Institute of Community and Public Health
Birzeit University

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Traditional Birth Attendants in the West Bank:

An Assessment of System Building and Training Needs

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Study design:
Rita Giacaman
Hanan Halabi
Ruwaida Salem
Laura Wick

Field work:
Fathiyeh Abu Awad
Itaf Abu Ghdeib
Kawthar Abu Khalil
Dalal Al Hawitat
Fahmiya Barghouthi
Jenan Barghouthi
Manal Barghouthi
Ruwaida Salem
Laura Wick

Field work supervision:
Ruwaida Salem
Laura Wick

Focus group discussions:
Maysoon Filfil
Hanan Halabi

Data coding and entry:
Kawthar Abu Khalil
Jenan Barghouthi
Ruwaida Salem
Laura Wick

Data analysis:
Hanan Halabi
Laura Wick

Report writing:
Laura Wick

Document reviewed by:
Rita Giacaman
Hanan Halabi

This study is part of a broader systematic field investigation aiming at unfolding the principle elements entailed in the process of childbirth in Palestine. Information for this particular part of the study was collected, analyzed, and written by the Institute of Community and Public Health of Birzeit University for the Women's Health and Development Directorate of the Ministry of Health, Palestine. The Institute wishes to acknowledge the Women's Health and Development Directorate for facilitating the project and UNFPA and WHO for their technical and partial financial support.
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TRADITIONAL BIRTH ATTENDANTS IN THE WEST BANK AN ASSESSMENT OF SYSTEM BUILDING AND TRAINING NEEDS

A. Introduction

Childbirth in the home has been assisted by midwives in Palestine for centuries yet little has been written about these women who have played an essential role in the lives of so many Palestinian families. Palestinians refer to the traditional birth attendant as *daya*. In the past, the *daya* played an important role in the indigenous medical system and the life of the community. However, the rise of modern medicine has transformed health care in Palestine and has marginalized the role of the *daya*. The transformation of the health care system needs to be analyzed within its overall context in order to articulate a reproductive health policy which incorporates not only aspects of the biomedical model of the West but also the relevant traditional values and characteristics of Palestinian society.

Pregnancy and childbirth are life events where beliefs and customs greatly affect the health of both the mother and the fetus or newborn. Their health status reflects a complex interaction among the physiological, the emotional, and social systems (Andersen 1983, p. 218). It is well documented that social and psychological factors influence the physiological process of labor and delivery, although the actual mechanisms are not fully understood.

This particular period in the history of Palestine, when the state and its health system are being created, offers the opportunity to look at childbirth within its wider framework and to formulate a policy within the system which is sensitive to the needs and perceptions of women, as well as to the standards of practice deemed necessary by specialists in order to attain basic development goals. Rather than adopting a fragmentary approach whereby packages of health care are offered and often accepted according to criteria prioritized outside the country, it is hoped that this study, which seeks to describe a small aspect of Palestinian women's health and well-being, will contribute to an overall debate and policy formulation, integrating the divergent needs and aspirations of all groups of the population.

This assessment is based on the assumption that the model of health care that has been adopted in Palestine is concerned with equity and distribution of services as stated in the policies of the Ministry of Health and the Women's Health and Development Directorate at the Ministry. This study was undertaken at the request of the Women's Health and Development Directorate of the Ministry of Health to investigate the role of the *dayas* in the West Bank within the context of the burgeoning health care system, in order to identify system rehabilitation imperatives, training needs, and policy recommendations with the aim of improving the quality of care of those women who give birth in their homes.

Approximately 10% of births continue to take place in the home in the West Bank (PCBS, 1998), over 5,000 women every year. Although there seems to have been a rapid decline in the number of births outside the hospital in the past five years, it is nevertheless a reality that an important proportion of Palestinian women continue to give birth at home. The women who tend to give birth at home are, for the most part, from remote areas and without means to pay a lot for the services they receive. Although further investigation is needed to identify more precisely the most

vulnerable groups of women at highest risk for various health problems, it is important to look at the needs and perceptions of the women who are not using the usual hospital services for childbirth, in spite of the medical and social pressure on them to do so.

This study introduces some basic questions for women's health policy formulation concerning women's expectations of health care and their perceptions of the care they receive. A description of the work of the *dayas* may also shed light on some of the socio-cultural aspects of childbirth which could be used to sensitize health professionals to the importance of making medical services more acceptable to women in order to bridge the cultural gap between women and health care providers.

A Brief Historical Overview

Understanding the transformations which have taken place in childbirth in the past century may give some insights into guiding present policy. Fifty years ago most births took place at home assisted by traditional birth attendants as the majority of the Palestinian population relied on traditional medicine. (Reiss 1991, p. 47). Although home births gradually declined as more people had access to hospital services, the traditional birth attendants continued to play a major role during the *Intifada.* When areas under siege or curfew were cut off from hospitals and clinics, the *daya* was often the only health practitioner available to perform essential tasks. The *daya* has continued to play a role due to her accessibility, her total integration into the culture and the community, and her cost-effective and convenient services. Although the traditional birth attendants without formal training may be in the process of being replaced by trained community midwives, women in many parts of the country continue to solicit help from *dayas* for their health needs.

In 1993, the Palestinian Ministry of Health took over the health sector and was faced with the task of harmonizing the fragmented health services into a health system. There are currently four main health providers: the public sector operated by the Ministry of Health, UNRWA services provided to the refugees, the non-governmental organizations, and the private-for-profit sector. All of these sectors offer some provision of antenatal, intrapartum, and postpartum services. However, harmonizing these services into a functional system which is equitable and respects the diversity of needs within the population is a real challenge. Taking into consideration models and standards of practice from other countries and adapting them to the particular resources, infrastructure, cultural priorities, needs, and perceptions of Palestinian women might contribute to an overall policy which would provide the best quality of care for the whole population.

Palestinian women's reproductive health care represents an important part of the society's overall health care needs. Integrating it into a functional system will increase the effectiveness of the care. The community based midwifery care that is investigated in this report, is part of a larger picture of childbirth services and women's health care. In order to understand how it might fit into the larger policy, it is important to envisage what is documented concerning the childbirth process today.

Childbirth in Palestine Today

The Ministry of Health reported **51, 648 live births in the West Bank in 1998** (not including Jerusalem) and 37, 060 in the Gaza Strip, a grand total of 88,708 live

births in Palestine (MOH, Annual of Statistics 1998, p. 49). This number probably reflects some underreporting as records are not always precise. Particularly early neonatal deaths are not apt to be recorded or reported. In 1998, the largest percentage of births took place in the Hebron district (28%) with Nablus (16%), Ramallah (16%), and Jenin (15%) following, and the remainder in the five other districts (MOH,1998, p.53). This same source reports **5,245 home births** in the West Bank or **10% of all deliveries in 1998**, with 43% of the remaining births taking place in private hospitals, 42% in government hospitals, and 5% in private clinics. According to the latest PCBS report, 71% of women deliver in hospitals, 11% in a doctor's clinic, 10% in the home, and 9% in an MCH facility (PCBS 1998, *Women and Men in Palestine*, p. 88). [1]

Concerning home births in Palestine, PCBS estimates that 59% of home births were attended by doctors or trained midwives, which if applied to the West Bank would mean about 3,000 of the reported home births take place with a trained midwife or doctor and about 2,000 with a traditional birth attendant. According to a midwifery database, the number of trained midwives in the West Bank is around 250 and the number of traditional birth attendants is 120 (PCH 1998:24). The reasons given by PCBS for why women chose to give birth at home were the following: 56% preferred to do so, 20% of the reported cases were due to premature delivery, 17% to the cost, and 3% to lack of access. Older women (40-49) had the highest proportion of home delivery (PCBS 1998:89).

There has been an apparent decline in home births in the past five years. In 1996, the Ministry of Health reported that in the West Bank 18% of all births took place at home. In 1998, only 10% of all births took place at home. The World Bank, in a general overview of the health situation in Palestine, estimated that one third of all deliveries occurred without supervision by a trained birth attendant (World Bank 1993). If this can be presumed to be an estimate of the number of home births, it would represent a considerable decline. Thus, childbirth has changed radically for many women over a short period of time from traditional childbirth in the home with female birth attendants to a hospital with primarily male doctors and technology-oriented delivery.

[1] The definition of doctor's clinic or MCH facility is not provided.

B. Overview and Methodology

Training programs for traditional birth attendants have been an ongoing strategy supported by WHO and other international organizations in developing countries for decades because of the importance of the role of the TBA in delivering health services, her accessibility and closeness to the population that she serves, as well as the cost-effectiveness of her services. In general, these training programs have not always been successful in improving the outcome of home births in many countries (Jordan 1989, p. 925) and the assessment of the impact of such programs is problematic due to numerous complex factors affecting maternal and infant outcomes. As an isolated intervention, training alone has not necessarily changed the practices of the TBAs (Kamal 1998, p. S51).

TBAs continue to be needed and many programs have shown that they are trainable within a context of on-going supervision and a system of transport, referral, and emergency care (Kamal 1998, p. S 51). This same principle would apply to the limitations of training of all health providers. Concerning reproductive health, there is a need for systemic change that would incorporate the roles of the obstetrician, the doctor, the midwife, the nurse, and the TBA, as well as others to work together in the provision of health care which, particularly during pregnancy, childbirth, and the post-partum, requires a holistic view of health and a team approach.

Before undertaking such a project in Palestine, it was deemed necessary to assess the actual functions and specific tasks of the *dayas*, the existing structure of supervision, the role of the *dayas* in the overall health care system, and the expressed need in the community for these local midwives. This information would then be used to redefine the role of the *dayas*, to identify their training and supervisory needs, and to make policy recommendations for integrated system development.

The assessment of the situation of local midwives working as independent practitioners in communities of the West Bank was undertaken in collaboration with the Women's Health and Development Directorate of the Palestinian Ministry of Health as one element in the upgrading of perinatal and maternal services. In order to make an assessment of the *dayas* and recommendations for the future, it was necessary to look at the context in which they are working, the system of supervision, and their link to the health services. A referral system and emergency obstetric care are also essential elements of a strategy for safe motherhood. Without a system's approach, it is unlikely that training of the *dayas* would have any effect on the maternal and infant morbidity and mortality.

A. The Objectives of the Study

The objectives of the study were the following:

1. Identify how the community needs, perceives, and uses the *dayas.*
2. Identify characteristics and regional differences of the target population utilizing the *dayas'* services.
3. Describe the profile of the *dayas* and assess their reported performance.
4. Make an initial assessment of the process of home birth in the West Bank.

5. Investigate the policies and practices linking the *dayas* to the health care system.
6. Identify the training, material, and supervisory needs of the *dayas*, as well as their perceived needs for support.

B. The Design of the Study

In line with the objectives of the study, the following methods and tools were considered the most appropriate to collect the necessary information given the existing time and the serious budgetary constraints:

1. **Interviews with all the *dayas* (licensed by the Ministry of Health).** A structured questionnaire was designed for the purpose of obtaining information about the characteristics of the *dayas*, their tasks in the community, their knowledge and attitudes concerning prenatal, intrapartum, and postnatal care, their supervisory structure and link to the health care system, and the identification of training needs. The questionnaires were piloted by the fieldworkers with midwifery students at Ibn Sina college in Ramallah. The questionnaire was then revised in light of the pilot findings. (See questionnaire in Appendix, p. 65).

2. **Interviews with the district supervisors of the licensed *dayas*.** A semi-structured questionnaire for the supervisors of the *dayas* in the nine health districts of the West Bank was designed. This questionnaire was designed to collect information on the supervisory structure of the *dayas* and to illicit the supervisor's opinion of the technical knowledge, skills, and attitudes of the *dayas* (See questionnaire in Appendix, p. 73).

3. **Focus group discussions with mothers.** A focus group question guide was developed for this purpose. Focus groups were organized with mothers who had experienced home and/or hospital births in order to attain a better understanding of women's motivations for choice of place of birth, their impression of the *daya* in their community, services offered by the *dayas*, and perceived barriers to use of the health services.

4. **Interviews with policy-makers.** Policy-makers in the Ministry of Health and UNRWA were consulted in order to collect information on the policy toward the licensed *dayas*, home birth, the supervisory structure of the *dayas*, and the system for reporting home births. (See Appendix for list of interviewees, p. 81).

5. **General audit of the records.** The record audit included *dayas'* records of home births, the administrative reports of the *daya* supervisors to the nursing director, the Ministry of Health's lists of the licensed *dayas*, and the UNRWA and government statistics on home births.

Thus, both quantitative and qualitative data were collected in order to meet the objectives of the study. Quantitative data was obtained through the closed questions of the questionnaires. Qualitative data was collected through open-ended questions to the *dayas* and their supervisors, the focus group discussions with the mothers, and the interviews with the policy-makers. The study design used these two types of data in conjunction with each other in order to investigate the frequency of certain practices,

the knowledge and attitudes of the *dayas* and their supervisors, and the perceptions of the women concerning home and hospital birth.

C. The Fieldwork

1. Timeframe of the field work. Preparatory work for the design of the questionnaires began in January 1999.The two questionnaires for the *dayas* and their supervisors were prepared in February and March 1999. The selection of the fieldworkers and their training took place during the first ten days of April. The administration of the two questionnaires to the *dayas* and their supervisors in the nine health districts, the implementation of three focus groups in the north, south, and central regions, and several interviews with policy-makers were carried out intensively from April through June 1999. Initial analysis, results, and report writing were completed by November 1999**.**

2. Selection and training of the field workers. The field workers, who had previously been trained by the Institute of Community and Public Health to work on other projects, were residents from a rural area in the Ramallah district. Because of their rural background, they were familiar with women's everyday lives and the role of traditional birth attendants.[2] These women were considered to be able to facilitate the communication with the *dayas* and to create a positive relationship, especially after undertaking intensive training and closely supervised field work. The same seven field workers, including one from the Women's Health and Development Directorate, administered the questionnaires to the *dayas* in the nine health districts. In addition to their previous training and experience, they had one supplementary week of training using the questionnaire for this research, as well as a general background in childbirth and on the appropriate terminology which might be used by the *dayas*.

3. Organization of the field work and survey coverage. The supervisors of the *dayas* in each district were responsible for facilitating the link with the local *dayas.* The supervisors were used to initiate the contact because of their close relationship with the midwives in the various vicinities and their ability and authority to get them to respond. It was also important to involve the supervisors in the process from the very beginning in order to gain their acceptance and involvement, as they are the primary actors and a key to the future training and sustainability of the project.

According to the lists of the Ministry of Health, the total number of midwives licensed for home delivery in the West Bank was 208. However, in this survey it was found that two of the *dayas* on the official list had died, six were permanently out of the country, and twenty-one had not been relicensed for several years due to sickness and old age. 179 *dayas* remained on the list and were called by their supervisors to the assigned place on a specific date for the structured interview. In the nine districts of the West Bank, 169 interviews with questionnaires were completed. Twenty-two of the 169 dayas who did not show up for the scheduled interviews were visited at their homes and administered the same questionnaire. Due to limited time, it was not possible to contact ten of the licensed *dayas* out of the total number. They failed to respond to two

[2] Nursing or midwifery students were not selected to administer the questionnaires because of the tendency of trained health professionals to use medical terminology and to be biased against those practitioners who have no formal medical training.

consecutive requests for a meeting and some were not present when visited at home. Thus, the response rate was 94%. The non-responders were from the following districts: 4 from villages in Hebron, 1 from the Bethlehem district, 2 from the Jenin district, and 3 from the Tulkarem district. Out of the 10 dayas who were not questioned, 6 had assisted only a few births in 1997 according to the records of the MOH.

4. Administration of the questionnaires. The interviews with the 169 *dayas* took place for the most part in each district health department over a period of one to three days, depending on the number of *dayas* in the district. The supervisor in each district was also interviewed at the same time and place with a different questionnaire. An attempt was made to maintain privacy and confidentiality with each person. However, this was not possible in every case as there was little physical space for each interview and several fieldworkers administered questionnaires simultaneously in the same room where other *dayas* were waiting for their turn.

In spite of these obstacles, most of the *dayas* appeared to speak their mind freely, to appreciate the interest in their work, and to establish a good relationship with the fieldworker. Each interview was quite long and most of the fieldworkers were able to engage the interviewee in the process. The *dayas* seemed to forget themselves and to become involved in telling their story. At the end of the interview, their childbirth kits were checked to see what equipment and materials they had available. The notebooks where they record details of each home birth were also investigated for the number of births and thoroughness of information.

5. Visits to non-responders. Some of those *dayas* who neglected to come to the meeting were visited at home in their camp or village where the fieldworker administered the same questionnaire. A total of twenty-two field visits in the different districts were undertaken for the purpose of contacting and interviewing the *dayas.* These visits enabled the fieldworkers to interview some of those *dayas* who had not come to the meeting place and to observe them in their own surroundings. In addition, the visits contributed to the understanding of how the *dayas* live, the conditions under which they work, and the difficulties of supervision due to the remoteness of the village or the lack of transport.[3]

6. Interviews with policy-makers. Interviews were carried out with policy-makers concerning traditional birth attendant and home-based midwifery care during the entire period of the study. Regular interaction with informed sources provided information and opinions which contributed to clarifying and enriching the data collected. Interviews were made with the Women's Health and Development Directorate, the Primary Health Care Department, and the Statistics Department of the Ministry of Health. Three medical directors and one nursing supervisor from health directorates of different districts were interviewed. UNRWA was also consulted concerning their policy and supervision of the traditional birth attendants in their employment.

[3] For example, one fieldworker had to walk for one hour on a dirt road in the Ramallah district to reach one of the *dayas* for the interview. Most of them do not have telephones and thus cannot be reached in any other way.

7. Focus group discussions. Three focus group discussions were carried out in the north, center, and south of the West Bank. Time limitations determined the number of groups that could be organized in the short period designated for this study. The locations were chosen by region and type of locality in order to have as diverse a representation as possible. One camp, Aqabat Jaber in Jericho, was selected in order to hear the opinion of some refugee women. Maythaloun, an agricultural village in the Jenin district, and Idna, a town in the Hebron district, were the other two locations. In Aqabat Jaber, the focus group took place in the UNRWA clinic of the camp, whereas the other two were held in the government primary health care clinics. The *daya* supervisor in each district was asked to organize the session.

Those women who had recently had a home birth were asked to come to the clinic. The mothers who happened to be using the clinic services at the time of the meeting also joined the group. A total of 40 women participated in the three focus groups consisting of 12 women from Aqabat Jaber, 10 from Maythaloun, and 18 from Idna. A focus group question guide was developed which covered the topics of antenatal and postnatal care, choice of place of delivery, expectations of care, and satisfaction with care. (See Appendix p. 79.) A facilitator experienced in leading focus groups was present and a recorder taped the sessions. The supervisors, *dayas*, and clinic staff did not take part because of the inhibitory effect they might have on free and open discussion. The focus group discussions lasted approximately one and a half hours each.

8. Record audit. The notebooks of each of the 169 *dayas* were examined when the questionnaires were administered. The notebooks record each birth attended at home with the name, place, date, time, sex, and weight of newborn, and status of the newborn at birth. These records were checked for completeness as well as for the number of births in 1998. The three-monthly activity reports of the *daya* supervisors for the nursing director were examined to have an idea of their routine tasks and reporting system. *Daya* reports on home births were compared to MOH and UNRWA statistics to measure their accuracy.

D. Data Processing

The 169 questionnaires were coded and entered into an IBM compatible computer. For the qualitative, open-ended questions, the technique of content analysis was employed in order to identify different categories of responses which might show particular trends such as what motivated the *daya* to take up this profession or why she thought women chose to give birth at home rather than in the hospital. The quantitative data was analyzed using the Statistical Package for Social Sciences (SPSS, Win version 7.5). The questionnaires were coded by the team members and the data was entered into the computer.

The focus group discussions were recorded and transcribed, and the content of each session was examined for underlying themes which might contribute to the understanding of the role of the *dayas* in community care, the reasons for having a home birth, and the women's perceptions of the advantages and disadvantages of the home and hospital birthing experience. The content was analyzed according to the identification of themes and a summary of the data using some direct quotations. The focus group narratives were also examined for any emerging clues about other expectations or concerns that women might have regarding their health during

pregnancy and childbirth and the services they received. In addition, the responses of the three groups were compared for regional differences which might give insights into the particular needs of women in the three areas.

III. A Profile of the Palestinian *Daya*

A. The definition and term *daya*

A traditional birth attendant (TBA) is the term used in development language for those health practitioners who assist women in childbirth and often carry out other services in the community related to pregnancy, childbirth, and postnatal care. The accepted definition of a TBA is "a person (normally a female), who assists mothers during childbirth and who initially learns her skills delivering babies by herself or by working with another more experienced TBA" (Kamal 1998, p. S43). TBAs have been referred to as lay midwives, empirical midwives, or independent midwives, as well as specific terms differing according to the culture and place, such as *comadrone* in Latin America which means "co-mother" as she is God-mother to the children she delivers, or *hilot* in the Philippines which means "message" (Bergstrom 1993, p.88). This study will refer to the traditional birth attendant by the regional term, *daya.*

B. Background of the *daya*

The Palestinian *daya* is an integral part of the culture and society due to the fact that she lives with the population whom she serves and is from the same social class. She is totally accessible to her people, unlike most other health professionals. Because of her class and gender, she has a particular understanding of the women she works with. Without verbalizing it as such, she understands the structural constraints in some women's lives in this society. For example, the *daya* sometimes provides assistance to the mother in the puerperium with housework and childcare.

Although she has little formal schooling, the *daya* has a great deal of practical experience and has mastered her trade through a long period of apprenticeship. She usually becomes a *daya* after having several children of her own. Many of the Palestinian *dayas* were divorced or widowed at a young age and needed to become economically independent to support their children. As women coming from modest backgrounds, this profession was one opportunity that was open to them where they could learn by working alongside a skilled *daya* without leaving their village. Often they responded to a need in the community. When asked about their decision to become a *daya*, many replied that they were chosen by the *mukhtar* (village leader) or by the community, they responded to a need or to a calling, or they assisted childbirth "as a good deed". One answered, "I was born in a far away village which never had a *daya*. As I grew up, I decided to become a *daya* because the village needed me". Most of them expressed their commitment to their profession, "the beauty of the work". "I like the work; I like women, and I want to lessen their pain." Many were motivated by a humanitarian or a religious desire to serve their people: "I wanted to contribute something to society", or another expressed, "I like attending births, and when I saw the treatment of women in the hospital, I decided to become a *daya*".

The *daya* sees herself as an independent-minded woman. Several cited that they considered themselves to be "brave" or to have a "brave heart". At times, the profession requires taking a great deal of responsibility such as making an important decision, being authoritative, going out alone at night, all of which are roles that women in this society are not necessarily accustomed to assuming.

One of the older *dayas* explained how she had come to be a *daya* and she described the context in which she had practiced. She was married at fifteen and had

her first baby at sixteen. Her husband left her when she was pregnant with her second child. The only way she could support her family was to find a job. She lived in the Jerusalem vicinity and began to work with a doctor there. He taught her to assist him and give basic nursing care. Through her work, she met a practical midwife (*qabila qanunia)* who was doing home deliveries and was encouraged by the midwife to get training. By enrolling in a Jordanian government program, she was able to train for six months at the Austrian Hospice in the Old City of Jerusalem to learn how to attend births. (One night when she was working in the delivery room, the 1967 war broke out. She was called by one of the doctors to go out with him in a car and bring back the wounded. She remembers vividly the bodies that she found in the street when they reached Shufat. She then treated the wounded in the hospital as well as delivering the babies.) After she had gained experience in attending births in the hospital, she decided to work in the community and do home births in order to be more available for her growing children. At the time of the *Intifada*, she would be called out during curfews to assist at births. Sometimes she would go in an ambulance and sometimes she would disappear in the dark of the night to help the women who could not reach a hospital. It is understandable that one needs a "brave heart" to do such work.

C. Apprenticeship of the *daya*

The profession of the *daya* was often passed down from generation to generation. Such women explained that they learned their skills from their mother, mother-in-law, or another *daya* in the village whom they loved and respected. It was a way of life that they experienced from a young age, including the many stories that would be told about women giving birth, the herbs that were collected and used, and the complex social and behavioral customs that constitute the birth experience of which the *daya* is an integral part. One *daya* recounted that her "apprenticeship" dates back to her childhood when, as a young girl, she was always the one to take the role of the *daya* in the games they would play. The *dayas* learned through a long and gradual period of apprenticeship. Typically they would begin by accompanying another *daya* to a home birth. At first, they would only observe. Little by little, they would begin to perform small tasks on their own until one day they were called in an emergency to a birth and had to cut the umbilical cord (Jordan 1989, p. 932).

These illustrations show that the way the *dayas* learned their profession - which necessitates mastering a complex variety of technical, social, and communication skills - is totally different from the way of learning in today's schools or training courses. One author describes the difference between learning by apprenticeship, which is very much based on imitation of bodily movements, and the didactic mode, which focuses on acquiring abstract knowledge: "While learning under the didactic model is concerned with verbal and abstract knowledge, apprenticeship learning is, above all, the acquisition of bodily skills. It involves *the ability to do* rather than *the ability to talk about* something, and indeed it may be impossible to elicit from people operating in this mode what they know (how to do)" (Jordan 1989, p. 933).

D. The *daya* in the family context

Describing the context in which the *daya* works helps to understand who she is and the gap which exists between the world view of the *daya* and the women in her community, and that of the medical professionals. *Dayas* and their clients view childbirth as one of the important events of the life cycle and of their community. The home birth takes place in the context of daily life. Mothers who give birth at home are

not anxious about reaching the hospital on time and leaving their family. Women mentioned several times during the focus group discussions that the *daya* was always available and close, coming immediately when she was called which was reassuring to the mothers.

Respect for privacy and intimacy, the need for support and closeness to the family, and the familiarity of the surroundings are all factors which may contribute to a normal and physiological birth. After delivery, the *daya* continues to visit. One of the roles of the *daya* is to help with the housework and with children, providing a continuity in the process of giving birth within the family and the social context**.**

E. Practices of the *daya*

The *daya* has a holistic concept of health and disease. She believes that stress and emotions have an effect on the physical state of the mother. Thus, during childbirth she puts a great emphasis on psychological support and traditional methods of pain relief such as massage with olive oil and herbal teas. She talks "sweet words".[4] She often reads to them from the Qur'an which calms their fears. Others stated that during the most painful period of labor, the *daya* uses distraction techniques by telling the mother stories or jokes. Certain obstetrical complications are associated with psychological factors, such as hemorrhage which is believed to be linked to strong emotions. When the *dayas* were questioned about what they would do in case of hemorrhage, they gave the clinical response of massaging the uterus to make it contract, but they associated the cause of this complication with the psychological state of the mother.

One fundamental difference between childbirth in the home with the *daya* and childbirth in the hospital appears to be the question of who is in control. In the home, the woman gives birth. She is assisted by the *daya* who does everything in her power to support the mother in coping with pain and in pushing out the baby. But the ultimate responsibility is on the woman herself. The *daya* described the different techniques she used if the mother is tired during the transition period immediately before the birth of the baby. She brings in women from the family to encourage her. She gives her herb teas with sugar to build up her energy. She calms her with readings from the Qur'an or distracts her from the pain with stories. One even stated that she would threaten the woman with transferring her to the hospital if she didn't have the strength to deliver on her own and immediately the baby would be born. But whatever the supportive technique, the *woman* needs to assume the responsibility for giving birth.

In the hospital, the health professionals are accountable for the outcome and they are in control. The woman in labor is delivered, rather than giving birth on her own (Martin 1993, p.79). The health professionals have different techniques which they can use to extract the newborn. The mother becomes a passive observer rather than the primary actor of a process deeply embodying the wholeness of the mind and the body. In pathological situations, interventions have saved the lives of many mothers and babies. But in the majority of normal deliveries, it is an alienating process which some women do not necessarily experience positively (Martin 1993, p. 82). Some studies in Western countries, where an infrastructure for antenatal care, home birth, and postnatal visits exists, have shown that morbidity for both women and

[4] This same expression was used several times in different focus groups when describing the behavior of the *daya* during labor.

babies appears to be higher among deliveries in the hospital due to a tendency to intervene (Alexander et al.1990, pp.1-19). However, these studies were carried out in countries with a well-developed health infrastructure and are not necessarily applicable in a different context.

Although the *daya* works as an independent private practitioner in the community and is not a salaried health professional, she is not part of the private-for-profit market. Often she does not ask for money. She reports that families decide what to give her, either in money or in kind (sweets, olive oil, soap for example), according to their means. This is particularly true of the *dayas* working in the rural areas with a small workload and who mainly assist extended family members. Some families can't afford to pay her anything and in this case she will attend births without compensation. Other *dayas* usually receive about 20 JD or 100-150 NIS for a home birth and postnatal care, depending on the means of the family and, at times, on the sex of the baby. If a male is born after several females, the *daya* is well compensated for her assistance. The *daya* may also have other ways of supporting herself, like work in the fields, keeping animals, or carrying out other functions in the community such as providing nursing care in the homes or helping at the day care center.

F. The *daya* as part of the indigenous health system

The *daya* is still part of the indigenous health system even though she is familiar with modern medicine. Spiritual healing with the Qur'an (*Ilaaj bi al-Qur'an)*, massage *(tamlis),* cupping (*kassat hawa*), and herbal treatments (*a'shaab)* are used by a large number of the *dayas*. A few practice bone-setting (*tajbr*), cautery (*kawi),* and pricking (*takhrim).* The herbs that are used during childbirth to strengthen the contractions are sage (*mayramieh)* and cumin (*kamoun),* prepared in an infusion with sugar. The birthing mother is often given dates (*tamr)* to eat, as the example in the Qur'an with Miryam.[5]

Traditional foods are given after childbirth, such as chicken soup or rice pudding with raisins, nuts, and cinnamon. Fenugreek (*hilbeh)* and anis *(yansoun)* increase the mother's milk supply. The newborn is sometimes given chamomile *(babunnej)* or anis *(yansoun)* with sugar or rock candy (*sukkar faadi)* to suck after delivery. Fennel (*shomar)* tea is used to soothe the pain of colic in the infant. The practice of rubbing salt water on the baby's skin dates back to Biblical times and is still a custom today in spite of efforts to change the habit. Traditional *dayas* also use salt water to disinfect the cord of the newborn. One of the midwives claims that she has rarely seen an infection with this method, "The cord withers like a flower without water". The baby's body is massaged with olive oil which is one of the *daya's* tasks when she visits the mother after delivery and bathes the baby. The majority continue to swaddle the newborn but some claim that they do it only on the mother's request. Hot and cold are important concepts in traditional medicine. For example, avoiding cold drafts for the newly-delivered newborn and mother is frequent health education advice.

In addition to various topics of health education advice given by the *daya*, she also has played a role in the past as a counselor. Some of the older *dayas* expressed that they encourage young girls to be polite and respectful. They teach them about the

[5] "And shake towards thyself the trunk of the palm tree: It will let fall fresh ripe dates upon thee. So eat and drink and cool (thine) eye." Surat XIX (Maryam) Verse 25-26. (Hashim, p. 42)

importance of finding a suitable husband and the necessity of getting along with their in-laws. Today, some regret the fact that fewer people are listening to their advice.

IV. Main Findings

A. Characteristics of the *Dayas* in the West Bank

This study investigates the work of the local midwives licensed by the Ministry of Health and working in communities of the West Bank. It is important to note that according to the findings of this study, the licensed midwives actually are composed of a very heterogeneous group whose common attribute is that they provide home-based midwifery care. Some are traditional birth attendants (TBAs) with extensive experience in attending births but without any formal education. Others are trained nurses or midwives who have a degree in nursing or midwifery. They all receive the same license from the Department of Health which is renewed annually. However, the profile of the licensed midwives/nurses is quite different from the TBAs because of their socialization into the medical system through their formal training. But unlike other health staff who work in hospitals and clinics, they tend to live in the community in which they work and thus have the same accessibility that characterizes the TBAs. This study will refer to all those who have a license as *dayas*, no matter what kind of previous training they have had, as this is the way the Ministry refers to them.

1. Number and type of birth attendants licensed by the Ministry. Information was collected from 169 of the 179 *dayas* licensed by the Ministry of Health to assist home births in the community, resulting in a response rate as mentioned previously of 94%. Within this group, 77% (130) are traditional birth attendants who have learned their profession empirically by experience with a family member, a *daya,* or a midwife but who have not had any formal degree course.

Twenty-three percent (39) of those practicing as *dayas* in the community have a degree in midwifery or nursing. Although these two groups are carrying out the same functions in the community, they have learned their skills in very different ways and in distinct environments. Nurses and midwives learn to deliver in the hospital and the TBAs have primarily gained their experience through providing services in the home.

2. Age and sex of the licensed *dayas.* All of the registered *dayas* in Palestine are women. The ages ranged from 26 years to 80 years. The mean age of the traditional birth attendants without degrees is 53 years, whereas the mean age of the nurse/midwives (about one fourth of all the licensed *dayas)* is 42 years. This illustrates that the nurse/midwives working in the community tend to be about ten years younger than the TBAs.

3. Family status. The large majority of the *dayas* had married (86%). Out of the 145 who have married, the mean number of live children is five. However, only 50% of the *dayas* were currently living with their spouses, the others having been widowed, divorced, or separated. This profile of the *dayas* indicates that middle-aged women, having had the experience of childbirth, are most likely to be carrying out this work in the community. With the experience of age and childbearing, they tend to have more authority in the community than young women, and probably they have fewer household and family chores which makes them more available for the demanding and irregular schedule of a community midwife. It would conceivably be more difficult for a young woman

who had never been married to make home visits at all hours of the day and the night as the *daya* is required to do. The fact that 50% of the *dayas* are living without a husband may indicate that these women were in need of paid work due to being widowed or divorced with children. This was a role which was open to them and acceptable to the community.

4. Residence and place of work. Sixty-six percent of the *dayas* live in villages or towns; 19% live in the main city of the district; 15% of them live in refugee camps. Many of the *dayas* work both in the locality where they reside as well as in surrounding areas. Sixty-nine percent of them report working in villages, 27% in cities, and 17% in camps. The number of localities exceeds the 169 *dayas* questioned as some work in more than one location. Although the majority work in villages, over one fourth of the *dayas* are working in cities in spite of the fact that maternity hospitals are available. Thus, it appears that distance from the hospital is not the only criteria for choosing to deliver at home.

5. Level of education and literacy. Two thirds of the *dayas* had attended school and the same number reported knowing how to read and write. Those who do not know how to write (34%) keep records by asking a family member to record in their notebooks the necessary data on the home births which they attend. The majority had completed at least six grades of school. Within the group of licensed *dayas,* the mean number of grades completed by the traditional birth attendants was 8, whereas the mean number of grades completed by the nurses/midwives was 13.5, indicating as might be expected that those with a degree course had acquired an average of five and a half more years of formal schooling than those who are TBAs. It is noteworthy that 20% of all the registered *dayas* had continued their studies beyond the *tawjiihi* (high school). Those who had never attended school were in the older age group, reflecting the general progression in the overall population toward high literacy levels in Palestine. The variation within the group of registered *dayas* in the West Bank ranging from no formal schooling to university degrees has important implications for future training courses as the choice of content and methods will differ according to the previous training of the *daya*.

6. Work experience and licensing. The majority of the *dayas* (77%) have been working for over ten years in their profession and 40% have been practicing for over twenty years. Thus, they have a considerable degree of experience in home birth and community care. The system of licensing *dayas* in the West Bank was initiated in the 1950s under Jordanian rule in order to establish a register of practicing TBAs and their geographical distribution for the purpose of supervision and training. The number of years that the *dayas* reported working with a license ranged from 1-40 years, the mean being 16 years. Only a small number have been newly licensed in the past few years due to the policy of the Primary Health Care Department of the Ministry of Health and of UNRWA to phase out home births by not renewing the licenses of the old *dayas* and issuing licenses for new *dayas* only in rare cases, when the request was made in areas where birth facilities were not accessible.

7. Previous training and upgrading. When asked what kind of previous training they had, the responses of the *dayas* were very diverse, reflecting the differences between the TBAs and the nurses/midwives with a degree. Because

of the fragmentation of the health services during the period of occupation and the isolation of the various districts in the West Bank, there was no uniform policy on the training and requirements for licensing of TBAs and nurses/midwives. Most were required to spend a few months working in the maternity ward of a government hospital of their district. Six percent of the *dayas* learned their skills exclusively by assisting a family member or neighbor through informal apprenticeships. Seventy-seven percent had no formal training but had worked in a maternity hospital or clinic for a minimum of a few months before getting licensed. Seventeen percent have a midwifery or nursing degree.

The last upgrading course for the licensed *dayas* was offered by UNICEF in 1986 and lasted about two weeks. The trainer was brought to Palestine from Egypt for the period of the course. This time constraint prevented follow-up on the training and evaluation of the training course. Several years ago, a one-day workshop was held by UNICEF for midwives and TBAs on breast feeding. However, aside from some health education sessions given by the *daya* supervisors in the various districts to the *dayas*, there has not been any systematic training or upgrading since the UNICEF course over a decade ago. This gap can be attributed not only to the lack of resources for upgrading but also to the ambiguity of the policy-makers toward the continued licensing of TBAs and midwives. The work of the *dayas* was considered a stop-gap measure for the interim period until the system moved toward hospital births.

B. Number and Distribution of dayas in the West Bank Districts

A total of 179 *dayas* are currently licensed in the West Bank. Their number and distribution according to district and population is the following:

District	Population of the district	# of women of reproductive age (15-49)*	# of licensed *dayas*	# of *dayas* per 10,000 women of reproductive age
Hebron	405,664	88,029	40	4.5
Jenin	239,635	52,001	37	7.1
Tulkarem	134,110	29,102	28	9.6
Ramallah	213,582	46,347	26	5.6
Nablus	261,340	56,711	21	3.7
Bethlehem	137,286	29,791	10	3.4
Salfit	48,538	10,533	7	6.7
Jericho	32,713	7,099	6	8.5
Qalqilya	72,007	15,626	4	2.6
Total	**1,544,875**	**335,239**	**179**	**51.7**

* The number of women of reproductive age was calculated as 21.7% of the entire population as per PCBS 1996. *Survey of Maternal and Child Health in the West Bank and Gaza Strip: Main Report.* Ramallah: 1999.

The ratio of licensed *dayas* to the total population of the West Bank is about 1 to 10,000. There is approximately 1 licensed *daya* for every 2,400 women of reproductive age. Although midwives and traditional birth attendants are practicing in communities throughout the West Bank, the frequency and manner in which they practice seems to differ according to the social, cultural, geographic, and demographic variations within the country. The reasons for the utilization of the *dayas* in each region appear to differ, and within each of these regions there is diversity in the demand for *dayas* according to the socio-economic conditions. Some women may prefer the *daya's* services primarily for economic reasons or because she is from the same class and culturally closer to the *dayas* than to the medical professionals in the

hospital. Other women may choose, for religious reasons or for reasons of modesty, to give birth at home with a trained midwife even though they might pay her the same amount as they would pay for a hospital delivery.

The largest numbers of *dayas* are in the Hebron and Jenin districts where the most home births occur. Hebron has the highest total fertility rate of the regions in the West Bank (6.8) with an overall rate of the Palestinian territory estimated to be 6.06, 5.4 in the West Bank, and 7.4 in the Gaza Strip (PCBS 1998, p.21). Jenin, Tulkarem, Qalqilya, and Hebron have the highest percentage in the West Bank of mothers or pregnant women in the 15-19 age group (PCBS 1998, p. 26), indicating the need in these communities for reproductive health services for adolescents which might be partially provided by the *dayas*. The regional disparity is also evident in the lack of accessibility to hospitals and medical professionals in some parts of these regions.

C. Activities of the *Dayas*

Home Births

1. Number of home births. The primary function of the licensed *dayas* is to attend home births. According to the latest Ministry of Health report, there were 88,708 births in the Palestinian territories in 1998, with 51,648 in the West Bank and 37,060 in the Gaza Strip. The same source indicates that 10% of births in the West Bank or 5,245 births took place in the home. Some of these home births are attended by doctors. Others are attended by midwives, nurses, or TBAs. The licensed *dayas* in this study reported having attended 3, 941 births in 1998 in the West Bank. It would appear from interviews with some of the *dayas* that there is underreporting of home births in certain regions. *Dayas* feel that the doctors, for economic reasons, want births to take place in hospitals. In order to avoid drawing attention to the number of clients that they have, *dayas* may be underreporting the number of births which they actually attend.

2. Number and distribution of home births according to region in 1998, as reported by the licensed *dayas*:

District of the West Bank	% of total number of home births reported by the licensed *dayas*
Hebron	37% (1476)
Jenin	20% (800)
Tulkarem	18% (702)
Bethlehem	10% (397)
Ramallah	4% (145)
Nablus	3% (120)
Salfit	3% (104)
Jericho	3% (101)
Qalquilya	2% (96)
Total	100% (3,941)

About three-fourths of all home births take place in the districts of Hebron, Jenin, and Tulkarem. 46% occur in the north, 48% in the south, and only 7% in the center, indicating that this issue concerns primarily the north and south of the country.

3. Case loads of the *dayas* in 1998 (number of home births attended by individual *dayas*).

a. Licensed *dayas* reporting no births in 1998. The information collected for this report from the *dayas* showed a considerable variation in the number of home births attended by each individual *daya*. Twenty-eight of the 169 licensed *dayas* reported not assisting any births in 1998. This large number of inactive *dayas* can be explained in part by the lack of updating of the register in some districts. Some of the old TBAs were still on the list but were no longer practicing. Another reason is that in certain areas, Ramallah for example, the number of home births has decreased considerably in the past decade due to the accessibility of hospitals and the opening of new private hospitals in this area, as well as an active policy by the health department to encourage hospital delivery for all women. As a result, in Ramallah there are 26 licensed *dayas* for a total of 145 home births in 1998 (an average of about five births per year per *daya*, if all were still practicing). In addition, some of the *dayas* who attended no births in 1998 are actually midwives working in maternity facilities who renew their licenses regularly in case they happen to be called to a home birth or are requested by family members to assist them in delivery.

b. Range of births attended by individual *dayas* in 1998. Out of the 141 licensed *dayas* reporting births in 1998, the range of the number of births attended was a minimum of 1 to a maximum of 263 births in that year. The mean number of births attended per *daya* per year was 25, averaging about two births a month. Seventy-five percent (2,976) of the births reported were assisted by traditional birth attendants and 25% (981) by midwives or nurses.

The percentage of *dayas* attending twenty births or more is shown in the following table:

Case load	% of dayas
20 births or more	33% (53)
50 births or more	16% (25)
100 births or more	5% (10)

Missing =9

This information is important in the selection of the licensed *dayas* to be trained. Although the number of births attended is not the only criteria to be considered, it is more cost effective to invest in training for those TBAs and midwives who are attending the most births. Age and geographical location are also necessary to consider as criteria, as some isolated villages may be very much in need of the services of the *daya*, even though the number of births attended is relatively few.

c. Distribution of the *dayas* with a caseload of 20 births or more in 1998 according to district. The following information could be useful to policy-makers when planning for the training and supervision of the licensed *dayas*. If the selection of the *dayas* to be trained were based primarily on the number of births attended, the distribution according to the district of those who attend twenty births or more per year would be the following:

District	% of dayas with a caseload of 20 births or more/year
Hebron	35.8 % (19)
Jenin	30.2 % (16)
Tulkarem	11.3 % (6)
Bethlehem	7.5 % (4)
Jericho	3.8 % (2)
Ramallah	3.8 % (2)
Salfit	3.8 % (2)
Nablus	1.9 % (1)
Qalqilya	1.9 % (1)
Total	100.00 (53)

4. Place of home births. Most of the *dayas* report that they attend home births in the house of the woman who is giving birth. However, when asked if they sometimes use their own house, about 30% replied that they do, although for most of them it was infrequent. Because the Ministry of Health discourages the licensed *dayas* from attending births in their own houses, it is difficult to know how accurate the self-reporting of the midwives is concerning the place of birth. The policy of the Ministry should perhaps be reviewed and clarified on this point in the context of an overall policy for the licensed *dayas* which can be adapted to the particular needs and resources of each district.

The *Dayas*' Practice of Antenatal Care

1. Definition, coverage, and background of antenatal care. Antenatal care is defined by WHO as having had one or more visit with a trained person during pregnancy. The idea of antenatal care is to screen a healthy population of pregnant women in order to detect early signs of disease and to intervene appropriately. This intervention may involve treating the illness or directing women at increased risk of complications to deliver in hospitals (Rooney 1992, p. 8-10). In Palestine, the coverage of antenatal care is approximately 80% of Palestinian women (PCBS 1998, p.87). Although some studies have measured the process of antenatal care in this country (availability, number of visits, etc.), there is not sufficient information to assess the impact or health outcomes resulting from the antenatal care that is provided. Thus, the quality and the impact of the antenatal care provided either by the doctors, midwives, or traditional birth attendants is not known.

Antenatal care is usually comprised of three components: regular physical check-ups, laboratory tests, and health education. In Western countries, regular antenatal care became a widespread phenomenon in the 1930s (Tew 1992, p. 79). During this period, the discovery of antibiotics and sulphonamides played a major role in treating infections during pregnancy, and in the next decade, the prevention of haemolytic disease of the newborn by the identification of rhesus blood groups was a real break through for obstetric care. A review of the literature indicates that, in addition to the intrapartum and postpartum treatments for hemorrhage and puerperal sepsis, improving antenatal nutrition had an important impact on the reduction of maternal mortality (Tew 1992, p.87). However, since the beginning of antenatal care and continuing to this day, the problem of both under-diagnosis of complications and over-diagnosis leading to the dangers of unnecessary interventions has existed. "The prediction and

detection of problems by current antenatal procedures remains unacceptably inaccurate" (Tew 1992, p.95). However, it appears from the evaluation of different programs of antenatal care that quality care during pregnancy does make a difference, particularly for the most vulnerable groups of women who may not otherwise seek health care.

Client dissatisfaction with antenatal care in Western countries has also been an on-going problem, seemingly difficult to remedy. Complaints are usually linked to long waiting time, a rapid clinical examination with little contact with or explanation from the practitioner, and lack of privacy (Tew 1992, p.90). In one study in Jordan, these same factors were enumerated. More than half of the women who needed information during prenatal visits were not receiving it and more than half were dissatisfied with the quality of the information that they received (al-Quotob and Mawajdeh 1992, p.57). Although beyond the scope of this study, it would be important to determine in the local context what procedures of antenatal care are most effective, what type of health care professional can best provide these services, the advised frequency of attendance, and successful experiments in countries similar to this one in antenatal supervision. Planning the overall system of antenatal care in Palestine and setting standards will then facilitate the task of identifying the most useful role of the community midwives and traditional birth attendants in providing certain aspects of antenatal care.

2. The daya's role in antenatal care. Forty-three percent (73) of the *dayas* reported providing antenatal care and 92% (156) gave health education advice to pregnant women. Out of those practicing antenatal care, 39% are traditional birth attendants and 56% are midwives/nurses. The larger percentage of trained midwives providing this service in comparison to the TBAs would indicate that those who have received formal training are more frequently solicited or more likely to offer antenatal care in the community. The midwives have been trained in antenatal care which is an important component of midwifery courses. In many other countries including those in the West, antenatal care is part of the scope of practice of midwives. Midwives often provide the normal antenatal services with doctors who may be responsible for the initial visit. This model permits the doctor to follow closely all the abnormal pregnancies which need regular and specialized supervision.

3. The *dayas'* reported interventions in antenatal care. Out of the 43% of licensed *dayas* who do some type of antenatal care, the most common tasks that they report providing to pregnant women were the following:

Interventions for antenatal care	**% of *dayas* reporting to practice it**
Measure blood pressure	52% (38)
Do abdominal palpation	38% (28)
Make home visits to pregnant women	26% (19)
Check fetal heart beat	25% (18)
Test the urine	16% (12)
Measure the weight	14% (10)
Take a personal history	11% (8)

The reporting of the *dayas* may not accurately reflect their actual practice of antenatal care. They may under report certain interventions thinking that they

are not supposed to carry out these tasks. They may also over report for other reasons.

Nevertheless, according to their reporting of their practice of antenatal care, it does not appear that the examination is very thorough. Only a few mentioned checking for fetal movement and none mentioned checking for edema. Only 25% of those who do antenatal care mentioned listening to the fetal heart beat which is an essential part of the examination and does not require expensive equipment, as the fetoscope is a simple, inexpensive, and effective tool. The same comment would apply to weighing the pregnant woman, checking for fetal movement, doing a urine dipstick test for albumine, and checking for edema. However, this question needs further investigation. It may be that the *daya* is doing additional antenatal care for some women who are also attending clinic consultations and thus is not the principal provider of her antenatal care. Women may consult different health providers for the same purpose.

4. The *dayas'* advice concerning antenatal care. Ninety-two percent (156) of all the *dayas* (169) reported giving antenatal care advice, which indicates that they still have a vital role in disseminating health information in the community due to their continual presence and closeness to the people. Although it was not possible to evaluate thoroughly the contents of this information or how systematically it was given, it indicates that with training the *dayas* might be very effective in propagating messages concerning women's health care to a segment of the population which is most in need. The most common health education advice during pregnancy that the *dayas* reported giving was the following:

Antenatal advice	**% of *dayas* reporting to give advice**
Nutrition	82%
Advise regular check-ups	59%
Rest, reduce workload, take care of yourself	47%
Hygiene	34%
Exercise	15%
Breast feeding	14%

(Some of the *dayas* reported giving advice on several different subjects.)

The type of advice that the *dayas* reported giving illustrates their holistic approach to the health of the pregnant woman. The majority give some kind of advice about nutrition. Almost half of them advise the woman to reduce her workload and to rest and take care of herself during the pregnancy. In most cases, this advice cannot be realized due to the heavy demands on Palestinian women such as housework, child care, and in some instances, work outside the home. However, it is important that the health provider is aware of this problem which is as essential to the health of the woman as regular examinations.

5. Advice on pregnancy at a young age and cousin marriage.

a. Pregnancy at a young age. Eighty-seven percent (147) of the 169 *dayas* reported giving advice on pregnancy at a young age. The reasons they expressed for giving such advice were the increased dangers of complication of pregnancy when one is too young because the body is not

yet fully developed for reproduction. They also expressed the importance of the lack of psychological maturity in adolescents: "How can she take responsibility for little children when she is still little herself", "she won't feel that the child belongs to her because she is too young", and "she is too young and hasn't yet seen anything in life". The particular way that the *dayas* express these messages can be useful to other health educators, because their manner may be better understood by the people than the way medical personnel might explain it. In addition, it is important to note that the *dayas* advise not to get married at a young age because once you are married, you need to get pregnant. If this reflects the way the community thinks, it is not realistic to imagine that young couples will marry and use contraception to delay the first pregnancy.

b. Advice on cousin marriage. Eighty-six percent (146) of the 169 *dayas* report giving advice on cousin marriage. Although most of them realize that cousin marriage may be one cause of disease or disability, some think that if the couple consults the doctor there is no problem. Twelve percent of the *dayas* who give advice encourage cousin marriage or advise that there is no problem; 12% advise not to marry a cousin; 77% advise that it may cause some kind of disability, disease, or social problem. Under the present circumstances antenatal care cannot prevent congenital anomalies resulting from marriage to a close relative. Thus, if the *dayas* deliver the appropriate messages, their role in health education for adolescents and their parents might be one useful strategy in dealing with a complex social practice which has a negative effect on the health status of the offspring.

The *Dayas'* Practice of Postpartum Care

1. Definition, coverage, and background of postpartum care. Postpartum care begins immediately after delivery and proceeds for approximately six weeks, the time it takes for the body to adapt physically and psychologically to the childbearing process (Olds et al. 1984, p. 901). The aim of care in the puerperium (postpartum) is to promote the physical well-being of mother and baby, to support appropriate methods of infant feeding, and to encourage the development of the relationship between the infant and the mother, father, and other family members (Bennett and Brown 1993, p. 233). Postpartum care is part of the continuum of care which begins in the antenatal period and proceeds throughout childbirth and its aftermath. It is one of the essential elements in this continuum to prevent maternal and neonatal mortality and morbidity, as poor health of the mother and a sick newborn are invariably linked and often caused by the same factors. Postpartum care seeks to prevent or treat complications after delivery which, for the mother, may lead to post-partum hemorrhage, puerperal sepsis (infection of the genital tract), breast infection, urinary tract infection, thrombo-phlebitis, or puerperal psychosis. For the newborn, the aim is to prevent birth asphyxia, infections, hypothermia, jaundice, and infant feeding problems and to care appropriately for low birth weight babies.

Not only should the health provider of postpartum care recognize danger signs followed by appropriate treatment or referral, but also she or he should play an essential role in promoting the health of the mother and baby through care and advice on bonding, breast feeding, nutrition of the mother, care of the

newborn and child-rearing, family planning methods and child-spacing. Although it is difficult to measure the overall impact that such care may have on the physical and psychological health of the mother and child, many studies have shown the indubitable advantage of promoting a healthy mother, breast feeding the infant, and spacing pregnancies.

Postpartum care may take on different forms and be carried out by different types of health providers. The most effective way of providing this care needs to be determined by the resources available and how it fits in to the larger health system. Although Western medicalization of childbirth has made a great deal of progress in the treatment of complications during pregnancy, childbirth, and the puerperium, it has also created iatrogenic complications in normal births by overuse of obstetrical interventions (Tew 1992, p.130), reduction in the practice of breast feeding, separation of the mother and infant after birth, augmenting the risk of infection for newborns by putting them in hospital nurseries, and implementing strict feeding schedules (Wagner 1994, p. 242-252). Further research has shown the importance of the social and cultural traditions surrounding childbirth, focusing care after birth on the mother-infant dyad, keeping the baby with the mother, promoting early contact and touching, and encouraging maternal care-taking behavior and self-confidence rather than creating dependency on medical staff (Wagner 1994, p.284). The approach to reproductive health care needs to encompass different strategies in order to have an impact on the health status of mothers and infants. While developing effective emergency obstetric care at the different levels is essential to reducing maternal mortality and morbidity, developing an appropriate system of basic quality postpartum care reaching those women most in need is equally as important.

Seventy-seven percent of women in the West Bank receive no post-natal care. Out of the remaining 23% of women receiving some care after childbirth, 22% is provided by physicians and 1% from a midwife or *daya* (PCBS 1998, p.89). Policy planners should consider how to reach the majority of women and who the most appropriate provider would be, taking into consideration the needs and the resources of the country. Considering that women who deliver in hospitals often go home shortly after delivery and that maternal morbidity is probably relatively high, it would appear to be a priority to plan and implement a system for effective postnatal care. Home-based postpartum care is recommended as the best care for the healthy mother and baby (Wagner 1994, p.240). Whereas the sick newborn or mother are very much in need of hospital care, the healthy ones are better off at home due to the risk of infection in the hospitals and the high cost of hospitalization. The home is more apt to offer conditions that facilitate bonding between the family members and the newborn, the promotion of breast feeding and infant development, and the encouragement of maternal care-taking behavior.

Most of the mothers who deliver at home also receive some postnatal care from the *daya* without paying any further fees, as this service is included in the amount that the *daya* takes for attending the birth. In this respect, they have greater continuity of care than those who deliver in hospitals, most of whom receive no postnatal care. According to one study, 80% of women delivering in the hospital had no postnatal examination or family planning advice (PRC 1996).

2. Frequency of postnatal visits. All the *dayas* reported visiting the mother and newborn whom they assisted in childbirth during the postpartum period. However, variation in the frequency of visits is apparent. Thirteen percent of mothers are visited only once on the day following the birth. The large majority receive several visits during the first week and about 5% of the *dayas* visit the family daily until the fortieth day. Visiting until the fortieth day used to be common practice of the *dayas* but they report that now they do not visit as often.

When the *dayas* were asked specifically if they provide postpartum care, the percentage responding positively was less than the number who report visiting the mother after attending the birth. This discrepancy may be due to what some may conceive to be postnatal care. Eighty-six percent (146) of the *dayas* attending home births reported performing postpartum care for the women they deliver and 90% (152) provide postnatal care for the newborns. About one third of the licensed *dayas* (57) provide this service in their communities to women who have delivered in the hospitals or clinics, and about one half of the *dayas* care for newborns after hospital delivery. The data collected shows that more *dayas* offer postnatal care to babies than to mothers, perhaps reflecting the Palestinian tradition of prioritizing the health of the infant over the health of the mother. This favoritism indicates the need to focus not only on the technical skills but also on the attitudes of the birth attendants during their training.

3. Postpartum care for the mother. Although postpartum care is often not given sufficient attention, it is extremely important in preventing maternal mortality and morbidity. In order to provide timely and adequate treatment for such complications as hemorrhage, puerperal sepsis, breast infection, deep vein thrombosis, and postnatal depression, it is imperative that the *daya* examines the mother and recognizes the danger signs which need referral to a doctor.

In examining the mothers after childbirth, the *dayas* report massaging the uterus and checking for blood loss. Some of them bathe the mother but only about one-fifth of them report taking the mother's temperature or blood pressure which is an important preventive measure in the postpartum. Thus, training should emphasize the systematic examination of the mother and recognition of danger signs.

4. Postnatal care for the newborn. Ninety percent of the *dayas* doing home births reported doing postnatal care for the newborns whom they deliver, while 47% also provide postnatal care for newborns delivered in the hospital. When asked what they do, the procedures which they mentioned were the following:

Procedure in postnatal care of the newborn	**% of the *dayas* reporting to practice this procedure**
Bathing the baby	72% (152)
Doing cord care	51% (78)
Dressing and warming the infant	33% (50)
Doing a physical assessment	29% (44)
Assisting with breast feeding	26% (39)
Check the temperature	14% (21)

It is difficult to determine from their reporting what procedures they actually do because many *dayas* do not think and express themselves in medical concepts. The *daya* traditionally has an important role in bathing the baby for the first time. She may very well observe the baby for symptoms of hypothermia even though most *dayas* do not take the baby's temperature. Very few report checking the urine and meconium of the newborn. However, this may be part of the traditional *dayas'* observations even though they don't express it as part of postnatal care. Observation by the supervisor of the *daya's* performance of postnatal care would be more reliable and could be incorporated into future training and supervision.

5. Advice given by the *daya* during the postnatal period. During the period after childbirth, the family tends to be open to advice on care of the mother, care of the newborn, breast feeding counseling, health education on nutrition, and family planning, etc. The *daya* who lives in the community and knows the family is perhaps the most suitable person to give this advice.

Ninety-six percent of the *dayas* reported providing health education advice to the mother after childbirth concerning her health and 88% on the health of the newborn. All of the *dayas* give counseling on breast feeding. Ninety-one percent report giving advice on family planning. The topics which they report advising on are the following:

a. Health education for the mother during the postpartum

Topic of health education	**% of dayas reporting to give advice**
Nutrition of the mother	65% (105)
Hygiene of the mother	57% (92)
Importance of rest and taking care of yourself	27% (43)
Exercises after childbirth	25% (41)
Keeping warm	22% (36)

b. Health education concerning the newborn during the postpartum

Topic of health education	% of *dayas* reporting to give advice
Hygiene of the newborn	61% (90)
Breast feeding	54% (80)
Regular check-ups and vaccinations	49% (72)
Sleeping positions	16% (24)
Keeping the baby warm	16% (23)
Not to swaddle the baby	8% (12)
Signs of neonatal jaundice	5% (8)

c. Health education concerning breast feeding. Ninety-nine percent (168) of the *dayas* replied positively when asked directly if they give health education on breast feeding.

Topics of health education in breast feeding	% of *dayas* reporting to give advice
Exclusive breast feeding	60% (101)
Advantage of breast feeding	39% (63)
Management of breast feeding	26% (43)
Nutrition of the mother during breast feeding	25% (42)
Washing the breasts	23% (38)
Importance of colostrum	7% (11)

Although the majority of the *dayas* reportedly advised exclusive breast feeding (only the mother's milk for the newborn), other data from the same questionnaire show contradictory information that about 50% also advised the mother to give extra liquids to the newborn. The guidelines that no liquids other than the mother's breast milk are needed in the first few months of breast feeding has not been sufficiently integrated into the *dayas* teaching. Other reports on breast feeding in the West Bank have shown the advantages of breast feeding to be more often a topic of advice than the management of or how to breast feed (UNICEF 1993, p. 55). In addition, only a few *dayas* mentioned advising on breast feeding problems or lactation as a family planning method.

d. Health education concerning family planning. In many countries, community midwives and TBAs give family planning advice in the communities where they work. Ninety-one percent (154) of the 169 *dayas* in Palestine report giving advice on family planning. When asked what they advised about family planning, their responses were categorized under particular themes. Sixty percent (92) of the 154 *dayas* mentioned the importance of spacing children for the physical or psychological health of the mother and baby. ("Let the uterus rest." "The mother needs to space her children in order that the blood becomes strong." "One child after another is a shame for the child." "A child has his rights and needs advice and education.")

- Thirty-four percent (52) advised a specific method of family planning or suggested visiting the family planning clinic.
- Twenty-five percent (39) advised breast feeding as a method of spacing children. ("Breast feed - it's from the Prophet.")

- Sixteen percent (25) advised family planning for economic reasons. ("You need the possibility not only to have children but to bring them up.")
- Five percent (8) of the *dayas* reported that they don't agree with family planning or that they advise the mother to have as many children as possible. (One responded, "Space children, but not for long, because we need them to go to war". Another reported, "as long as you keep having children, you will keep your husband".)

The large majority of the licensed *dayas (*86%) reported giving some kind of advice encouraging family planning. Only 5% reported not agreeing with family planning and 9% reported that they don't deal with the question.

Other tasks provided by the *dayas* in the community

In addition to the tasks of prenatal care, childbirth, and postnatal care, the *dayas* also provide other health services at the community level. When asked what other tasks they perform, eighteen of them mentioned practicing first aid which must have been particularly important during the period of the *Intifada* when they were the only health practitioners in some villages. Seventeen provide nursing care in the home, a need which is increasing as more elderly people live without their extended family. Thirteen give health education or counseling including family planning advice, nine give massages, two read and explain medical prescriptions, two pierce ears, one treats prolapsed uterus, and one washes the dead.

1. Tasks performed by the *dayas* (in addition to prenatal, childbirth and postnatal care). When asked directly (yes/no response. See questionnaire in Appendix, p. 66) if they provided specific services or treatments in the community, the responses were the following:

Practice or treatment	% of dayas replying 'yes'
Treat wounds	71% (120)
Treat burns	62% (104)
Give injections	54% (91)
Treat menstrual cycle problems	21% (36)
Treat vaginal infections	19% (32)
Prescribe medication	15% (26)
Treat menopausal symptoms	3% (5)

It is apparent from these results that when the *dayas* were asked specific questions about practices, they reported more. As is often the case, respondents remember more with check lists than with open questions.

2. Dayas having other employment. For some of the licensed *dayas*, the home-based care is not a full time job. As many Palestinian women who are not part of the labor force (only 11% of the working age female population, PCBS 1998, p. 103), they may be involved in several different activities in addition to their household and child-rearing tasks in order to generate income. Thirty percent of the licensed *dayas* report having an additional job. About 20% of them work in a health clinic or hospital. The remaining 10% report working in daycare centers, in nursing homes, in rehabilitation centers, in agriculture, in stores, and in sewing factories.

3. The *daya* as a traditional healer. The *dayas*, as well as the population with which they live in close contact, tend to combine modern medical practices with the traditional methods and to use allopathic medicine in addition to herbal preparations and dietary customs.

When asked about the practice of traditional medicine, the following percentage of *dayas* replied "yes" to the use of these particular traditional methods of healing:

Traditional healing method	% of *dayas* who practice it
Spiritual healing *(Ilaaj bi al-Qur'an)*	44% (75)
Massage (*tamlis)*	29% (49)
Herbal preparations *(a'shaab)*	26% (43)
Cupping *(kassat hawa)*	13% (22)
Bone-setting *(tajbiir)*	4% (7)
Pricking *(takhrim)*	4% (6)
Cautery *(kawi)*	2% (3)

Clearly, some of the *dayas* continue to use traditional methods of healing. Some of these methods such as spiritual healing, massage, and use of herbal preparations are an integral part of the care during pregnancy and childbirth. During pregnancy, for example, the *daya* will use massage for relaxation, to relieve pain, or to determine the size of the fetus and the progress of the pregnancy. Towards the time of delivery, massage is used to position the fetus or to perform external version to avoid breech delivery (Population Reports 1980, p. 444). Certain herbal teas are used during labor to strengthen the contractions such as sage (*mayramieh)* and cumin (*kamoun).* Fenugreek (*hilbeh)* and anis *(yansoun)* are given after the birth to increase the mother's milk supply.

The Process of a Typical Home Birth as Reported by the *Dayas*

The reporting of the *dayas* on the process of a normal home birth, although often not expressed in medical terminology, showed in general their good understanding and skill in assisting the physiological process of labor and delivery, reflecting their extensive experience in attending normal births. Their constant presence with the woman giving birth and their apparent close observation of clinical signs was noteworthy. For example, although the *dayas* will not do frequent vaginal examinations to record the progress of the dilation of the cervix as in hospital maternity care, they report assessing the progress by observing the movements of the woman, the color and perspiration of her skin, her breathing, the noises she makes, etc. Thus, without increasing the risk of infection with frequent internal examinations and interrupting the rhythm of the woman in labor, they still know when the woman is about to deliver and prepare her for the birth.

Understanding the process of a normal home birth in Palestine is important not only for the evaluation of the *daya's* performance but also for health professionals to respect the cultural values and traditional standards of practice in order to integrate them when possible into clinic and hospital service provision.

1. The first stage of labor. The pregnant woman calls the *daya* when she thinks she is in labor. The *daya* comes rapidly when she is summoned to the

mother's house and usually does a vaginal examination to see if there is dilatation of the cervix and to determine if the mother is really in labor. If such is the case, the *daya* will remain close to the mother until after the birth and provide technical assistance and psychological and emotional support to cope with the labor pains and anxiety. If the labor is proceeding normally, most of the *dayas* permit the mother to walk around and to be in the position that she finds most comfortable. The mother can eat and drink when she so desires and is encouraged, in particular, to drink herb teas with sugar (usually sage or cumin) in order to maintain her energy level and to avoid dehydration. They observe her closely during the first stage of labor to follow her progress and to identify any signs of eventual complications. Usually, the number of vaginal examinations is limited to one in the beginning of labor and one at the end, when necessary. The *dayas* reported using different non-pharmacological methods of pain relief during labor including massage and rubbing with olive oil, herbal infusions, breathing techniques and relaxation, verbal coaching (which they refer to as "sweet words"), and reading from the Qur'an to draw the woman's attention away from the pain and to calm her. The *daya* is usually very patient and doesn't interfere in the natural physiological process of birth. Most do not practice artificial rupture of the membranes. If the contractions are weak, they encourage the mother to walk around and give her herbal teas with sugar. At the end of the first stage of labor, they do not get the woman to actively push until she feels the urge in order not to exhaust her. The *dayas* reported being aware of abnormal signs of labor and delivery and referring women to the hospital at the first indication of complications.[6]

2. The second stage of labor. The room is prepared for the birth with a clean place for the delivery and the necessary equipment for cutting the cord. The mother gives birth in bed or on a mattress on the floor. She is frequently in a semi-sitting position for the actual delivery. The mother is usually accompanied by another female member of her family (mother, mother-in-law, sister, etc.) according to her choice. (About 25% of the *dayas* report that they are alone in the room with the mother at birth. Seventy-five percent have another family member with them.) Before the actual birth, they prepare the perineum by massaging it with olive oil. When the head is crowning, the fingers of one hand support the perineum while the other hand exerts gentle pressure on the head of the fetus to prevent perineal damage. The mother is encouraged to breath out and not to push hard. The *dayas* do not do episiotomies and they report very few perineal tears.

3. The third stage of labor and the immediate care of the newborn. At the birth of the baby, the *daya* usually stimulates the baby to breathe by rubbing the back, flicking the feet, or wiping or suctioning the mouth. A small number of *dayas* suspend the baby by its feet. Most *dayas* practice late clamping of the cord. They report that they wait for the cord to stop pulsating, the placenta to be delivered, or the baby to be rested. Most of them clamp the cord with artery forceps and a sterile plastic cord clamp but some still use two pieces of string which they have boiled. They report cutting the umbilical cord with scissors that have been previously sterilized by boiling. After delivering the placenta, they

[6] This aspect seems to have been emphasized by their supervisors, particularly the question of referral for prolonged labor. They report referring any woman whose first stage of labor exceeds six hours. One doctor, experienced in home birth, mentions that most birthing complications are preceded by a long and difficult first stage of labor (Odent 1991, p. 6).

examine it to make sure it is complete. (One described the placenta as looking like "the web of a spider".)

Most of the *dayas* dry and wrap the newborn but do not encourage early skin-to-skin contact. They help the mother to initiate breast feeding but not necessarily within the first half hour. They remain with the mother on average for 1-2 hours after the birth and check for uterine contraction and bleeding. Most *dayas* appear to be aware of the danger of hemorrhage. Although they do not measure the amount of blood loss, with experience they can estimate the quantity and they observe the mother closely for any clinical signs of complications. As one *daya* stated, "a hemorrhage does not hide". The *daya* is not allowed to administer any medication. However, twenty-four of them reported having Methergine (ergometrine) in their bags in case of emergency. Most of them report that they do not put anything in the newborn's eyes. The majority put a disinfectant on the umbilical cord of the newborn, usually either alcohol, salt and water, or another disinfectant. About one third of them give the baby sugar water or herb tea (anise, chamomile, or fennel tea) to drink or rock candy (*sukar faadi)* to lick after the birth in addition to the mother's colostrum. Approximately one quarter of the *dayas* rub something on the baby's skin, either olive oil, salt and water, or a combination of the two. About one half of the *dayas* swaddle the baby.

4. Routine procedures performed by the *dayas* during labor and home delivery. Percentage of *dayas* reporting to practice routine procedures during labor:

Practice	**# of *dayas* responding 'yes'**
Internal exam	98% (159)
Abdominal palpation	93% (150)
Fetal heart beat	85% (138)
Takes mother's temperature	82% (132)
Takes mother's pulse	80% (129)
Gives mother an enema	72% (116)
Takes mother's blood pressure	56% (91)
Gives mother medications or herbs *	33% (53)

*Out of those who reported giving medications, 5 *dayas* reported giving Methergine during home deliveries and 4 reported using Spasmine. All the others primarily use herbal infusions.

5. The daya's instruments for delivery. All of the *dayas* with one exception have instruments for birthing and report that they sterilize these instruments (primarily the scissors and artery forceps). A large majority report boiling the instruments and the rest, who presumably also work in a hospital or clinic, have access to an autoclave for sterilization.

When the *dayas* came to be interviewed, they had been requested to bring their birthing kits. Most of them did so and when the bags were checked, the necessary equipment, for the most part, was present. They were obviously used to having their equipment checked by their supervisor.

Most of the *dayas* received birthing kits from UNICEF in 1986 which have not been replaced since that time. Thus, their instruments are about 13 years old and should be replaced with new ones. However, almost all of the *dayas* had scissors to cut the cord. In some districts they are advised to have a sterile razor blade to cut the cord in case they are called in emergency and do not have time to boil the scissors. In general, most of the *dayas* had the necessary equipment for delivery.

Other than the donations of UNICEF, the *daya* herself is responsible for having the required supplies. In a few cases, the kits did not appear to be clean or tidy. In other instances, some items such as the infant bulb syringe for suctioning the newborn's nose and mouth immediately after birth, did not seem to have been used as it was still in its box. Some of the older midwives apparently continue to use the traditional method of tying the cord with two pieces of string instead of clamping the cord with the artery forceps and the plastic umbilical cord clamp, which is one of the disposable items that can be used only once and must be purchased by the *daya.* In certain kits, the disposable articles such as the sterile gloves appeared to be very old. Although they know that they are supposed to use sterile gloves for vaginal examinations and the delivery, it is apparent that many of them only use clean gloves (rather than the sterile ones which cost about 2NIS a pair) which they purchase in quantities and keep in their kits. Supplies of gauze and cotton were often missing or appeared to be old.

Complications of Pregnancy and Delivery

According to the international literature, 10-15% of all pregnancies have an increased risk of complications (Alexander, p. 269). These particular pregnancies and the births which follow need special supervision which requires that the birth takes place in a hospital where skilled health professionals and emergency obstetric care are available. Unlike some other countries, distances are limited in the Palestinian territories and most women, at present, have accessibility to hospitals. This was not the case during the period of the *Intifada* when curfews and check points often prohibited women in labor from getting to the hospital. However, the problem remains that, although women usually can reach the hospital, the high risk pregnancies and referral cases, except for exceptional situations, still are not permitted entry into Jerusalem where the main Palestinian referral hospital and specialists for the West Bank and Gaza are located.

In the international setting, a system of risk assessment during prenatal care has dominated the approach to decisions about birth for decades (WHO 1997, p.2). This system, through knowledge of the medical and obstetrical history of the pregnant woman, of her age, height, parity, and abnormalities in the present pregnancy (De Groot et al., 1993) can determine those women who are most likely to need special attention during childbirth and direct them to the appropriate level of care. Risk assessment does have its limitations, one of which is the predictive value of risk scoring (WHO, p. 3). Another is that those pregnant women who are the most likely to be at risk are those who have the least access to the preventive health services (Rooney 1992, p. 13). The effectiveness of the system thus depends on antenatal care coverage and the quality of the antenatal care provided. However, in spite of these draw backs, it is at the moment the most effective way of screening pregnant women.

According to the policy of the Ministry of Health, the *dayas* are to assist home births only with women who are at low risk and who are most likely to have a normal birth. A "normal birth" involves two factors, one being the risk status of the pregnancy and the other the course of labor and delivery (WHO 1996, p. 3).

> We define normal birth as: spontaneous in onset, low risk at the start of labor and remaining so throughout labor and delivery. The infant is born spontaneously in the vertex position between 37 and 42 completed weeks of pregnancy. After birth mother and infant are in good condition (WHO 1996,p. 4).

In the local setting, in order to set guidelines on the risk status of the pregnancy, the MOH provided the *dayas* with a list of fifteen categories of high risk pregnant women who should not deliver at home. Mentioned in the list were the following: primipara, pregnant women with a chronic disease such as diabetes or heart disease, breech presentation, RH Incompatibility, pre-eclampsia, large baby, bleeding during pregnancy, placenta praevia, premature delivery, dystocia, non-engagement of the head, twins, abnormal fetal heart beat, meconium-stained amniotic fluid, and prolapsed cord. Regarding complications which might occur during the course of labor and delivery with a low-risk pregnant woman, the *dayas* were instructed by their supervisors on guidelines for the referral of women in labor. Most *dayas* emphasized the importance of referring women whose labor lasted longer than six hours or who had any abnormal presentation which had not been diagnosed previously during antenatal care.

1. The *daya's* knowledge of contraindications to home births. Each daya was asked which pregnant women should not give birth at home in order to understand whether she had assimilated the list of contraindications or high risk pregnancies which require a hospital birth for greater supervision. The most common high risk cases mentioned by the *dayas*, in order of frequency, were the following:

Contraindication to home birth *	**% of *dayas* mentioning the case**
Chronic diseases (cardiac, diabetes, anemia, hypertension)	70% (118)
Primiparas	59% (99)
Abnormal position (breech, transverse lie)	50% (85)
Bleeding	33% (57)
Previous Caesarian section	33% (56)
Preeclampsia	33% (55)
Previous abnormal delivery	25% (42)
Old age of the mother	23% (39)
Grand multipara (>6 births)	23% (39)
Twins	17% (28)
Dystocia (big baby and/or small pelvis)	13% (22)
RH Incompatibility	12% (20)
Young age of mother	10% (17)

* Those contraindications in bold were mentioned despite not being on the list of the MOH.

As appears in the table, chronic diseases were the most frequently reported cases by the *dayas* which necessitate a hospital delivery. This list of their knowledge of high risk pregnancies may reflect the emphasis that the supervisor has put on the various contraindications. It may also reflect their own perception of what is "at risk" or not. (The *dayas* perceive pregnancy and childbirth as a normal physiological process except for specific cases of illness, whereas those trained in the medical model would tend to view pregnancy and childbirth as potentially pathological until the newborn is actually born normally.) When a pregnant woman has diabetes or heart disease, it is evident to the *daya* that she is not healthy and needs special attention. However, the *dayas* are accustomed to handling high-risk cases such as the age of the mother (old or young), twins, or grand multiparity, often without any complications. Thus, they are perhaps less likely to insist that these cases must go to the hospital for delivery. In studies from other countries, grand multiparity and advanced age were also the two risk factors associated with a reduced probability of giving birth in a hospital (Rooney 1992, p. 12).

The reasons expressed by the *dayas* for directing the high risk cases to the hospital showed understanding of the potential complications in such deliveries. They reported that the mother and newborn were more apt to have complications, that they needed specialists and hospital facilities, and that it was too much responsibility for the *daya* to assume.

2. *Dayas'* reported delivery of high risk pregnancies at home in 1998. Out of the total number of 169 licensed *dayas* who were questioned, 28 (about 17%) had done no home deliveries in 1998, either for reasons of sickness and

old age, for lack of demand (as for example in the Ramallah area where the most inactive *dayas* reside), or because they work in a clinic or hospital and do not have time and/or permission to deliver at home.

Out of the 141 *dayas* who did home births in 1998, the following proportion of *dayas* reported having delivered high risk pregnancies at home in the past year.

Contraindication to home birth	**% of *dayas* who said 'yes' to delivering high risk cases at home in 1998**
Woman < 18 years old	33% (46)
Woman > 40 years old	24% (34)
Breech	19% (27)
Twins	14% (20)
Previous c-section	9% (13)
Premature delivery	9% (13)

This table does not represent the number of cases "at risk" which were delivered at home but rather the percentage of *dayas* who reported having assisted such births.

High risk, home-delivery cases need further investigation as to why these women are not delivering in a suitably equipped hospital. Identifying the weak link in the chain of risk assessment and guidance to the appropriate level of care for delivery would help find a solution to the problem. In the case of breech delivery, for example, is the abnormal lie not being detected by the health professionals during antenatal care, is the woman not being sufficiently counseled to have a hospital delivery, is the *daya* accepting abnormal cases for home birth, or is the woman not complying with the advice she received and if so, for what reasons? According to the current research, it is important that these abnormal cases be directed to the hospital for delivery (Rooney 1992, p.28). The accuracy with which clinical detection of malpresentation (breech, for example) during pregnancy near term predicts malpresentation in labor, needs further epidemiological study (Rooney 1992, p. 67).

3. Referrals of home births to the hospital. Although identifying some pregnant women who are at high risk and who therefore may have abnormal deliveries will contribute to selecting those normal births which are safe to deliver in the home, it is impossible to determine completely before the beginning of labor which births may require hospital delivery. About 15% of all births experience complications in need of medical attention (UNICEF, 1997 p.4). Although many of these cases show signs of abnormality during pregnancy, there will always be some where the clinical signs appear only during the first stage of labor. Thus, it is necessary for the *daya* to transfer the woman to the nearest hospital. For this reason, in addition to training the *dayas* in recognizing the danger signs, an organized referral system in each district with emergency obstetric care available in the regional hospitals is a necessity in order to ensure safe home births.

When the *daya* was asked if she referred any home births to the hospital in the past year, 47% (86) of the *dayas* said that they had. The *dayas* reported a total of 306 referrals (or 8% of the total number of reported home deliveries in 1998) to the hospital and stated that they usually accompany the mother to the

hospital in case of transferal. In her response to this question, the *daya* may have included some cases that she referred before the onset of labor. It is probable that the number of referrals was underreported by the *dayas* and the supervisors do not keep records of this information. Although reasons were not given for all of the referrals, the most common reasons mentioned by the *dayas* for transfer to the hospital during a home delivery were the following**:**

4. Most common reasons reported by the *dayas* for referrals of home births to the hospital in 1998*:*

Complication of birth	**% of total referrals to hospital by the *dayas***
Breech	10% (30)
Prolonged labor	6% (18)
Hemorrhage	6% (17)
Primiparity (first delivery)	6% (17)
Dystocia (big baby and/or small pelvis)	5% (15)
Reason not known	4% (11)
Previous caesarian section	4% (11)
Pre-eclampsia	3% (10)
Twins	3% (8)
Low birth weight	2% (7)
Transverse lie	2% (7)
Anemia	1% (4)
Weak mother	1% (4)
Heart disease	1% (4)

Note: The total % does not equal 100 because many of the *dayas* reported referring cases to the hospital, but they didn't report the reason for doing this in about 46% of the cases. It was not always clear from the *dayas'* reporting if some of these cases were referred by her to the hospital before or after labor had begun.

Although the list of reasons for referring is not statistically important because of the incomplete information, it is nevertheless significant for future training of the *dayas* in order to have an idea of the complications that they experience and how to deal with the cases.

The considerable number of breech deliveries that were referred by the *dayas* raises the question of whether the abnormal presentation was diagnosed before labor, during antenatal care, or whether it only became apparent to the *daya* when labor began. More thorough antenatal care visits at the end of pregnancy might avoid such referrals by directing the woman with a breech presentation to a hospital delivery. The same would be true for previous Caesarian section, twins, low birth weight, and transverse lie. Either the mother is not seeking antenatal care at the end of her pregnancy, or antenatal care is not diagnosing the abnormal presentations and thus assessing the risk sufficiently, or the woman and/or the *daya* are not following the directives for a hospital birth.

5. Outcomes of the referrals to hospitals as reported by the *dayas.* The *daya* reported information on the outcome of the referral in approximately one half of the cases. Twenty-five percent of the referrals to the hospital resulted in a normal delivery. The remaining cases required particular hospital

interventions. The *dayas* reported that 1% (4 cases) of the referrals resulted in neonatal death.

Reported outcomes of referrals to hospitals	**% of referred cases reported by the *dayas***
Normal delivery	25% (75)
Caesarian section/vacuum extraction	21% (63)
Oxytocin	5% (14)
Episiotomy	4% (11)
Blood transfusion	1% (4)
Neonatal death	1% (4)

Again the incompleteness of the information reported does not give a clear picture of the outcome of these referrals to the hospital. One task of the *daya* supervisors might be to follow-up on all referrals and record data from hospital records and inquiries.

D. Women's Reasons for Choosing a Home Birth

In many countries, the family's choice of place of birth is influenced by particular cultural beliefs, including their view and experience of pregnancy, childbirth, health, and disease. In the West, the selection of the home over the hospital for giving birth is often linked to a desire to have control over the birthing event and to avoid the technological interventions that are practiced routinely in a hospital setting. Personalized care, a family-centered birth, previous negative experiences in the hospital, and the influence of social networks are other reasons given for choosing the home environment (Anderson et al.1982, p. 291). Many women in developing countries have no choice of birth attendant or of setting.

Information in this study concerning women's choice of birthing place and their perception of the care they received was obtained primarily from the focus group discussions with women who have experienced home and hospital deliveries.(See focus group question guide in Appendix p. 79.) Additional data was obtained by asking the *dayas* during the interviews why women choose to give birth at home. The basic themes concerning reasons for choice of a home delivery correspond to the motivations described in the relevant literature from other countries. Although some women expressed feeling more secure in a hospital for delivery, most women in these focus groups who had experienced home birth felt at ease with the *daya* and their experience of birthing. The following motivations were cited by the *dayas* and the women:

1. The feeling of security in the home environment and the continuity of care. The women expressed the importance of knowing their care-taker well, of consulting her during pregnancy, and having her present during the birth and the follow-up. This reduced the anxiety of going to the hospital, a strange place with health professionals whom they had never seen before. Sometimes the same *daya* would assist all the births in the extended family and thus be totally integrated into the social and cultural environment of the birthing woman. The atmosphere of the home made women feel more at ease and eliminated the additional stress of being separated from their other children.

2. The presence of other family members during the labor and delivery. The attendance of close family members was also mentioned as reassuring for the women during home births. Having a support person (often called a "doula" in the birthing literature) has been shown by numerous studies to improve the birthing environment. The well-known work of Klaus and Kennel demonstrated that women in the hospital who had continuous support involving verbal encouragement, massage, and coaching had consistently much shorter labors and half the number of Caesarian sections as the group who delivered in the hospital with only minimal support. Use of oxytocin and pain medications and the requests for epidurals were also greatly reduced (Klaus and Kennel 1996, p.36). While in some other countries, the husband may assume this role, in Palestine it tends to be a close female family member, usually the mother or mother-in-law. In addition, at home births there is the presence of the *daya* who fulfills the function of both technical and psychological assistance in addition to the other female companions.

3. Trust in the *daya.* In general, the women knew the *daya* very well and they trusted and respected her. They appreciated her for being attentive to all of their needs and for taking such good care of them. When describing what they liked about the *daya*, they put great emphasis on her availability, her commitment to her vocation, and the emotional and psychological support which she gave them. They mentioned that she talks "sweet words" and comforts them in a nice way.

4. Modesty and privacy. Some women chose to give birth at home for reasons of modesty, the desire for privacy during the birthing experience, and the preference for a female birth attendant in a situation where they were sure that they would not have to expose their body to males.

It is a basic human right for women to have privacy when they give birth. They should have the option to have a female birth attendant if this is deeply important to them. At least one of the government hospitals mentioned by the women had no female doctor.

5. Financial considerations. Some women gave financial considerations as a reason for home births and the *dayas* themselves confirmed it. In cases of needy families, many of the *dayas* feel that it is their charitable duty to assist them in time of need without any compensation. Although the cost of a home birth for most families is similar to what they would pay at a government hospital for a normal birth leaving the hospital soon after delivery, there is always the possibility in the hospital of obstetrical interventions which will make it considerably more costly than a home birth.

6. Previous hospital experience. Most of the women who had home births also had a previous hospital experience. (*Dayas* are not supposed to accept primiparas for a home delivery.) The reasons that women gave for dissatisfaction with their experiences in the hospital were linked to the relationship with the care-takers, to the hospital milieu, and to some of the obstetrical practices. They complained about the health providers not being empathetic and respectful of them, of screaming at them, leaving them alone for long periods of time, and not giving them any psychological support. Often, family members were not allowed to stay with them to fulfill this function.

They expressed objections to lack of privacy and being exposed to male health providers. They mentioned the lack of cleanliness and overcrowding of the hospitals. Concerning routine interventions, women complained of frequent episiotomies in hospital births with painful side effects which lasted for months. Several mentioned the use of oxytocin to augment labor and the resulting increased pain of contractions which was difficult to cope with.

E. Policy and Supervision of the *Dayas*

1. The system of licensing of the *dayas*. *Dayas* have existed for centuries and have been present at the births of most Palestinians until recently. In the West Bank, the process of registering and licensing the *dayas* began during the Jordanian period in the 1950s but little has been recorded about the work of the *dayas*. One survey was done in 1987 on the *dayas* in the Hebron district.[7]

There are different types of health practitioners licensed by the Ministry of Health to do home births. As mentioned previously, some are midwives and nurses with degrees and some are traditional birth attendants who have learned through apprenticeship. The license is renewed on a yearly basis for a fee ranging between 2NIS and 50 NIS depending on the district. It is not clear why there is a variation in the licensing fees from one district to another. For renewal of her license, the *daya* is also required to be in good health, to have the necessary materials in her bag, and to record the births she attends in a notebook.

The nine health districts each have a *daya* supervisor who is responsible for the *dayas* in the district. (See details of the supervisory structure and activities in the next section.) They report to the nursing supervisor of the district, to the medical director of the district, and to the nursing director of PHC in the MOH.

A small number of the *dayas* licensed by the MOH are working within the structure of the UNRWA health services. They do home deliveries in the camp and they report to the UNRWA clinics where the women receive antenatal care. An UNRWA nurse from the clinic usually accompanies the *daya* to a home visit with the mother and newborn after the birth. Thus, a close link is established between the clinic and the home-based care of the *daya.* In addition to her work in the community, the UNRWA *daya* is a full-time employee of the clinic. According to an interview with the UNRWA supervisor, the *daya* does not have a clear job description in the clinic and she usually ends up doing the cleaning, a task which she perceives as degrading in front of her clients in the community. UNRWA might better use the resources and skills of the *dayas* by extending home-based services such as postpartum care.

2. The *dayas'* views on licensing. All of the *dayas* reported that there are advantages in being licensed. They expressed that it offers them legitimacy and protection as well as a structure of supervision. It gives them value in the eyes of the community and enables them to register the births and to work legally

[7] Dr. Jawad Abu Munshar and Dr. Munjed Hammouri,. 1987."The Role of the Daya in Home Deliveries and its Outcome in the Hebron Area".

and independently. Some *dayas* mentioned that it should also include evaluation of their work, training, and continuing education.

Although the majority of the *dayas* did not see a disadvantage in being licensed, they did comment on some weaknesses in the licensing procedure. Some felt that it was costly and inefficient to have to be relicensed every year. They complained of the delay in relicensing for the past two years in some districts, as the policy of licensing trained midwives was changed and the new policy was not applied uniformly in all of the districts. Some proposed that different categories of licensing should exist for traditional birth attendants and qualified midwives instead of grouping them all together. They recommended that clear procedures including a fair investigation should exist in cases of breach of the rules and the withdrawal of a license. They propose that new *dayas* should be permitted to be licensed according to established criteria to replace those who are becoming too old to meet the demands of their work.

3. Policy relating to the *dayas* and home births. From interviews with the policy-makers, it would appear that several trends have occurred in the past years, although there is no written policy. The findings would indicate that in the past, there has not been a comprehensive and clear policy for home-based midwifery care and that certain measures have been taken in reaction to particular situations. Now that the opportunity exists to build the system and to have clear policies, certification of midwives and traditional birth attendants practicing in the community should be an integral part of the system.

As in other areas of the health sector, only very limited resources have gone into the upgrading and evaluation of the *dayas'* skills. However, a written list of high risk pregnancies and contra-indications to home births was distributed by the MOH. This information was stressed by the supervisors in their meetings with the *dayas.* They also received a written circular prohibiting the *daya* from using any medications which might indicate that the issue of use of medication during a home birth needs to be addressed.

For the past several years, the MOH has stated that no new *dayas* should be licensed (except in cases of exceptional need by the community). No training courses have been held for new *dayas* and the last upgrading course for the existing ones was by UNICEF in 1986. Those *dayas* who become too old or too sick to carry out their functions are not relicensed and are not replaced even when there is the demand. The justification for phasing out the *dayas* was to encourage women to use the government hospital services for childbirth which in some localities were underutilized. Towards this end, the fee for a hospital delivery was reduced to 100 NIS for a normal birth and a twenty-four hour hospital stay.

For the purpose of promoting hospital deliveries and reducing home deliveries, it was decided about two years ago that midwives and nurses would no longer be licensed to do home births. Thus, it became illegal for midwives to deliver at home but not for the traditional birth attendants who continued to be licensed.

According to the findings of this study, these policy decisions have been applied in different ways depending on the district. In some districts, midwives

and nurses continue to be licensed and in others they do not. In one district, none of the *dayas* had been relicensed or supervised for two years because they were not considered to be necessary in that particular region.

4. Supervision of the *dayas*. The *daya* supervisors in the nine districts of the West Bank are nurses or midwives who have been assigned the responsibility of supervising the *dayas* and midwives who are licensed by the Palestinian Ministry of Health to practice home births. Eight of the supervisors are females and one is a male. Two are trained midwives with extensive practice in home and hospital births. The other seven are staff nurses who have studied public health or administration. For the most part, they are experienced in their role as *daya* supervisor, as seven of them have had this function for ten years or more. The number of midwives or *dayas* under their supervision ranges from forty-five and forty-three respectively in the Hebron and Jenin districts where about 58% of the home births take place, to two in the Qalquilya district. Three supervisors have the responsibility of supervising only the *dayas* in the district, while six have the multiple functions of being the nursing supervisor and/or the maternal and child health supervisor for the Ministry of Health.

5. The job description and tasks of the *daya* supervisors. The *daya* supervisors are responsible to the medical director of each district and to the nursing supervisor of the Primary Health Department of the Ministry of Health. Their job description as written by the Ministry of Health contains the following tasks:

- Control and supervision of the *dayas* and the provision of health education.
- Making home visits to the mothers and newborns after a home birth and giving them health education.
- Making recommendations for the licensing of new *dayas* according to their qualifications and the needs of the community.
- Preparing study days and continuing education for the *dayas* to improve their educational and technical level.
- Participating in the planning for maternal and child health programs.
- Participating in the committee that investigates questions concerning the *dayas*.
- Submitting a monthly report to their supervisor.

The control and supervision of the *dayas* involves primarily checking their childbirth kits to make sure they contain the right materials, checking the notebooks of the *dayas* which record information about the home births attended, and annual relicensing of the *dayas.* All the *dayas* report organizing their work through a monthly or weekly work plan. However, the criteria for establishing their work plan is often based on the priority of other PHC projects (ex. vaccinations and school health), the need to fill in for other staff members, the requirements of their other supervisory tasks (nursing or MCH supervision), or on the availability of transportation. Supervising the *dayas* seems to be at the bottom of the list of priorities when human resources or infrastructure (transportation) are lacking. When asked what they liked best about their job, the two midwives who are supervisors preferred midwifery while the others preferred nursing activities and administration.

The amount of time that the *daya* supervisor actually devotes to the supervision of the *dayas* varies from one district to another, depending upon the number of licensed *dayas* in that area, the additional responsibilities of some of the supervisors, the priority given to the project by the director of that district, and the needs of the other PHC projects in that district when there is a shortage of staff. It ranges from regular supervision in one district to total lack of supervision in the past year in another district where the Directorate planned to phase out the licensing of *dayas* doing home births in order to encourage women to use the hospital facilities.

Some of the *daya* supervisors visit the birth attendants in the field in order to check the contents of their childbirth bags, to record the number of births that they have attended, to discuss any needs or problems they might have, and to visit a newly delivered mother and newborn if the occasion arises. They are expected to visit the *dayas* every month. In the Hebron district, the supervisor called in the birth attendants for regular meetings instead of visiting them in the field as transportation is not available for her to make visits. Most of the supervisors reported the inability to visit some of the birth attendants in the remote areas because of lack of transportation.

The emphasis of the supervision over the years has been for a large part on the recording of the births and checking the childbirth bags to make sure that the necessary equipment is available and functional. At the same time, the birth attendants are given some advice such as reminders about the contraindications to home births and to encourage women to seek antenatal care at the clinic and to bring their newborns for vaccinations.

Actual observation and performance evaluation of the practice of the birth attendants is rarely undertaken. There seem to be several reasons for this. To the best of our knowledge, this type of evaluation has never been requested of the supervisors. Secondly, the logistics of attending home births is difficult, particularly when staff time and transportation are limited. Thirdly, most of the supervisors (with two exceptions) are not midwives, and though they are very competent in nursing MCH skills, they report not having a lot of skill or experience in the actual birthing process. As a result, their opinion of the practice of the birth attendants is primarily based on what they hear from the mothers in the clinics, any feedback which they might hear from the hospital on complications and referrals from home births, and the regular checking of the birth attendant's bag and notebook recording the home births. The supervisors appear to have a good relationship with the birth attendants. They know them well and they know which ones are greatly appreciated by their communities.

When the *dayas* themselves were asked during the interviews about how they were supervised, 9% of the *dayas* reported to have never been visited by their supervisor in the past year. Twenty-one percent reported to have been visited once or twice during the year, and the others reported more frequent visits. Only one third of the *dayas* recount that they were visited on a monthly basis as according to the directives.

The most common activity of the supervisor when she visited the *daya* was to check her bag. Seventy-four percent of those who had been visited reported that her bag had been checked by the supervisor, 52% reported that her

notebook was checked, 32% reported having received some health education advice from the supervisor, and 23% reported that the supervisor made a home visit with her to a newly delivered mother.

V. Discussion of Findings and Summary

Palestinian women's reproductive health care represents a large segment of the society's overall health care needs. Pregnancy, childbirth, and children are an integral part of the culture and highly valued. Improving the care surrounding these life events to make them safer and more meaningful is a priority. The contribution that midwives and traditional birth attendants can make in the community is part of the continuum of health care provision which in its totality can improve the health and well-being of the population.

A. Integrating midwives and traditional birth attendants into the health care system.

The work of the *dayas* reviewed in this study describes the important contribution that they make to home-based care. As mentioned, this group of licensed *dayas* is comprised both of traditional birth attendants with extensive experience in childbirth and community care but without formal degrees, and of midwives/nurses who are serving the same function in the community and who have had some type of formal education as health providers. Both groups are providing essential health services to certain segments of the population and they need to be recognized as such.

The quality of care which they provide and the extent of their coverage would be improved by their integration into an overall system of women's health care. Because of their accessibility and their capacity to provide home-based care at a low cost, it would appear that they are an essential link in the chain of promoting better health care for Palestinian women. Instead of viewing the traditional birth attendants as a stop-gap measure or as competitors vying for the same market, they need to be supported and integrated in a creative manner into the system. Their beneficial practices, which are by far the most numerous, should be reinforced and those harmful practices, which are relatively limited, should be reduced by training and careful supervision. Some *dayas* appear to be skilled practitioners and their abilities are being underestimated and underutilized by the health system. Without integrating them totally into the medical services where they would risk losing their identity and becoming just another aid nurse, a creative way of using them in their present role of providing community and home-based services could be established. With minimal financial support, their role could be expanded in offering postnatal care, for example, to all women in the community. A well-planned training course with hands-on skills, practice in counseling and in delivering the most important health promotion messages, and tools such as check-lists and simple home-based records would improve the quality of the services they offer.

Trained midwives and nurses who currently are discouraged from working in the community by lack of policy and licensing should also be incorporated into the system of women's health care and supported in their work. In some communities, they have replaced the traditional birth attendants and in others they work along side each other. They could play an essential role in providing basic services to certain groups of women in the population and referring abnormal cases to the doctors. No matter how accessible the health services including maternity facilities are, some women will continue to seek home-based care.

Women have the right to safe childbirth, to choice of a birth attendant, to privacy, to respect, and to information concerning their health care. Some women

with a normal pregnancy will choose to deliver in the hospital because they feel more secure and reassured in this setting. Some others will choose to deliver at home with a trained midwife or with a traditional birth attendant because they feel more confident in that environment and with that particular care-taker. Because giving birth is not only a biomedical function but also a process which is influenced by very deep cultural beliefs and past experiences, it is important to respect each family's particular situation. Some women are going to continue to give birth at home for a variety of reasons, even if health policy encourages hospital deliveries. It is essential to offer them as safe an alternative as possible. Other services such as postpartum care for the healthy mother and newborn are better provided within the home and the family context. The midwives and traditional birth attendants could be used as a valuable human resource in offering these services.

The results of this investigation point to the importance of establishing an overall reproductive health policy and system which would integrate the different components of reproductive health and adopt a team approach utilizing the various types of health providers to improve the quality of care. The role of the midwife is to assist normal pregnancy, childbirth, and the post-partum period. The traditional birth attendants usually have extensive experience, are a valuable source of knowledge, and can increase coverage by reaching out to those women who don't use the health services. The doctor is best trained to treat risk cases and emergencies and to use birth technology in the most appropriate way. As a team, they can most suitably meet the physical and psychological reproductive health needs of the family unit. Although integrating these roles within the system in a creative and flexible manner is not an easy task, it is a challenge that is worth the effort for the sake of better health care.

In a world that is rapidly changing in unpredictable ways and in a region that has been characterized by political and economic instability, it is important to combine beneficial traditional practices with good modern health care that can be adapted to different situations. There is no inherent contradiction in bridging the gap between these two worlds of deeply-rooted customs and modern health care based on research evidence.

B. Assessment of the routine procedures of the *dayas* for home birth and suggestions for training.

In order to identify the strengths and weaknesses of the *dayas'* performance in planning for training needs, the following assessment of procedures based on the data from this study will be described. Then specific recommendations will be made. Although there is not one model or one system which can be applied to all situations, it is hoped that during this period of system building, these suggestions will open the debate to create the best solution for Palestine. Measuring the impact of community-based care has always been problematic, particularly in respect to traditional birth attendants. In addition, what works elsewhere might not be suitable here. But commitment to improving women's health and working together for this purpose at all levels of the society can go a long way in finding appropriate solutions.

1. Risk assessment and choice of birth facility. Although the PHC clinics do use a risk approach in maternity care and advise high risk pregnant women to give birth in hospitals, it appears that some high risk pregnancies are still being delivered at home. More investigation and more accurate record-keeping would help to determine *why* some high risk women deliver at home

and not in the hospital in order to develop strategies for improving the quality of care of home births. The *dayas* are familiar with the list of contraindications to home births and 80% of Palestinian women receive some antenatal care (PCBS 1998, p.86). Most complications during pregnancy should be diagnosed prior to delivery. Whether these high risk women who deliver at home have been advised to have a hospital delivery but do not comply for reasons linked to accessibility and acceptability of the hospital needs further investigation.

It also may be that "high risk" is poorly understood by women and some of the traditional *dayas.* The fact that an abstract concept of probability which applies to a group does not necessarily predict the outcome for an individual, is not that easy to comprehend. Many of these women experience what has been defined as high risk pregnancies, where the births turn out to be completely normal. Concerning the *dayas'* comprehension of risk factors, it has been presented to them as a list of rules which they should follow. But because of their past experience in attending abnormal cases, such as breech, twins, or pregnant woman at a young age, they do not necessarily *believe* that these apparently healthy women are at higher risk. However, chronic diseases such as heart disease and diabetes with pregnancy seem to be more easily comprehended as a "risk", because the woman is not healthy. The literature supports the fact that the risk approach in pregnancy is still an imperfect tool. Even when the system is well applied, it fails to identify some women who eventually will have complications during delivery (about 15% of all normal births). And many who are classified as "high risk" may have normal births (WHO 1997, p. 2). However, for the moment a better system for evaluating the pregnancy and determining what type of care is needed during childbirth has yet to be developed.

It is apparent from the descriptions of home deliveries given in the focus groups that the *dayas* are very attentive to the emotional and psychological well-being of the pregnant women during home births. The women who deliver at home express that they feel reassured by the constant presence and support of the *daya* during labor. They appreciate her accessibility and the fact that they don't have to worry about reaching the hospital on time and leaving the rest of their family. The *daya's* respect for the privacy and modesty of the women and the intimacy of the birthing experience is a primary reason for choosing to deliver with the *daya.* She expresses a holistic view of health, linking the structural factors such as overwork and the psychological factors such as stress and anger to the ill health of women. The continuity of care that she provides in the antenatal, intrapartum, and postnatal period is reassuring to the women who are familiar with their care-taker.

The *daya's* support and assurance to women during labor and her less interventionist approach to birth maximizes the chances of normal outcomes if she assists only low-risk cases in the home and works within a system of referral and emergency obstetric care. Studies have shown that not only biomedical but also psychosocial factors affect the outcome of pregnancy and childbirth (Pagel et al. 1990, p. 597). In this study, women who chose to deliver at home after a hospital experience report coping with the pain and anxiety of childbirth better in the home environment. Some report that the hospital experience caused them to panic, to scream, and to have prolonged labor. Others felt reassured in the hospital by the presence of a doctor and the use of drugs

and technology. Because of this diversity among women, providing different options for safe birthing is more apt to correspond to the multiplicity of needs and demands.

2. Routine procedures of normal births assisted by *dayas*. Concerning the risk of infection during a home birth, the *dayas* reported preparing a clean surface for delivery and having the necessary materials such as scissors, soap, and antiseptics in their bags. Whether or not they actually wash their hands could not be determined without observation. However, they express awareness of the importance of cleanliness. It does not appear that most of them use sterile disposable gloves for the delivery. Providing them with a supply of sterile gloves rather than expecting the *daya* to purchase them on her own might reinforce their use. They reported sterilizing their instruments. There has not been a recorded case of neonatal tetanus for several years in the West Bank.

Although no written reports evaluating the performance of the *dayas* are available, it would appear from the *dayas'* self-reporting and that of the supervisor that many of the *dayas* observe the woman very closely during childbirth. Because of her constant presence during labor and because she cannot rely on results of lab tests to monitor the woman, some *dayas* seem to have a keen sense of observation of changes in behavior. They tend to intervene minimally in the physiological process of labor. However, some inadequacies are apparent. Simple procedures such as taking the temperature and pulse and listening to the fetal heart beat which are important procedures in the management of labor do not seem to be done in a systematic way. Most use a fetus scope to listen to the fetal heart beat but they report using it only occasionally rather than every 15-30 minutes during the first stage of labor and after every contraction during the second stage. The practice of regular, intermittent auscultation is a good example of a cheap yet appropriate technology which can be as effective as electronic fetal monitoring without the expense and the disadvantage of restraining the woman on her back in bed. (Extensive research comparing the two techniques has been carried out. Although rates of intervention such as caesarian section are higher in the groups with electronic fetal monitoring, there is no evidence that the practice of continued fetal monitoring led to any benefit for the infant [WHO 1997, p. 16]).

Although not a harmful procedure, there is no evidence that giving an enema is a necessary procedure. The practice of allowing food and fluid intake (warm herbal teas with sugar) during labor is important to prevent dehydration and to maintain the energy level. The fact that the woman is often upright during labor and is free to take any position she is more comfortable in, tends to favor the physiological process of labor and shorten the first stage. The non-pharmacological methods of pain relief used by the *daya* may also reduce the actual perception of pain and anxiety that accompany childbirth. The *daya* usually does a vaginal examination when she first assesses if the mother is in labor, but she does not repeat it unless it appears that labor is prolonged. (WHO recommends only once every four hours during the first stage of labor [p. 21]).

She does not practice early amniotomy (artificial rupture of the membranes early in labor).[8] She does not report using oxytocin or any other drugs during

[8] Several trials do not show any evidence that early amniotomy has either a favorable or unfavorable effect on the condition of the newborn [WHO 1997. p.23].

labor. The use of olive oil to massage the vaginal opening at the crowning of the head of the fetus would not appear to have any harmful effect if hygienic conditions are respected. The *daya* only rarely uses an episiotomy, and she reports that she has very few perineal tears because she is patient and works closely with the mother to deliver the fetus very gradually.[9]

The woman is usually in a semi-sitting position during the actual birth which tends to be more physiological for bearing down (pushing) because it directs her efforts with the force of gravity. Most *dayas* report using gloves to assist in the delivery of the baby but it would seem from the contents of their bags that they do not use sterile gloves which are relatively expensive for them to buy in the pharmacy. The large majority of *dayas* do not use oxytocin or ergometrine during the delivery of the placenta because administration of medications is not permitted and they do not practice controlled cord traction. They report examining the placenta carefully after its delivery to make sure it is complete. A small percentage report having ergometrine in their bags in case of hemorrhage at the third stage of labor but they do not use it routinely. They report evaluating the amount of blood loss but usually they estimate from experience rather than measuring the amount.[10] The large majority of the *dayas* do late clamping of the cord. They wait to clamp the cord until the pulsation of the umbilical cord ceases. (Although the timing of the clamping of the cord has not shown to have an effect on the respiratory condition of the neonate, babies born after early clamping have lower hemoglobin values. Late clamping is the physiological way of dealing with the cord [WHO, p. 32]). All the *dayas* report sterilizing the scissors used to cut the cord by boiling them.

For immediate care of the newborn, the *daya* dries and wraps the baby but usually doesn't put the baby in skin-to-skin contact with the mother. This practice facilitates the baby's colonization of the mother's skin bacteria to which it gains immunity through breast milk rather than other harmful bacteria which he/she might be exposed to during skin-to-skin contact [WHO. p.33]. Usually the *dayas* assist the mother in initiating breast feeding after the birth, but not always in the first half hour as recommended as the optimal time to promote bonding between the mother and newborn. Some of the *dayas* give the baby extra fluids such as sugar water, in addition to the mother's colostrum, a practice that is not recommended. The *daya* remains with the mother for one to two hours after the birth, checking the contraction of the mother's uterus and observing her for bleeding during this critical time for hemorrhage.

3. Use of medications during a home birth. The *dayas* are not allowed to use any medications at a home birth. Although no *dayas* reported using oxytocin to accelerate the contractions, there seem to be some cases where it had been used. One midwife had her license withdrawn recently, apparently for the use of oxytocin during a home delivery which caused a cervical tear, hemorrhage, and emergency referral to the hospital. Some of the supervisors reported that this practice is more of a problem with the hospital-trained midwives and nurses who do home births and who were accustomed to the frequent use of oxytocin in the hospitals. The traditional birth attendants appear to be much less likely to use drugs as they are accustomed to the physiological process of labor without

[9] In numerous studies, there has been no evidence that routine or liberal use of episiotomies either protects the fetus or affects urinary incontinence [WHO 1997, p. 29].

[10] Postpartum hemorrhage is defined as blood loss >= 500ml [WHO 1997, p. 31].

intervention. The danger of using oxytocin without the proper equipment, monitoring, and facilities for an emergency caesarian section is urgent to emphasize in training courses and to include in the curriculum for nursing and midwifery students. The licensed midwives should be closely supervised to avoid its use.

However, permitting those *dayas* skilled in administering injections to have ergometrine in her bag to use in case of excess blood loss after the delivery of the placenta should be discussed with the policy-makers. This drug is used only after the birth of the baby and does not comport the same risk for the fetus as oxytocin. If the supply of the drug was controlled and the midwives were supervised so as not to use it routinely, but only in case of hemorrhage, then it could be a life-saving precaution.

4. Procedures reported in case of complications or emergency. The *dayas* response in the interview when asked what they do in case of particular complications (hemorrhage, prolonged labor, prolapsed cord, etc.) was always referral to the hospital. (Some of them also described measures that they would try, for example, in the case of prolonged labor, before referral.) Whether this actually corresponded to their practices or whether they were trying to give the "correct" answer is difficult to verify. But in any case, the very fact that they know that they are expected to refer complicated cases to the hospital is a significant finding.

In case of hemorrhage, the *dayas* seemed to be aware that the immediate care should be to massage the uterus to keep it contracted.[11] Concerning prolonged first stage of labor, the *dayas* seemed very aware of the risk of a long first stage of labor and report transferring the patient if she has not delivered within six hours. In a report on home birth in industrialized countries, the author indicates that most complications in a home delivery are preceded by a long and difficult first stage of labor (Odent 1991, p. 6).

In the resuscitation of the newborn, the most common practices are rubbing the back and flicking the feet. Some wipe out the mouth or use suction but only a few seem to have disposable suction devices, and rarely did they mention the possibility of using cardio-pulmonary resuscitation.. Teaching proper procedures in case of birth asphyxia would be an important component of a future training course.

5. Reported outcome of the transferals to the hospital. The *dayas* reported 4 cases of neonatal deaths after transferals to the hospital in 1998. It was not possible to validate the information about referrals from any other source than their self-reporting. Sources in the Ministry of Health report that neonatal deaths either in the home or in the hospital are widely underreported. It would be important for the *daya* supervisors to investigate all neonatal deaths, complications, and transferals during home births and their outcomes.

[11] According to the Egyptian Maternal Mortality Study 1992-1993, this simple procedure was often neglected by health providers in emergency cases of hemorrhage.

C. Assessment of postnatal care provided by the *dayas* and suggestions for training.

An important duty of the *daya* is the home visits to the family after the birth. This is a crucial time for the mother and newborn to receive preventive care in order to avoid complications of the puerperium. Finding a solution to the lack of coverage in postnatal care in this country should be a priority. Home-based, post-partum care is recommended as the best care for the healthy mother and baby (Wagner 1994, p. 240).

The family is open to advice during this sensitive period regarding the care of the mother, care of the newborn, breast feeding counseling, health education on nutrition, and family planning. The *daya* who knows the family is an ideal person to offer these services. Although the findings seem to indicate that the care given by the *daya* in the postpartum is not always systematic and thorough (particularly for the mother as more frequent care is given to the newborn), the *dayas* could easily be trained to provide more comprehensive postnatal care for the mother and newborn with a linkage and referral to the clinics. With training, they would probably be more suited to the task than the health professionals in the clinic. Home visiting programs for clinic staff are always difficult to implement. Clinic staff usually tend to give priority to the services within the clinic and when there is an overload of work, as is often the case, the home visits are neglected. The Ministry could eventually establish a system of reimbursement for the services of the *daya* which, in the long-term, would be more cost-effective than treating complications due to lack of care in the postpartum period.

D. Assessment of antenatal care provided by the *dayas* and suggestions for training.

Almost half of the *dayas* reported doing antenatal care, and out of this group the majority were trained nurses or midwives. Further investigation is needed to determine if the pregnant women who go to the *dayas* for antenatal care also seek care in a clinic or whether these women are part of the 20% of Palestinian women who apparently receive no antenatal care (PCBS 1998, p. 87). Although the adequacy of the antenatal care provided by some of the *dayas* may be questioned, they may be reaching a vulnerable group of the population who are not using or are under-utilizing the health services and who are apt to be at high risk. The provision of antenatal care by the *daya* should be complementary to the clinic services and not in competition with them. A system could be established whereby increased *daya* supervision and linkage to the health clinic could provide antenatal care and increase coverage by reaching out to remote areas.

E. Women's expectations and perceptions of health services.

The results from focus group discussions seemed to reflect rural women's ambivalence towards traditional and modern methods of health care. Descriptions of other developing countries have shown that "the so-called modern medical system has not necessarily replaced the traditional one; it has only created another option that some people will use sometimes for some conditions" (Population Report 1980, p. 441). Although the degree to which modern medicine is used in response to disease in Palestine is quite extensive, people may also seek other treatments (Giacaman 1988, p. 146), particularly concerning pregnancy, childbirth, and the post-partum.

Those women who discussed the issue of modern birth technology in the focus groups tended to express a certain ambiguity towards medical technology. They were attracted to the services which they think other women are getting in the private sector. For example, the demand has been created for innumerable ultra-sound examinations during pregnancy by the proliferation of ultra-sound machines. Women are not informed about the appropriate use of this technology and many receive more examinations during pregnancy than would be recommended in other countries.

F. Policy and Supervision of the *dayas.*

1. Assessment of the supervision of the *dayas* - strengths and limitations. Decades of experience with TBA programs around the world has shown that good supervision is a very important element in the success of a program. *Dayas* may be well-trained or experienced but if there is not an adequate system of supervision, they may revert back to old practices or work in isolation rather than within the system where certain cases will always need to be referred. This applies not only to traditional birth attendants but also to trained midwives and nurses providing home-based care.

The supervisors seemed to know the *dayas* well and to have a good relationship with them. They assumed their responsibilities conscientiously and were motivated, but they were frustrated at their inability to supervise more closely due to of lack of time and resources, particularly the lack of transportation which would enable them to make several visits during a day. It would appear from the findings of this study that the supervision of the *dayas* is primarily administrative. Resources provided for the supervision of the *dayas* are not sufficient for active management, for direct observation and evaluation of their work, for investigation of complications, for adequate reporting and for exchange of information with the other health districts.

The supervisors collect the records of the home births, check their equipment, and relicense the *dayas.* Some make home and field visits but they do not observe systematically the practices of the *dayas* or assess their performance. Their reporting lists the tasks which they have accomplished as supervisors (e.g., number of field visits with the *dayas,* number of health education sessions) but does not provide an evaluation of the *daya's* performance. An evaluation of the *daya's* work would involve attending home births as well as observing other practices. This process is the only way to have an idea of the safety of her practices and to support her in improvement of her skills.

Most of the supervisors devote only part of their work time to the *dayas* as they have other functions to fulfill. They expressed the frustration that many times they are torn between their different tasks and responsibilities. The time and commitment that was put into the supervision of the *dayas* in the past year differed from one district to another, and depended on the attitude of the medical directors toward community care and the training and initiative of the supervisor. In the past year, it ranged from regular supervision in one district to no supervision in another where the policy to continue the licensing of the *dayas* seemed to be in question.

The supervisors need to be able to rely on a clear policy for the midwives and traditional birth attendants who are working in the community and be provided with a clear job description for supervision. This depends on political support for the project and an understanding, at all levels, of the role and responsibilities of the supervisor. Otherwise, they will be continually diverted from their tasks for a "more important project". Supervisors need to meet regularly with each other in order to share experiences and information that would enrich their professional capacities.

UNRWA's utilization of the *dayas*, who have been integrated into the services for years, might also be worth reconsidering. UNRWA reports that the *daya's* role in the clinic is limited to cleaning. Rather than using her to do a job which she feels is incompatible with her role in the community, she might be used to extend the outreach and the provision of home-based care. With training and supervision, she could provide post-partum care to all the women who have delivered and follow-up on the family planning services.

2. A policy for home birth and home-based midwifery care. Community midwifery should be integrated into an overall reproductive health policy. Reproductive health is "the ability of women to live through reproductive years and beyond with reproductive choice, dignity, and successful childbearing, and to be free of gynecological disease and risk" (Zurayk et al., 1994, p.8). A comprehensive policy needs to include all of these elements in order to improve women's health.

In regard to a birthing policy, before a training course is planned, it is necessary to clarify the vision and policy regarding the *dayas* in relation to home birth, the other services they provide, and their link to the health system. Hospital birthing might be encouraged by improving the quality of the delivery services that are offered in the hospital. However, experience in other countries has shown that legally banning *dayas* (e.g., Syria, Egypt, and Lebanon) or trying to reduce their influence is not necessarily the right approach (Kamal 1998, p. S44), because the needs that they fulfill continue to exist. The result is that the *dayas* work unsupervised and have no link to the health services. A supportive approach to home-based midwifery care with close supervision would be more effective in making women's health services accessible to the most vulnerable groups of the population.

Home birth continues to exist in all countries. In the Western countries, the frequency of home birth varies from a small percentage in many places to 35% in the Netherlands where the perinatal mortality rate is one of the lowest in the world. "The Netherlands is the only industrialized country where one third of all births happen at home. It is also the only country where they can reconcile a perinatal mortality rate lower than 10 per 1,000, a maternal mortality rate lower than 1 per 10,000, and a rate of caesarian section of around 6%" (Odent 1991, p.8). Of course the Netherlands has an infrastructure and health system which is not comparable to developing countries, but the size of the country is similar to Palestine. There is not only one global model of health care and the choice of models should be made deliberately in planning for an overall health system that best suits the needs of the particular country.

3. Making birth safer. Within the context of a birthing policy, there should be the choice of birthing facilities. Birthing is a very complex process that is not only biomedical but also psychosocial. It is important to plan for the needs of the diversity of people that exist within one culture and to make birthing both a safe and a positive human experience for all members of the society.

The impact of traditional birth attendants on the health status of certain groups of the population is difficult to measure because of the complex factors which influence health status. The traditional birth attendants and community midwives are still fulfilling a need resulting from, among other factors, an unequal distribution of health personnel and lack of quality services in women's health care.

In Palestine, little research has been done on the outcome of hospital or home births, and certainly there has been no comparison of the two. There is no evidence that, for low-risk normal deliveries, one environment is safer than the other. Exploring the possibility of creating intermediary birthing facilities for low-risk deliveries with essential equipment and trained birth attendants needs further investigation. This suggestion was made by women in the focus groups. This option might provide the opportunity to meet both the medical and human needs of birthing women without having to refer them to a large hospital that also has the responsibility for serious high risk cases.

4. Transportation, referral, and emergency obstetric care. Making home birth safer involves not only training the birth attendants but also providing a system of referral, transportation, and regional emergency obstetric care. Transportation is not a major obstacle in this country as even remote areas have available transportation. A referral system among the different levels of care and the provision of emergency obstetric care to all areas requires planning and coordination among the different health providers. Although improvements in antenatal care and coverage might facilitate the assessment of women who are likely to give birth normally, there will always be a certain percentage of births that will result in an emergency and necessitate transfer. If the *dayas* can be trained in indications for referral, danger signs during labor, emergency care, and where to refer, then home births will be much safer.

5. Policy and certifying of *dayas*. A specific policy needs to legitimize and define the scope of practice of community midwives and traditional birth attendants. Certification based on supervision and accountability with quality review built into the system will help to provide for appropriate home-based midwifery care.

The midwives and TBAs are complementary in their work and a natural process seems to be taking place whereby trained midwives in some communities are gradually replacing the traditional birth attendants. This process should be encouraged by the authorities and midwives as long as appropriate traditional birth attendants are protected and supported in their work when they are needed.

However, the present policy of the Ministry is to license only traditional birth attendants, to the exclusion of midwives. Midwifery services are very

much needed in the community and filling the shortage of midwives in the country, particularly in the rural areas and the PHC settings, is necessary for the improvement of women's health care. Those who choose to work as independent practitioners in their communities should be encouraged to do so with a clear policy of licensing, supervision, and on-going training. Their services are certainly as needed in this capacity as within a hospital or clinic. Because most doctors are male and because their training is more specialized and oriented toward disease, doctors do not provide these home-based services as well as midwives. Furthermore, it is more cost-effective to use the doctors in a different capacity.

Because midwives with a degree and TBAs who have learned from experience differ in their training and their scope of practice, it would be preferable to differentiate between them in the certification process. Both are necessary and serve different functions in particular communities.

VI. Specific Recommendations

A. Policy and Supervision

1. Developing a Palestinian birthing policy with the purpose of making births safer and improving the quality of care during the antenatal, intrapartum, and postpartum period. This policy would include all types of birthing settings (hospital, birthing center, home), linking them together with a system of referral and of emergency obstetric care. A policy-making advisory committee comprised of the four sectors of health provision (government, NGOs, UNRWA, private) and of the different team members (doctor, midwife, nurse, TBA, community health worker) might be created to consider the reproductive health services available, what is needed, and how to use the human resources and appropriate technology in a cost-effective way to improve the quality of the services.

2. A unified policy and system of certification and licensing of both midwives/nurses and traditional birth attendants providing community-based care which can be adapted to the regional diversity of the health districts and which is part of an overall policy of reproductive health care. This policy might include the scope of practice for community midwives and for traditional birth attendants and their link to each other and to the health system. The broad guidelines could then be applied with flexibility according to the needs of the particular areas. Accountability and review are an integral part of certification.

Community midwives might be licensed as independent practitioners, providing assistance at home births and community-based women's health care with a linkage to the health services. Their home-based care is apt to be cost-effective and acceptable to the community. The problem of rapid turn-over that is experienced with midwives in hospital care would be reduced, as they are usually working in the community where they live and can adapt their work schedule to family life.

3. Developing standards for maternal and newborn care which can be adapted to the different levels of services, including home-based care.

4. Continued licensing of traditional birth attendants in the West Bank with clear criteria for selection and renewal of licenses based on evaluation of their performance, until such a time as they are no longer fulfilling a need. New applications for licensing of traditional birth attendants or community midwives should be considered on the basis of human resources and needs of the society.

5. Expansion of the role and utilization of the *dayas* by the health clinics to fill in the gaps in outreach and in service provision. Linkage of the *dayas* to the health system needs careful consideration in order to maintain their specificity and at the same time take advantage of the valuable services they have to offer. Materially and technically supporting selected *dayas* to carry out certain home-based services should be considered. For example, home visits by the *dayas* may be the most appropriate way to extend postnatal care to the 80% of women who are not receiving any care after childbirth. Their role in family planning advice and follow-up of the family planning clinic users could also be beneficial to the program.

6. Increased supervision of the traditional birth attendants and midwives is an essential element in any community-based program. Evaluation of their performance including observation of home births would be an important component of the supervision in addition to the administrative tasks. Investigating records of referrals and complications of home births should be included in the responsibilities of the supervisor. Closer monitoring of the records kept by the *dayas* would assist in identifying problem areas. The supervisors could at the same time contribute to the services provided by the local clinic by identifying women in the community for referral and creating links between the community and the health services.

7. The *daya* supervisor for the district requires a full-time position in order to carry out her functions properly and fulfill her job description. This also necessitates the availability of transportation to facilitate the supervision of the *dayas* in the field. If outreach services for women in the community are deemed important, they need to be given the priority. The *daya* supervisor should be able to train in community-based midwifery skills including home birth, and should be the linkage between the *daya* and the health system. She should be responsible for collecting the records of the normal births, the referrals made to the hospitals, the outcome and follow-up of the newborn after the home birth, and investigation of neonatal deaths in the community. In addition to monitoring and evaluation of the work of the *dayas* she could identify further health needs of the community and communicate this to the health services.

8. Provision of basic equipment for the traditional birth attendants and the midwives working in the community would be cost-effective and would contribute to improving the quality of the services. The childbirth kits provided by UNICEF over ten years ago now need to be replaced. In addition, continued provision of the *dayas* with disposable items such as sterile gloves, suctions, and cord clamps for the newborn would help to ensure the cleanliness of the procedures, as many of the *dayas* cannot afford to pay for them. Simple, cheap, and appropriate technology exists and should be made available, accompanied by training courses for the birth attendants in its use.

9. Investigation of still births, neonatal deaths, and maternal morbidity and mortality for causes and circumstances leading to these events, would help to identify areas for improvement of practices. The *daya* supervisors could be involved in the process as they have close contact with the community and are informed of what goes on.

B. The Training of the *Dayas*

1. Basic training issues. Any training program for community-based care faces certain basic issues: government support and integration into the overall health care system; community support for the program; selection of community midwives for participation; training in new or modified activities; supervision of the midwives; remuneration of the midwives; and evaluation of their performance (Population Reports 1980, p. 471).

Most of these issues need to be debated and dealt with before the training begins. The period before the training when the preparation takes place and the period after the training when the evaluation and supervision occur are equally important to the success of the program as the actual training. For this reason, in the interest of sustainability, it is preferable to take ample time to prepare the terrain.

2. Government support and integration of the program. As this program of assessing the training needs of the *dayas* was initiated by the Women's Health and Development Directorate of the Ministry of Health, it is their task to further the understanding of their goals by advocating support for their program at all other levels of the Ministry of Health involved in community care. The licensed *dayas*, due to their social status, their sex, and their location, have very little political power within the society or within the medical establishment. They cannot impose their ideas or their services unless they have a network of support from the local clinic, their supervisors, women's groups, etc. In order to acquire this support, a policy clarifying their tasks, their role within the larger system, their linkage to the local health institutions, and a clear system of referral needs to be established and circulated to all concerned bodies. If the health staff at the community clinics do not see the *daya's* role as being complementary to their work and serving to strengthen the coverage and health provision, then it will be difficult for the *daya* to function effectively in isolation. At the same time, if the medical director of the district does not believe in home-based care and see the utility of the community midwife, then he will not facilitate the role of the *daya* supervisor, as he decides the time allotment of the medical staff for each project.

In a situation such as this, where the lack of human resources is an on-going problem, it is essential to the success of a program for it to be put at the top of the agenda. The current *daya* supervisors understand the value of the *dayas'* work and are sympathetic to them, but they do not have sufficient time and resources to supervise adequately and to activate the sector of community care. They themselves need guidance and support to deal with such difficult questions as outreach, poverty, risk cases, referral, health education, records, investigation of neonatal deaths, etc. These important aspects of health provision are not simple issues for any health policy-maker or provider.

3. Community support for the program. Enlisting the support from the community means involving them from the beginning in the planning process. Both the political support from the village leaders and the grassroots' support from the women of the village is necessary. If the community members feel involved in the choices for their health care, it would be an empowering experience that would go beyond the provision of services. Although many people talk about community involvement or participation in primary health care, it is difficult to make it a reality, and perhaps a program of home-based care would give inertia to the active participation of the community.

4. Selection of the community midwives for certification and participation in training. The supervisors need to play a major role in the selection and training process, as they are the most familiar with the *dayas* and the communities. The supervisors will be the ones to follow-up, monitor, and evaluate after the training.

Mapping the villages, towns, and cities in the West Bank and indicating where the traditional birth attendants and midwives are working and the areas where they would be needed would facilitate the selection process for training. Because the previous policy of the Ministry has been to phase out the TBAs and not to license the midwives/nurses as practitioners in the community (except for those districts where the policy was not applied), it may be necessary to reconsider issues such as recruiting new *dayas* for certain areas. In any case, it will be necessary to have a uniform policy

concerning midwives/nurses who work in the community. If home-based care is needed, then the health providers should be legitimized, protected, and supervised in their work. One way of dealing with this transitional phase, where formally trained midwives and nurses are gradually replacing the traditional *dayas,* would be to make choices available when possible and let the community choose, thus respecting the social process which is taking place at different rates in the diverse regions. Some groups of the population prefer to receive care from the experienced TBA. Others seek the services of a trained midwife, and others know that they want a hospital delivery with a doctor.

Some criteria for selecting those licensed *dayas* to be trained need to be established. With limited resources, it is not useful to train those who are inactive or who are too old. Criteria should be based on the need and the desire of the community, the age of the *daya*, and her caseload (number of home births). However, flexibility is required in selection, as some *dayas* may not be delivering many babies at home, but they may be the only care-takers in the particular village and serve an important function. As performance evaluations of the work of the *dayas* do not exist, it is not possible to base the choice on the quality of their work, except for rare cases where the supervisor deems her "untrainable."

5. Type of training. Because of the diversity of the group which currently constitutes the licensed *dayas*, it might be preferable to train the midwives and nurses with degrees separately from the TBAs who have had little formal schooling. They have two distinct approaches to learning which require different methodologies in order for the training to be effective. While the midwives need upgrading in adapting the practices learned in the hospital to home-based care, the TBAs need to practice systematic procedures and the recognition of danger signs. Both groups would benefit from simple tools such as check lists and records for home visits.

6. Place, size, and duration of training course. Most of the *dayas* in this study expressed the preference for future training to be near their homes. As many have family responsibilities, they cannot afford to be away from home for an extended period of time. Separate training groups for each region would facilitate focusing on the relevant issues and the reality of that particular area.

Because the training involves primarily upgrading of skills, small groups of not more than ten participants would be preferable. The duration of the training would depend on what new activities would be incorporated into the *dayas'* practice. For example, if the coverage of post-partum care and family planning counseling are to be extended, appropriate skills would need to be incorporated into the curriculum, in addition to a review of child birth practices. Several days of initial training might be followed up with a refresher course a few months later, in order to reinforce what was learned and to discuss what problems had been encountered in the field.

7. Selection of trainers and methods. Trainers need to be experienced in childbirth and creative in using techniques other than didactic learning with those TBAs who have acquired their skills through apprenticeship. Hands-on training using models is probably the most effective method. Visual aids are useful if they are culturally appropriate and the *dayas* can relate to them. Trainers who live and work in the same region would probably be the most culturally acceptable and the most aware of the regional issues and attitudes facing the midwives in the community.

8. Elaboration of the curriculum. Although it is not the purpose of this study to elaborate the curriculum for training of community midwives, certain gaps in knowledge and practices were identified throughout this report, and areas for expanding the role of the community midwives were proposed. The data indicates that the following issues would be relevant to include in the training of the *dayas*:

- Procedures for antenatal care if the *dayas* are providing this service.
- Selection of women who are likely to give birth normally (contraindications to home birth).
- Routine procedures for appropriate care during the normal birth.
- Reasons for not using drugs during a home birth (particularly the dangers of oxytocin).
- Immediate emergency obstetric care in case of complications and timely referral.
- Birth asphyxia and resuscitation of the newborn at a home birth.
- Prevention of hypothermia in the newborn at a home birth.
- Procedures in postpartum care for the mother and the newborn with the use of a checklist.
- Breast feeding management skills, the importance of exclusive breast feeding, and breast feeding as a family planning method.
- Giving the mother advice on preventive women's health care including family planning.
- Teaching the parents infant care including the recognition of danger signs and appropriate weaning foods.
- Traditional and cultural practices and attitudes that are beneficial, harmless or harmful (including, for example, "son preference" and how to deal with it in their practice).

9. Remuneration of the midwives. At present the *dayas'* main source of income are the fees for the service of home birth. If the health clinics use the *dayas* regularly for post-partum care or initiation and follow-up of family planning services, then the question of remuneration needs to be raised. Most of the *dayas* live on a minimum budget, and motivation to extend their services would require financial support. This could be in the form of a monthly stipend from the local clinic with eventual limited participation from the community.

10. Evaluation of the training program and the performance of the *dayas.* Establishing criteria for monitoring and evaluating the program and the work of the licensed *dayas* is necessary before beginning the training and implementation. Some baseline data would be useful to measure in the future the impact of the program.

C. The Training and Supervision of the Daya Supervisors

1. Birthing experience is needed for the *daya* supervisors in order for them to support and supervise the home births. Home-based midwifery skills are essential to their tasks.

2. A clear policy for home births, licensing, and the role of the *dayas* should be established to enable appropriate supervision.

3. Skills in training of trainers would be beneficial for the supervisors so they can carry out regular upgrading of skills of the *dayas.*

4. Training for the supervisors in the evaluation of the performance of the *dayas* would facilitate this aspect of supervision.

5. Training in record-keeping for data collection on the home births as well as the referrals to the hospital and simple analysis of the results might motivate the supervisors to do more investigation.

D. Further Investigations

1. Childbirth has been a neglected area of research in Palestine. Few studies have dealt with the quality of care in birthing facilities or in the home, the maternal and neonatal outcomes, and Palestinian women's expectations and perceptions of the health services.

2. Better recording and data collection of stillbirths, perinatal and neonatal deaths, and maternal and infant morbidity at the different levels of health care would provide indicators for building an appropriate strategy in the improvement of maternal and infant health.

VII. Conclusion

The *daya* continues to provide essential services to certain groups of the population who are very much in need of her expertise and who solicit her care. Although the health-seeking behavior of those women who utilize the *dayas* needs to be further investigated, they appear to comprise a particularly vulnerable group of women who otherwise do not tend to use health services. Until the *daya* is replaced by equally accessible and acceptable health providers, it would be extremely detrimental to try to discontinue her services. On the contrary, for the very reason that she is dealing with a high risk population that other health professionals have not succeeded in reaching, she needs supportive policies, supervision, and creative strategies to enable her to extend her coverage where it is most needed. In addition, she could fill in the gaps for such basic services as postnatal care and preventive women's health care which the majority of women here do not have access to. It is therefore essential that the *daya's* status, skills, and rewards be upgraded in the identified areas indicated by the data presented and analyzed in this study.

The profile of the *daya* seems to be changing in some locations from the traditional birth attendant who learned through apprenticeship and experience to the trained nurse or midwife who has chosen to provide home and community-based care.

If these community midwives gain the confidence of the people and the invaluable experience of their older predecessors, as many of them seem to have done, then it is to the advantage of all to have more highly skilled home-based care. If these services are part of an overall reproductive health care strategy and system, then it is likely to have a real impact on women's health in this country.

The goal of making childbirth safer and, at the same time, maintaining the human, social, and individual quality of a profound life experience for both the parents and the newborn, necessitates consideration by health planners and cooperation and team work by health practitioners and lay women. Learning from the successes and the failures in other countries can shed light on an appropriate strategy for Palestine. A commitment to making childbirth safer and more fulfilling for all concerned will always be a priority. A system of home-based midwifery care with the participation of community midwives and traditional birth attendants can contribute to this goal.

APPENDIX I

QUESTIONNAIRE FOR THE TRADITIONAL BIRTH ATTENDANTS IN THE WEST BANK, PALESTINE

Name of fieldworker: _____

I. CHARACTERISTICS

1. Questionnaire number: _____
1a. District _____

1b. Profession:
   1. TBA (daya)
   2. Midwife (practical; "qannuniyye")
   3. Midwife (diploma)
   4. Nurse (practical or aid)
   5. Nurse-midwife

Name: _____
2. Age _____
3. Address (village or town) _____
Telephone number: _____
4. Marital status:
   1. Single
   2. Married
   3. Widowed
   4. Divorced
   5. Separated
5. Number of live children _____
6. Do you know how to write? _____
7. Do you know how to read? _____
8. What was the last grade in school that you attended? _____
9. What villages/towns do you work in?
   _____
10. How many home births did you attend last year (1998)?
   _____
11. Where do you attend births? _____
12. Do you sometimes deliver in your house?
   1- Yes
   2- No (If no, continue to # 14)
13. If yes, how many women did you deliver in your house last year? _____

II. TRAINING

See table on following page.

III. LICENSING AND SUPERVISION

20. How did you decide to become a daya?
_____

_____
_____

21. How long have you been working as a daya?
_____

22. Do you have a license? 1.-Yes 2.- No

23. If yes, how many years have you been licensed? _____
24. What do you have to do to get relicensed? _____
25. How often do you get relicensed? _____
26. What are the advantages of being licensed?
_____
_____

27. What are the disadvantages of being licensed? _____
_____

28. Do you have a supervisor? 1.- Yes 2.- No
29. How often does she visit you? _____
30. What does she do when she visits you ? _____
31. Do you meet with the other dayas from your district? 1.- Yes 2.- No
(If no, continue to # 34.)
32. If yes, how many times did you meet last year? _____
33. Why do you meet? _____
34. What was the total number of births in your area last year (1998) including those in the hospital, clinics, with other dayas and midwives etc.? _____
35. Why do some women deliver at home and not in the hospital?
_____
_____
_____
36. How much do you get paid for a home birth?
_____
_____

37. Is there a difference in what you get paid if the newborn is a girl or a boy?
1.- Yes 2.- No (if no, continue to # 39.)
38. If yes, what is the difference?
_____
_____

IV. OTHER TASKS OF THE DAYA:

39. Describe the other things that you do as a daya? _____
_____
_____

Describe in detail if you do the following tasks:

40. Prenatal care: 1.- Yes 2.- No (if no, continue to # 42)
41. If yes, what do you do? _____
_____
42. Postnatal care for the women you deliver: 1.-Yes 2.- No (if no, continue to # 44)
43. If yes, what do you do?_____
_____
44. Postnatal care for the newborns you deliver: 1.-Yes 2.- No (if no, continue to # 46.)
45. If yes, what do you do? _____
_____
46. Postnatal care for newborns delivered in a hospital/clinic: 1.-Yes 2.-No (if no, continue to # 49.)
47. If yes, what do you do? _____
_____
48. If yes, how many children were born in the hospital that you took care of last year? _____
49. Postnatal care for women who delivered in hospitals: 1.-Yes 2.- No (If no, continue to # 52.)
50. If yes, what do you do? _____
_____

51. If yes, how many mothers who delivered in hospitals did you do postnatal care for last year? _____

52. Do you give injections? 1.- Yes 2.- No
53. Do you give or prescribe medications? 1.- Yes 2.- No (If no, continue to # 55.)
54. If yes, what are the names of the medications that you give?_____
_____

Do you use any of the following methods:

55. bonesetting (*tajbiir)*: 1.-Yes 2.-No
56. massage (*tamliis)*: 1.- Yes 2.- No
57. cautery (*kawi)*: 1.- Yes 2.- No
58. spiritual healing by the Koran (*alaaj bil Koran):*
59. herbs *(ashaab):* 1.-Yes 2.- No
60. cupping *(kasaat hawa)*: 1.- Yes 2.- No
61. pricking *(taghriim):* 1.- Yes 2.- No
62. Do you use any other methods? 1.- Yes 2.- No
63. If yes, what other methods do you use? _____

Which of the following cases do you sometimes treat:

64. burns: 1.-Yes 2.- No
65. wound care: 1.-Yes 2.- No

66. vaginal infections: 1.-Yes 2.- No
67. menopausal symptoms: 1.- Yes 2.- No
68. menstrual cycle problems: 1.- Yes 2.- No
69. other cases: 1.- Yes 2.- No (If no, continue to # 71)
70. If yes, what other cases do you treat? _____

V. HEALTH EDUCATION:

Do you give advice in the following cases:

71. Prenatal care: 1.- Yes 2.- No (If no, continue to # 73.)
72. If yes, what do you advise? _____
73. Newborn care: 1.- Yes 2.- No (If no, continue to # 75)
74. If yes, what do you advise? _____
75. Counseling on breast feeding: 1.- Yes 2.- No (If no, continue to # 77)
76. If yes, what do you advise? _____
_____

77. Postnatal care of the mother: 1.- Yes 2.- No (If no, continue to # 79)
78. If yes, what do you advise? _____
_____

79. Family planning: 1.- Yes 2.- No (If no, continue to # 81)
80. If yes, what do you advise? _____
_____

81. Pregnancy at a young age: 1.- Yes 2.- No (If no, continue to # 83)
82. If yes, what do you advise? _____
_____

83. Cousin marriage: 1.- Yes 2.- No (If no, continue to # 85)

84. If yes, what do you advise? _____
_____
85. Other subjects: _____

VI. HOME BIRTHS:

86. What mothers do you advise not to deliver at home? _____
_____
87. Why do you advise them not to deliver at home? _____
_____
88. Do you examine the mother before agreeing to deliver her at home?
1.- Yes 2.- No (If no, continue to # 91)
89. If yes, why do you examine her? _____
90. If yes, what do you do? _____
_____

Have you delivered at home any of the following cases in the past year:

91. Twins: 1.-Yes 2.-No

92. Did you know beforehand? 1.-Yes 2.-No
93. Breech: 1.-Yes 2.-No
94. Did you know beforehand? 1.-Yes 2.-No
95. Previous Caesarian section? 1.-Yes 2.-No
96. Did you know beforehand? 1.-Yes 2.-No
97. Mother's age less than 18 years: 1.-Yes 2.-No
98. Did you know beforehand? 1.-Yes 2.-No
99. Mother's age over 40 years? 1.-Yes 2.-No
100. Did you know beforehand? 1.-Yes 2.- No
101. Premature: 1.-Yes 2.- No
102. Did you know beforehand? 1.-Yes 2.-No

103. During a home birth, who is in the room with you during the actual delivery? _____

104. Do you have special instruments for delivery? 1.-Yes 2.-No (If no, continue to #108).
105. If yes, do you sterilize them? 1.-Yes 2.-No
106. If yes, what instruments do you sterilize? _____ _____
107. If yes, how do you sterilize them? _____

OBSERVATIONS AND INTERVENTIONS DURING LABOR:

108. What examinations do you do in the beginning of labor? _____ _____
109. How do you know if the mother is in labor? _____ _____
110. How do you know if the fetus is healthy? _____ _____
111. Do you do abdominal palpation? 1.-Yes 2.-No
112. Do you take the mother's temperature? 1.-Yes 2.-No (If no, continue to #114)
113. Do you have a thermometer? 1.-Yes 2.-No
114. Do you take the mother's pulse? 1.-Yes 2.- No
115. Do you take the mother's blood pressure? 1.-Yes 2.- No(If no, continue to # 117)
116. Do you have a blood pressure set? 1.-Yes 2.-No
117. Do you listen to the fetal heart beat? 1.-Yes 2.-No (If no, continue to # 120)
118. If yes, how do you listen to the fetal heart beat? _____

119. If yes, how often do you listen to the fetal heart beat? _____ _____
120. Do you do an internal (pelvic) examination? 1.-Yes 2.-No (If no, continue to # 123.)
121. If yes, when do you do it? _____
122. If yes, how do you do it? _____
123. Do you give the mother an enema? 1.-Yes 2.-No
124. Do you permit the mother to eat and drink if she so desires? 1.-Yes 2.-No
125. Do you permit the mother to walk around during labor? 1.-Yes 2.-No
126. Do you rupture the membranes during the first stage of labor? 1.-Yes 2.-No (If no, continue to # 128.)
127. If yes, how do you rupture them? _____
128. Do you give any medications or herbs during a home birth? 1.-Yes 2.-No (If no, continue to # 130.)

129. If yes, give the name of the medications or herbs. _____
_____
130. In case of emergency, do you have with you any particular medications?
1.-Yes 2.-No (If no, continue to # 132.)
131. If yes, what are the names of the medications? _____
_____
132. Do you use any traditional methods for pain relief during labor?
1.- Yes 2.- No (If no, continue to # 135.)
133. If yes, what do you use? _____
134. If yes, when do you use it? _____
135. How do you know if the birth is <u>not</u> proceeding normally? _____
_____
136. What do you do in this case? _____

OBSERVATIONS AND INTERVENTIONS DURING DELIVERY:

137. What do you usually wear when you deliver? _____
_____
138. How do you prepare the place of delivery? _____
_____
139. When do you advise the mother to start pushing? _____
_____
140. What position is the mother usually in for delivery? _____
_____
141. How do you avoid tears of the perineum during delivery? _____
_____
142. What do you do to make the child cry when it is born? _____
_____
143. Describe when you cut the umbilical cord? _____
_____
144. Describe how you cut the umbilical cord? _____
_____
145. How do you know if the placenta is complete? _____
_____
146. How do you keep the baby warm? _____
_____
147. Do you help the mother to initiate breast feeding? 1.-Yes 2.-No (If no, continue to # 150.)
148. If yes, when do you help her to put the baby to the breast? _____
_____
149. If yes, how do you do it? _____
_____

<u>What do you do in case of the following complications:</u>

150. Prolonged labor (> 12 hours)_____
_____
151. The mother is too weak to push the baby out _____
_____
152. Prolapsed cord (the cord appears at the vaginal opening) _____
153. Retained placenta (the placenta does not come out) _____
_____

154. The placenta is not complete _____
_____
155. Tear of the perineum _____
156. Hemorrhage of the mother (mother is losing too much blood) _____
_____
157. The baby is not breathing _____
_____
158. Did you refer any home deliveries to the hospital in 1998? 1.-Yes 2.- No
(If no, continue to # 162.)
159. If yes, how many? _____
160. If yes, who accompanies the mother to the hospital? _____
161. If yes, what were the reasons for the referral and what was the outcome?

Reason for referral	Outcome in the hospital
V161One1	V161One2
V161Two1	V161Two2
161Three1	161Three2
V161Four1	V161Four2
V161Five1	V161Five2
V161Six1	V161Six2

OBSERVATIONS AND INTERVENTIONS AFTER THE DELIVERY

162. How long do you stay at the home after the delivery? _____
163. How do you know if the mother is not losing too much blood? _____
_____
164. How do you know if the newborn is healthy? _____
_____
165. Do you weigh the baby? 1.- Yes 2.- No
166. Do you put anything in the baby's eyes? 1.-Yes 2.-No (If no, continue to # 168)
167. If yes, what ? _____
168. Do you give the baby anything to drink after birth? 1.-Yes 2.- No
(If no, continue to # 170)
169. If yes, what do you give? _____
170. Do you put anything on the umbilical cord? 1.-Yes 2.-No (If no, continue to
172)
171. If yes, what do you put? _____
172. Do you swaddle the baby? 1.-Yes 2.-No
173. Do you put anything on the baby's body? 1.-Yes 2.-No (If no, continue to #175)
174. If yes, what do you put? _____
175. Do you report the birth to someone? 1.-Yes 2.- No (If no, continue to #179.)
176. If yes, who do you report it to? _____
177. If yes, how soon after the birth do you report it? _____
178. If yes, how do you report it? _____
179. Do you visit the mother and baby after the delivery? 1.-Yes 2.-No (If no,
continue to # 183.)
180. If yes, when? _____

181. If yes, how often ?_____
182. If yes, what do you do? _____
183. What do you do if the mother has a fever? _____
_____
184. Do you advise the mother to give the newborn anything other than breast milk?

1.-Yes 2.-No (If no, continue to # 187)

185. If yes, what? _____
186. If yes, when? _____
187. What methods of family planning do you know of? _____
_____

VII. NEEDS OF THE DAYAS:

188. Do you have all the materials / equipment that you need? 1.-Yes 2.-No
(If yes, continue to # 190.)
189. If no, what are you missing? _____
190. Where do you resupply disposable items (gloves, cord clamps etc.)?
_____
191. What problems do you encounter in your work? _____
_____
_____
192. What additional needs do you have to improve your work? _____
_____
193. What's your opinion of the follow-up and supervision? _____
_____
194. What are your expectations from the supervision? _____
_____
195. If there is a training course, what would you like to talk about? _____
_____

What time of day do you prefer for a training course?

196. Morning: from _____ to _____.
197. Afternoon: from _____to _____.

198. Where would you like it to be held? (hospital, clinic, women's organization etc.)
_____
199. If such a course were held, what are the constraints that might prevent you from participating? _____
200. Do you know anyone else doing home births in your area? 1.-Yes 2.- No
(If no, the questionnaire is completed.)

If yes:

Profession	**Number**	**Relationship**
V200 Nurse	V200a	V200b
V201 Doctor	**V201a**	V201b
V202 Unlicensed midwife	V202a	V202b
V203 Licensed midwife	V203a	V203b
V204 Unlicensed daya	V204a	V204b

VIII. DAYA'S BIRTH KITS AND NOTEBOOKS

205.

1. fetus scope
2. scissors
3. artery forceps
4. kidney bowl
5. cord clamp
6. suction for newborn
7. gloves
8. apron
9. sheet
10. towel
11. cotton and gauze
12. soap
13. antiseptic
14. enema
15. thermometer
16. scale
17. meter
18. emergency equipment
19. other

206. Daya's notebook:

One) complete or incomplete
Two) number of births (if available)
1997-
1998-

APPENDIX II

QUESTIONNAIRE FOR DAYA SUPERVISORS

A. CHARACTERISTICS:

1. Name _____
2. 2. Date of birth_____
3. Address_____
4. 4. Telephone number_____
5. Job title(s)_____
6. How long have you been working as a daya supervisor? _____
7. What was your previous job? _____
8. How many dayas are under your supervision? _____.
9. What is your highest degree?_____ a. In what subject?_____
10. What additional training have you had in mother/newborn care?

    _____
    _____
    _____

11. Have you ever done home births? Yes _____ No_____
    a. If yes, how many? _____
    b. If yes, when? _____

II. THE JOB OF THE DAYA SUPERVISOR:

II. A. CONTENT:

1. Describe what you do in your job:

_____
_____
_____
_____

2. Do you have other job responsibilities outside of your job description as a daya supervisor? (example)

    _____

3. Do you have any specific tools that you use in your work? (schedule,checklist,
_____policy papers etc.)
4. What is your relationship/work with the mudiiriyye? _____

    _____

5. Do you have any relationship/work with the clinic? Yes _____ No_____
    a.Which clinics? _____
    b.What is the nature of your interaction with the clinics _____

    _____

    c.How much time do you spend in the clinic? _____
    d.What is your relationship to the doctors/nurses? _____

    _____

6. What part of your job do you like best?

    _____

7. What part of your job do you like least?

_____

8. What problems do you encounter in your work?

    _____

II. B. SUPERVISION:

1. Who are the people whom you report to? (supervisional structure)
2. How do you report to your supervisors?
   _____
3. How often do you meet with the other daya supervisors?_____
4. What do you discuss with them? _____

II. C. RECORDS: (take copy of records when available)

1. Describe how a home birth is reported.
   a. To the mukhtar _____
   b. To the health clinic _____

2. What records do you have?_____
   (take a copy if possible)
3. What records does the daya keep? _____
4. What records are in the clinic/mudiiriyye concerning home births and the follow-up?
   a. home-births_____
      _____
   b. follow-up mother _____
   c. follow-up baby _____

5. Are there any other records which might indicate the number of referrals or complications of delivery? (hospital referrals; infant mortality committee)
   _____
   _____

III. REPORTING OF THE DAYAS' PERFORMANCE AND NEEDS:

III. A. VISITS TO THE DAYA:

1. Describe a typical visit to the daya:
_____
_____
_____
_____

2. How many visits do you usually make in a month?
_____
3. Are there some dayas whom you are unable to visit? Yes_____ No_____
   a. If yes, Why?_____
4. Do the dayas ever come to the clinic? Yes _____ No_____
   a. If yes, what for?_____
      b. What is their relationship to the doctor/nurses?_____
      _____
5. What material/equipment is a daya supposed to have in her bag?
   a. Fetal stethoscope _____
   b. Scissors _____
   c. Artery forceps _____
   d. Kidney bowl _____

e. Cord clamp(sterile) _____
f. Suction (disposable?) _____
g. Gloves (sterile?) _____
h. Apron _____
i. Clean sheet _____
j. Clean towels (newborn)_____
k. Cotton or gauze _____
l. Soap _____
m. Antiseptic solution _____
n. Enema _____
o. Thermometer _____
p. Scale _____
q. Meter _____
r. Emergency equipment _____
s. Other _____

6. Does she usually have the necessary equipment? _____
7. Does she face problems resupplying certain disposable items? Yes____ No____
   a. If yes, what kinds of problems? _____
   b. How does she deal with them? _____
8. How much or how is a daya paid for a home birth? _____
   a. For other services? _____

III. B. PROCEDURE OF A NORMAL DELIVERY:

1. Describe what a daya does when she attends a home delivery?

_____
_____
_____
_____
_____
_____
_____

2. In your opinion do the dayas have good skills to do a normal birth? (Explain)

_____
_____

III. C. COMPLICATIONS AND REFERRAL:

1. What pregnant women do you advise the daya not to deliver at home?

_____

2. During a home delivery, in what circumstances do you advise the daya to refer the mother to the hospital? _____

_____

3. How does the daya deal with the following complications?
   a. Hemorrhage_____
   b. Prolonged labor _____
   c. Fits_____
   d. Abnormal position (breech etc.) _____
   e. Shoulder dystocia _____
   f. Tear of perineum_____

g. Baby isn't breathing _____
h. Premature newborn _____
i. Other_____

4. In your opinion do they refer satisfactorily in case of a complication? Yes___ No__
Explain _____
_____

5. Is there any medical support near-bye that they can call for in case of emergency? (doctor, nurse, other?) _____

6. How many referrals from dayas to the hospital do you remember in the past year? _____

a. What were the reasons for referral? _____
_____

b. What hospital(s) would she refer to? _____

c. Are there records of the referrals? Yes___ No___Where_____(take copy)

III. D. OTHER SERVICES OF THE DAYA:

1. Do the dayas do any prenatal care in your district? Yes ___ No ____
   a. If yes, what do they do? _____
   b. If yes, do the mothers also consult other health providers for prenatal care? Yes__No __
   c. If yes, whom do they consult? (doctor, midwife, other)_____

2. Do the dayas do any post-natal care? Yes____ No____
   a. If yes, when do they visit and how often? _____
   b. If yes, what do they do? _____

3. What other tasks does the daya do in the community? (newborn care, breastfeeding counseling, family planning counseling, first aid, gynecological problems, traditional medicines or treatments etc.)

_____
_____

III. E. LICENSING OF THE DAYAS:

1. What is your role in re-licensing of the dayas? (Explain the renewal process.)

_____

2. Are there any dayas in your district whose licenses have not been renewed in the past year?

_____

3. Do you know of any new women who have asked for daya licensing in the past year?

_____

4. Do you know of any unlicensed dayas, midwives, nurses, doctors (others) who do births in the community?

_____

a. If yes, how do they report the births?
_____
_____

IV. ATTITUDE TOWARD THE DAYAS:

1. How does the community view the dayas?

_____
_____
_____

2. Why do some women deliver at home?

_____
_____
_____

3. What are the positive and negative aspects of the dayas' work in the community?

_____
_____
_____

4. Do you think the dayas are good health educators in their community? (ex. newborn care, risks of marriage at a young age, family planning etc.) Yes___ No___
Explain:_____
_____

5. If a trained midwife were available in the community to assist at home deliveries, do you think the women would prefer being assisted by the midwife or the daya?

_____
Explain why?
_____

6. What is your opinion of home births?

_____
_____
_____

V. NEEDS OF THE DAYAS AND THEIR SUPERVISORS:

1. What do you think are the most important needs of the dayas?

One) equipment and materials _____
Two) training needs _____
_____
c) supervisory needs _____
_____

2. Do you see any other ways in which the dayas could be used as community workers?

_____

3. As a daya supervisor, do you see any additional needs that you may have? (training, management structure, material etc)

_____
_____
_____

4. Is there anything else that you would like to mention?

_____

APPENDIX III

FOCUS GROUP QUESTION GUIDE:

A. GENERAL:

1. When was your last delivery?
2. How many children do you have?
3. Where did you have your baby?
4. Is this the first time that you deliver at home?
5. Have you delivered in the hospital before?

B. ANTENATAL CARE:

1. Did you get any check-ups during the pregnancy?
2. Where?
3. How many?
4. What month did you first go to the clinic?
5. Were you satisfied with the care that you received during pregnancy?

C. CHOICE OF PLACE OF DELIVERY:

1. Did you see the midwife before deciding to have a home birth?
2. Did you decide alone or were other family members (others) involved in the decision?
3. What were your reasons for choosing to deliver at home?
4. What are the advantages of a home birth? What are the disadvantages?
5. Do you feel more secure/safe at home or in the hospital?

D. PERCEPTION OF CHILDBIRTH:

1. How do you view the process of childbirth? (natural process, scary event, from God etc)
2. Are you afraid of problems, or are you pretty sure that everything will go well?
3. Are there any particular things that you do to prepare yourself for the birth?

E. EXPECTATIONS OF CARE DURING DELIVERY:

1. What did you expect from the midwife/daya?
2. Did she fulfill your needs?
3. Did she help you cope with the pain and anxiety of childbirth?
4. How did she compare to other attendants you may have had in the hospital?

F. THE CHILDBIRTH EXPERIENCE AND SATISFACTION WITH CARE:

1. How was the birth?
2. Did it go as expected?
3. When did the midwife come?
4. Did she stay with you?
5. Were your children around? Your husband? Others?
6. Did you feel secure?
7. What did you do while you were in labor?
8. Were you happy to be at home?
9. Did the midwife do anything special to help you with the pain? (herbs, massage, talk etc.)
10. Did you move around during labor?
11. Did you eat and drink?
12. Who was with you when the actual birth took place?
13. Were you satisfied with the care you received?
14. Do you think it would have been the same in the hospital?
15. Would you do the same thing if you have another baby?

G. POST-PARTUM CARE:

1. Did the midwife/daya visit you at home after delivery?
2. If so, did she check your uterus, blood loss etc.?
3. Did she check the baby's cord and the color of the skin?
4. Did she help you with breastfeeding?
5. Who would you go to if you had a problem with breastfeeding such as cracked nipples or insufficient milk?

H. OTHER TASKS OF THE DAYA:

1. Do you consult the midwife/daya for anything else other than childbirth? What?
2. Do you think the midwife/daya play a useful role in the community?

APPENDIX IV

LIST OF INTERVIEWED EXPERTS:

Wijdan Siam, General Director, Women's Health and Development Department, Ministry of Health
Dr. Suzanne Abdo, Director, Women's Health and Development Department, MOH
Dr. Sana Shadid, Project Director, Reproductive Health Project, UNFPA.
Sana Abu Hijlee, Training Officer, Reproductive Health Project, UNFPA.
Hala Tamimi, Nursing Supervisor, Primary Health Care Department, MOH.
Dina Nasser, Field Nursing Officer, UNRWA.
Omar Arkuub, Director of Statistics and Information, Ministry of Health.
Dr. Said Hanoun, Medical Director, Tulkarem District.
Dr. Mohammed Al Abed, Assistant Medical Director, Jenin District.
Dr. Bassam Abu Madi, Director of Health Center, Salfit District.

LIST OF INTERVIEWED TBA SUPERVISORS:

Halimeh Al Awawdeh, Hebron
Wijdan Sultan, Bethlehem
Majdi Hijazi, Jericho
Amneh Abu Alia, Ramallah
Reem Abu Hijleh, Salfit
Nahida Arif Dimyati, Tulkarem
May Safarini, Qalqilya
Aisha Alayda, Nablus
Suad Alkuna, Jenin

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