sorting the piles and grouping them together. Postpartum baby nurses said that some of the duties were day long and, thus in the same group; some were related with supplementary feeding and were in the same group; and the rest of duties were related to the hygienic procedures with the babes. Since these duties are very well-defined tasks of the postpartum baby nurses, we would expect such similarities between nurses in the way piles are sorted.

According to the data of pile sort exercise, postpartum baby nurses sorted these 13 duties into three big piles: a) child feeding duties, b) treatment-related duties, and c) duties connected with hygienic procedures of infants (see diagram).

Diagram: Duties of a postpartum baby nurse (pile sorts results)



Pile sorts exercise discovered the following subdomains.

Subdomain 1. *Duties connected with child feeding.* These duties were combined into pile because they were relevant to the child feedings: supplementary feeding of babies, help moms to breastfeed, show position of breastfeeding. Last two duties were sorted into small piles in the child feeding subdomain.

Subdomain 2. *Treatment-related duties.* This pile includes more duties because they are relevant to the treatment of infants, maintaining well being of infants. These duties are shift change, morning rounds, take baby's temperature, maintain treatment, perform doctor's recommendations, injections.

Subdomain 3. *Duties connected with hygienic procedures of infants.* These duties were sorted into pile because they related to the hygienic procedures of infants. These are the following: bathing babies, giving enemas, swaddling infants.

V. RESULTS, Second Phase

Key Informant Interviews Results

Characteristics of key informants

Health care providers selected for this study included postpartum baby and mother nurses who worked in physiological (post-delivery), intensive, and infants departments. Seven of postpartum nurses were in age range 26-39, and one nurse was in age 50. The majority were married, only two of nurses had never been married. Nearly half of nurses had work experience in delivery hospitals more than 10 years, and few of them had 5 years work experience.

Main results from the key informant interviews.

Data from all key informant interviews indicate that the policy changes from the BFHI in postpartum practice are not being fully implemented in delivery hospital L in Yerevan. These findings support the qualitative data, for example, in some cases baby nurses still use nipples for additional feeding of

infants; babies taken out from mom's room at some period of time. The main results from the key informant interviews are represented in the Table 3.

Table 3. Main Results From the Key Informant Interviews

Subject	Postpartum Baby Nurses		Postpartum Mother Nurses	
	Hospital L*	Hospital H**	Hospital L	Hospital H
Knowledge/Awareness of BFHI	One nurse received UNICEF training	No awareness	No awareness	No awareness
Attitude of nurses regarding rooming-in	Positive	Positive	Negative	Positive
Attitude of nurses regarding on demand breastfeeding	Positive	Positive	Negative	Positive
Attitude of nurses regarding early initiation	Positive	Positive	Positive	Positive
Attitude of nurses regarding no usage of nipple and bottle	Positive	Positive	No opinion	Positive
Attitude of nurses regarding position of breastfeeding	Positive	Positive	Positive	Positive

* Hospital L-low rate of rooming-in practice

**Hospital H-the highest rate of rooming-in practice

Knowledge / Awareness of BFHI

It is necessary to indicate that only one postpartum baby nurse from delivery hospital L attended the training by UNICEF and knew about BFHI. The rest of postpartum baby and mother nurses never heard about BFHI. All nurses attended training in 1996 that was required by their hospitals.

Attitude of nurses regarding rooming-in.

All interviewed postpartum baby nurses in both hospital felt that mothers and their infants should be together for 24 hours a day, which agrees with concept of rooming-in practice.

I am definitely agree with rooming-in practice, because it helps to avoid many problems that we had during former Soviet Union. During former Soviet Union mothers wanted to see babes more then they could, because nurses gave baby to the moms only according to regime times for breastfeeding, and also nurses performed hygiene procedures and recommendations of doctor in the department of infants. Now moms are satisfied, each manipulation with the babies we do in front of their eyes. Also rooming-in practice is create close contact between mom and child (hospital H).

Perceptions of postpartum mother nurses in delivery hospital L regarding recent changes in postpartum practice was very contradictory. Among postpartum mother nurses there were differences

between opinions about the amount of time, when infant should be with its mother. Both postpartum mother nurses in hospital L said that mother and infant need not be together all the time. So, the attitudes and perceptions of postpartum mother nurses about rooming-in practice were negative, in difference from the attitudes and perceptions of postpartum mother nurses in delivery hospital H.

I am not always agree with this new practice. Mothers very often complain that they don't have rest after delivery and sometimes they complain that can't sleep at night because breastfeed baby 2-3 times. That is why I am not completely agree with rooming-in practice (hospital L).

Postpartum mother nurses had opposite opinion in delivery hospital H.

I think that rooming-in is right practice. When baby and mom stay together all the time, it helps to feel satisfaction (I mean mom and child), because each second baby are in front of mother's eyes, each action with baby nurse is doing in front of mom's eyes.

Attitude of nurses regarding on demand breastfeeding.

Perceptions and attitudes of postpartum baby nurses regarding on-demand breastfeeding were the same in hospital L and H.

It is very good practice for reduction of intestine infection, mastitis of mother's breast, contraction of uterus. I would like to emphasize that now, all babies eat colostrum, which is very useful for the babies (hospital H).

Breastfeeding without regime is the best decision. When mother and baby arrive to the ward we always say them about on demand breastfeeding. Very often moms ask us, that during former Soviet Union period, mother had to breastfeed baby strongly by regime i.e. in each 3 hours, with 6 hours of break at night. Why you changed this practice so starkly? Each time I am explaining to moms, that this new practice has right influences (for example, reduction of intestinal infections) on the health status of infants (hospital L).

Attitude and practice of mother nurses about on demand breastfeeding practice were also different. In hospital H postpartum mother nurses were agree with on demand breastfeeding practice.

I also agree with on demand practice, because it helps moms in terms of rapid contraction of uterus, prevention of mastitis. Now, we don't use drugs against contraction of uterus.

Both postpartum mother nurses in hospital L were disagree with on demand breastfeeding practice.

I mentioned before, sometimes, mother, especially, after hard delivery (who had episiotomy, long time of labor, etc.) wants to have rest, but this is impossible when baby wants to eat, for example, every hours. My opinion it is not right practice, I think that baby have to be breastfed by regime.

Attitude of nurses regarding early initiations

Postpartum baby and mother nurses in both hospital emphasized that early initiation is good and right practice for mothers and infants.

Early initiation is a right practice, because baby recognizes mom at the beginning of his or her life, which create close relationship between mom and infant at first second (baby nurse, hospital L).

Early initiation helps to contraction of mother's uterus, prevent mastitis, and good practice for baby's future breastfeeding practice (mother nurse, hospital H).

Mother nurses in hospital L indicated that women who had cesarean delivery tended to initiate breastfeeding during the first 6 -10 hours after delivery.

Attitude of nurses regarding no usage of bottle and nipple

Postpartum baby nurses in both hospitals and mother nurses in hospital H were agree with no usage of bottle and nipple practice if babies were healthy. In some cases, when infant could not suck well, or had very low birth weight, nurses used bottle and nipple only after permission of doctor.

We never use nipple, because the law is prohibited. In some cases we use bottles. As I mentioned before, we use bottles without nipple, particularly at night time, for those babes whose moms had cesarean delivery. Almost after each breastfeeding, moms pump out milk into these bottles, then we pasterizite all of them in the special milk room, and in the special machine (180 C, one hours). We use this milk due to necessity (baby nurse, hospital L).

Postpartum mother nurses in hospital L indicated that this practice was not their obligation and that they not deal with baby at all. That is why they did not answer what they think about no usage of bottle and nipple practice.

In our hospital we don't use bottles and nipples, but I can not say more about it, because, as I said, I am not deal with baby at all.(hospital L).

Attitude of nurses regarding position of breastfeeding

During describing typical work day, postpartum nurses in hospitals L and H indicated that one of their duties was to show to mom right position of breastfeeding.

My duty is also to show the position nipples in the baby's month, and more convenient position for right breastfeeding.

Postpartum mother nurse in hospital H appreciated this practice and also gave advises to mom about position of breastfeeding. Mother nurses in hospital L again indicated that this is not part of their job but, anyway they think that position of breastfeeding is a right practice.

This practice does not related to my job, but I think that it is right practice and very important for primiparous women. Very often they don't know how to hold child in order to breastfeed.

Attitude and practice of postpartum baby nurses in delivery hospital L and H regarding typical work day.

By comparing typical work day of postpartum baby nurses in both hospitals there were found out many little differences. Some duties of baby nurses were different. For example, postpartum baby nurses in delivery hospital L, tie navel, swaddle baby using only dipper, check temperature if there is such necessity.

My duty is to tie navel, then to swaddle infants (I would like to mention that in summer, we used 4 diapers for swaddling baby and leave head open. In winter we add blanket and “close” the head of baby). We are swaddling babies very light, keeping position of legs like frog... We measure temperature if there is such necessity, weight of the infants, because, as you know, after delivery in first three days baby loses weight.

In difference from delivery hospital L, in delivery hospital H postpartum baby nurses measure temperature of baby twice in day, don't tie the navel (it is obligation of doctor), swaddle babies in another way, etc.

During round I put baby on the special table, that I clean with a chloraminum after each baby, opening and bathing baby, smear oil on the natural folds of the skin; treating eyes with a furacilinum; measure the temperature, and weight. The doctor performs physical examination of baby (check condition of navel, if it is necessary she ties a navel (it is only her duty), heart, lungs, eyes, genital, bone of head, reflexes, etc.). Then I swaddling only the legs of baby by two diapers, put on shirts, and put baby on the baby bed or special incubator depending on the health condition of infants... According to the regime of our department I measure temperature of babes twice in a day at 6:00 a.m. and 6:00 p.m.; 7 times swaddle infants, which means that I am looking babies 7 times during my shift as a rule.

There was also difference in the performing of hygiene procedures of baby. In delivery hospital H, immediate after delivery, baby nurse from the delivery department, performs first hygiene procedures of baby, when baby with mother stayed in the delivery department two hours for the adaptation. In two hours baby nurse from the infant department transfers baby in infant department for the performing secondary hygiene procedures. After being sure that health condition of baby is normal, she transfers baby to the post-delivery department in the mom's room.

After delivery, baby nurse, who conducted delivery, performs first hygiene procedures which includes bathing infant, treating eyes by fufacininum, treating skin by vegetable oil, measuring weight, height, circumference of the head, chest. Secondary hygiene procedures are the same procedures that we perform in the department of infants immediately after transference from the delivery department where mother and baby stay 2 hours after delivery. We perform secondary hygiene procedure in order to be sure about health condition of baby.

In delivery hospital L postpartum baby nurse conducts delivery and after performing hygiene procedures of baby in the delivery department, she transfers baby to the post-delivery department in the mom's room and then, observes baby due to necessity (perform recommendation of doctor, change diapers, show position of breastfeeding, etc.)

In the delivery department I perform all hygiene procedures of baby and having permission of doctor pediatrician I am transferring baby to the post-delivery department to the mom's room. After transferring baby to the mom's room I show mom how to breastfeed baby. Mom calls me when it is necessary to change diapers, if she has any questions connecting with taking care of baby or feeding baby, etc.

Attitude and practice of postpartum mother nurses in delivery hospital L and H regarding typical work day..

Results of key informant interviews in both hospitals have shown that there are many similarities regarding typical work day of postpartum mother and baby nurses.

All interviewed postpartum mother nurses start day with sharing shift, then taking participation in the doctor-nurse rounds, perform recommendations after rounds, getting drugs from the chief nurse. But in delivery hospital H, mother nurse goes through the wards alone to find out any health problems of moms before starting doctor-nurse rounds.

After sharing shift I am taking medical records of moms, and go through all the wards in order to find out health problems of mothers before starting doctor-nurse round. Then, we start doctor-nurse round through all the wards.

She doing that in order to be sure about health condition of mother and be ready to introduce health problems of mother to the doctor during doctor-nurse rounds. In delivery hospital L, postpartum mother nurse starts to participate in doctor-nurse rounds immediately after sharing shift. She introduces health condition of mother to the doctor by reading medical record of mom.

I go and meet the nurse who worked the day before me and she starts to share her shift. She indicates about how many women had cesarean delivery, who is a new mom, what kind of health problems each mother has. Then, we start doctor-nurse rounds through all the wards. My duty during round is to introduce health condition of mother by reading medical record, does this mom primiparous or not, what kind of procedures and drugs she got previous day.

The rest of actions during work day were the same in both hospitals (for example, cleaning instruments, hygiene procedures of mothers, etc.)

Results of Direct Observations

First of all, it is necessary to indicate, that rooms in the ward of delivery hospitals L and H were very different in terms of number of beds. In delivery hospital L observation was conducted in mother's room where were 7 moms with their babies. The observation was done when babies started to cry in the same time. In delivery hospital H rooms in the ward were for one mother or for two mothers with their babies. Direct observation, in delivery hospital H was conducted in the mother's room where stayed two moms with their infants.

Several differences were observed between two hospitals. In delivery hospital L hot water was kept into tanks. Two intensive rooms had tanks with hot water. Lack of water was the main reason for gathering water into tanks. Sometimes, when amount of hot water was not enough, nurses just wiped

infants (when baby was "dirty") by clean diaper without bathing, and then swaddled them. In delivery hospital H cold water flow almost always and it was easy to have warm water all the time. During each swaddling baby, postpartum baby nurse from hospital H, bathed baby's legs, treat skin of baby (natural folds of the skin) with a vegetable oil, which they said was very important for prevention of skin's irritation. Same actions of baby nurse have been not observed in hospital L.

Other difference was obtained when postpartum baby nurse in hospital H put on shirts and swaddled only legs of infants in difference from hospital L where baby nurse swaddled legs and hands of infants. During both observations babies were in the same room with their mothers.

Semi-structured Interviews Results

Six semi-structured interviews were conducted with the mothers in each delivery hospital. According to the answers of mothers in delivery hospital L, two moms have mentioned, that baby were taken out from moms due to different reasons (cesarean delivery, hard delivery: long time of labor pains). Postpartum baby nurses, in hospital L, sometimes, had an incentives to take babies out from the mother's room, and received some type of compensation for this.

Attitudes and perceptions of moms regarding rooming-in practice were different. In hospital L one mom told that rooming in practice is a wrong practice.

I disagree with rooming-in practice. Woman should has rest after delivery, and during next 3-4 days staying in delivery hospital.

In delivery hospital H, all mothers were satisfied staying with babies together all the time.

The results of semi-structured interviews indicate on fact that rooming-in practice does not implemented fully in delivery hospital L, and the perceptions of mothers are different regarding rooming-in practice.

Answers regarding on demand breastfeeding indicate on good implementation of this practice in both delivery hospitals. All interviewed mothers in both hospitals said that they feed infants without regime. Perceptions of moms regarding on demand breastfeeding were positive in both hospitals, despite on fact that on demand breastfeeding disturbed sleeping at night.

VI. DISCUSSION AND RECOMMENDATIONS

This study demonstrated that attitudes, perceptions and practices of postpartum nurses are contradictory regarding BFHI in delivery hospital L and H. Even attitudes and perceptions between postpartum baby and mother nurses are different in the same hospital L. Rooming-in practice one of the postpartum practices which needs to be more revision and reexamination. Although in some delivery hospitals in Yerevan there are high rate of rooming-in, but often mother and baby are separated for some period of time due to several reasons. Postpartum mother nurses in delivery hospital L mentioned their disagreement with the rooming-in practice. They said that rooming-in practice was wrong. Mothers, from delivery hospital L, also, from the lack of sleeping or due to hard delivery, sometimes, were thankful nurses to separate them from their babies for some period of time. The negative opinion of postpartum mother nurses toward rooming-in and on demand practice might influence on mother's behavior. The results of semi-structured interviews with mothers indicate about the importance of identifying the perception and knowledge of mothers concerning on demand breastfeeding and rooming-in practices, so that health providers can provide environment that encourage mothers to breastfeed their infants in appropriate way.

In difference from mother nurses, postpartum baby nurses were fully agree with rooming-in and on demand breastfeeding practices. They indicated about significantly support of rooming-in practice on breastfeeding of infants, mothers' satisfaction, reducing risk of infection. Data have shown that there is some resistance to the rooming-in practice implementation in delivery hospital L in Yerevan. According to the results of key informant interviews, only one postpartum baby nurses attended UNICEF training, and knew about BFHI. It is unclear, due to what criteria this nurse was chosen for attending UNICEF training. The fact that the most number of nurses did not attend UNICEF training creates potential barrier for the fully implementation of BFHI in delivery hospitals.

According to the answers of nurses, women who had cesarean delivery tended to initiate breastfeeding during the first 6 -10 hours. This finding indicates that cesarean delivery may indirectly decrease rate of breastfeeding infants by delaying initiation of breastfeeding. All interviewed nurses in both hospitals indicated about positive influence of early initiation on successful breastfeeding.

Despite on fact that postpartum mother nurses in hospital L said that they were not deal with baby at all, but, anyway they agree with early initiation practice. Existence of two kind of postpartum nurses (mother and baby nurses) for taking care of mother and infant separately, also, might creates potential barrier for the implementation of BFHI in delivery hospitals.

Results of direct observation have shown, that presence of seven moms with their infants in one room was too much. This fact could be potential barrier for the implementation of rooming-in practice.

Differences between hospitals may exist in the rooming-in and on demand breastfeeding attitudes and practices of the hospital staff. In order to decrease this resistance need to increase health education of hospital staff, especially all postpartum nurses by training them regarding BFHI. Recommendations, which will be useful for improving implementation of BFHI in delivery hospitals are divided into two parts: recommendations for future *research* in the area of breastfeeding and recommendations for future *interventions* in the area of breastfeeding concerning BFHI.

Recommendations for future *research* in the area of breastfeeding are the following:

- Further qualitative research with physicians, mothers and families in delivery hospitals in Yerevan to get a more complete picture of the issues surrounding breastfeeding practice.
- Conducting structured observations, particularly spot check observation that will give effective data for rooming-in practice.

Recommendations for future *interventions* in the area of breastfeeding concerning BFHI are the following:

- Mandatory training for all postpartum baby and mother nurses concerning BFHI.
- Publication and distribution of brochures concerning BFHI to pregnant women in Women Consultation Units.

VII. CONCLUSION

More than three years, Armenia has made great step forward in the area of breastfeeding promotion. Five steps of the UNICEF's BFHI have been implemented in delivery hospitals in Armenia. At the time that some of policy changes (BFHI) occurred, many health care providers underwent retraining

and a massive communication campaign was implemented. Knowledge of health care providers was improved in area of breastfeeding promotion concerning BFHI.

The results of this study showed that although attitudes and practices of postpartum nurses toward breastfeeding and BFHI were positive, there were some areas in which knowledge was incomplete. Similarly, although the practice of rooming-in receives wide support, there remain variations in perceptions of what rooming-in involves, and doubts about possible disadvantages of rooming-in practice. Although support for general concept of rooming-in was strong in delivery hospitals, one fifth of interviewed postpartum nurses (these were mother nurses from delivery hospital L) did not feel that mothers and infants should be together for 24 hours.

The role of health care providers, particularly postpartum nurses, in insuring successful breastfeeding practice is crucial. This indicates about necessity of additional interventions in postpartum practice. These interventions can be continuing education and training of health care providers, particularly postpartum nurses, increase education of mothers.

Well designed training program regarding BFHI needs to be carry out in delivery, children hospitals, pediatrics polyclinics in Armenia. Such training program will need to consider the variations found between different delivery hospitals in Yerevan regarding BFHI. Increasing health education and training of health care providers and mothers will positively influence on health status of Armenian infants.

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VIII. APPENDICES

Ethnographic Field Guide

"Postpartum Nursing Practices"

Location of informants:

Different delivery hospitals in Yerevan.

1) *Opening*

"My name is _____. I am student at the American University of Armenia. I am working with three other people, _____, _____, and _____. We are trying to find out more information about postpartum nursing practices in your hospital. Are you able to talk with me now for about 45 minutes."

" We've prepared a form called a oral consent that I've show your supervisor and would like to show to you. Would you please get acquainted with that and ask me questions about any parts of it which you don't understand."

Instructions: After you have read the consent form and she asked you any questions, and agreed to cooperate proceed the interview.

2) *General information about practices of postpartum nurses.*

Instructions: Take the " grand tour" (i.e. let the informant describe her life and work to you in her own words).

Q:" As I said before, I would like to know more about your work, and the way you feel about it. Would you mind describing what a typical work day is like for you ? You could start at the beginning of the typical work day."

Consider exploring some of the following points:

- What are your job duties?
- How many hours/ wk. do you work?
- How many night shifts do you have per average week?
- How long have you been working in this hospital?

Q: Describe some of things about your job which you like the most?

Q: Describe some of things about your job which you like the least?

Q: What are the reasons for your feeling about those things?

Q: The work that you are doing seems to be really difficult. What keeps you going in this kind of work?

Q: What increase your motivation in this job?

3) *Information on recent changes and new initiatives*

Q: What do you now about recent changes in postpartum practices?

Consider exploring some of the following points:

- What are the five steps of UNICEF's Baby Friendly Hospital Initiative which are implemented in Armenia which you know?
- What do you think about rooming-in practice?
- What do you think about on demand breastfeeding?
- What do you think about breastfeeding positioning?
- What do you think about no bottle and nipple usage in delivery hospital?
- What do you think about early initiations?

Q: How they affected your day by day activities?

Q: Describe some of the things you like the most about these changes?

Q: Describe some of the things you like the least about these changes?

Q: What kind of changes can happen in future due to these innovations?

Interviewer:	Date:
	Location:
Last time have attended any training:	Attended UNICEF/ MoH training: Yes _____ No _____

4) *Closing* "Thanks for your time. I've enjoyed meeting you and finding out the work you do. I may have additional questions for you later and I would like to ask you , if that's OK with you (Y/N). Are there times which might be convenient for you?"

Oral Consent Protocol

Note: The following is to be read by the students to the informant before they participate in the key informant interview.

Introduction

My name is _____ (**name of data collector**). I am a student at the American University of Armenia. As part of class project we are talking to postpartum nurses who work in your hospital. You have been asked to speak with me today in this interview because our student group felt that your experience as a nurse here would provide us with invaluable information. Your participation in today's interview will take about 45 minutes. Your supervisor has given us permission to talk with you, but they will not be involved with this interview in any way.

I would like to inform you that the information you give will be kept private as far as the law allows. Your name, will not be recorded with the information that you give us today. The information that you give me will only be used for the class project and will not be shared with anybody unless we obtain further permission from you. Because of this, what you say will not influence your job in any way.

Your participation in today's activity is completely voluntary. You have the right to stop the conversation at any time. We have tried to eliminate sensitive questions from this interview. If you feel that something I ask you is too sensitive, please tell me and we can either more on to the next question or discontinue the interview.

Are you willing to participate in this interview?

If at any time during the interview you wish to stop, please inform me and we will not continue. Do you understand ?

Do you have any further questions?

Thank you very much. Let's begin.

APPENDIX III.

Coding System for Key informant Interviews.

Code - Long Form	Code - Short Form	When to use the code
Duties of Postpartum Baby Nurse	D-PPN	When nurse talks about her duties
Rooming - In Practice	R-IN	When nurse mentions the rooming-in practice
On Demand Breastfeeding of Babies	OD-BF	When nurse mentions on demand breastfeeding
Immediate Initiation of Breastfeeding	IM-IN	When nurse speaks about immediate initiation practice
Using No Bottles, No Nipples in Delivery Hospital	NB-NN	When nurse speaks about use or not use of bottles and nipples
Explanation of Position of Breastfeeding to Mothers	POS-BF	When nurse mentions and explains to mother the position of breastfeeding
Reasons for Doing Enema	ENEMA	When enema was mentioned and the reasons for that
Supplementary Feeding of Babies	SUPP-F	When supplementary feeding practice is mentioned
Shift Change Between Nurses	S-C	When nurses talk about shift change
Feelings About Job	F-J	How nurse feels about her job

Semi-structured interviews with mothers.

Questionnaire

Questions for moms in 24 hours after delivery.

1. How many hours in day do you see your baby?
2. What do you think about having the baby in the room?
 - a) Is it hard for you ?
 - b) Is it easy for you?
3. What are the things that you like about having baby in the room.
4. What are the things that you dislike about having baby in the room.
5. Do you breastfeed your baby
 - a) by regime
 - b) by demand
6. What do you think about on-demand breastfeeding?
 - a) Is it hard for you ?
 - b) Is it easy for you?
7. What are the things that you like about on-demand breastfeeding?
8. What are the things that you dislike about on-demand breastfeeding?