

**Effectiveness of the Health Care  
Providers Training Program on Safe Motherhood,  
Korangi 8, Karachi, Pakistan**

**Dr. Fariyal F. Fikree  
Dr. Sadiqua N. Jafarey  
Dr. Mohammad H. Rahbar  
Ms. Nazo Kureshy**

**Department of Community Health Services  
The Aga Khan University**

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## LIST OF ABBREVIATIONS

JPMC	Jinnah Postgraduate Medical Center
HCPs	Health Care Providers
SMP	Safe Motherhood Project
SMP technical team	Dr Fariyal F. Fikree, Dr Sadiqua N. Jafarey and Ms Nazo Kureshy
LHVs	Lady Health Visitors
TBAs	Traditional Birth Attendants
KAP	Knowledge, Attitude and Practice

# INTRODUCTION

## Rationale:

The rationale for the Safe Motherhood Project [SMP] took into consideration findings of a hospital-based<sup>1</sup> and community-based<sup>2</sup> study both of which highlighted delayed referrals as a key risk factor in maternal mortality. The results from the hospital-based study<sup>1</sup> revealed that inappropriate referrals (21%) contributed significantly to the causes of the delay for the 150 pregnant or recently delivered women who were brought dead to Jinnah Postgraduate Medical Center [JPMC] over a twelve year period [1981 - 1992]. The community-based study<sup>2</sup> revealed that though local assistance was generally sought shortly after onset of pregnancy complications, the time lapse between onset of the complication and death was, for example, more than a day in nearly 43% of maternal deaths. Consequently, delay in referral and inappropriate local care suggested a need for appropriate and timely triage at the local level. Thus, the intervention designed to address these issues was a training program catering to the local reproductive health care providers. The main objectives of the health care providers training program were:

1. To understand the role of health care providers in the role of Safe Motherhood activities
2. To recognise obstetric complications
3. To differentiate between mild, moderate and severe obstetric complications
4. To manage mild obstetric complications appropriately
5. To refer women with moderate or severe obstetric complications in a timely fashion to an appropriate health care facility
6. Take appropriate measures prior to referral

## Training Program:

The training program was geared to primary level health care providers. These included:

1. Doctors
2. Health assistants<sup>3</sup>
3. Lady health visitors [LHVs], midwives and nurses
4. Traditional birth attendants [TBAs]<sup>4</sup>

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<sup>1</sup> Jafarey SN and Korejo R. Mothers brought dead: An inquiry into causes of delay. Soc Sci Med 1993. 36(3):371-372.

<sup>2</sup> Fikree FF, Gray RH, Berendes HW and Karim MS. A community-based nested case-control study of maternal mortality. Int J Gynecol Obstet 1994. 47:247-255.

<sup>3</sup> Health Assistants are medical practitioners who do not have a medical degree but practice in the community and are identified by the community as "doctors".

<sup>4</sup> Traditional Birth Attendants were identified only if they reported conducting at least three deliveries annually

who met separately, on a weekly basis, at a nearby hospital. For example, Week one was scheduled for doctors, Week Two for health assistants, Week Three for LHVs, midwives and nurses, and Week Four for TBAs. Details of the training program and teaching learning strategies are elaborated in the training manual "*Management And Prevention Of Obstetric Complications At Primary Care Level*". The duration of the training program was for a year. The contents of the training program and objectives of each session are shown in Appendix A.

### Objectives:

A pre and post survey was designed to assess the effectiveness of the health care providers training program. The survey was designed as a Knowledge, Attitude and Practice [KAP] survey. The purpose of the survey was:

1. To assess change in knowledge regarding common obstetric complications during antenatal period.
2. To assess change in knowledge of risk factors for high risk pregnancies.
3. To assess change in knowledge regarding obstetric complications requiring referrals.
4. To assess change in knowledge regarding management and referral patterns for pre-eclampsia, eclampsia, prolonged / obstructed labor, threatened abortion, post-partum hemorrhage and puerperal sepsis.

In addition, a pre and post evaluation was conducted as part of the intensive three day training course. The objectives of the evaluation were:

1. To identify existing knowledge and change in knowledge for recognition of the obstetric complications of antepartum hemorrhage, obstructed labor, eclampsia and puerperal sepsis.
2. To identify existing knowledge and change in knowledge of immediate and delayed actions for the above mentioned obstetric complications
3. To identify existing knowledge and change in knowledge for patterns of referrals for the above mentioned obstetric complications

This research report presents the findings of the effectiveness of the health care providers training program based on the results of the evaluation of the intensive training course and the pre and post KAPs.

# METHODS

## INTENSIVE TRAINING COURSE

### Questionnaire Design

The questionnaire for the intensive training evaluation was based on case studies of the four major obstetric complications (antepartum hemorrhage, prolonged/obstructed labor, eclampsia and puerperal sepsis).

The major themes in the questionnaire were defined based on the objectives of the intensive training program. These included:

1. Reasons for obstetric complications
2. Immediate management of obstetric complications
3. Referral patterns for obstetric complications

Two questionnaires [Appendix B] were developed as there were variations in the type and level of training imparted to the four cadres of health care providers:

1. Questionnaire I : doctors, health assistants and LHVs/midwives/nurses
2. Questionnaire II : TBAs

### Conduct of Evaluation Questionnaire

These questionnaires were administered at the start and conclusion of the intensive training course. The questionnaires were distributed by the facilitator of the subsequent session and, except for the TBAs where the questions were read out to those TBAs who were illiterate, the other health care providers were given 30 minutes to complete the questionnaires. Questions needing clarification were answered by the facilitator.

### Sample Size

As the Safe Motherhood training program was to planned to train four cadres of health care providers<sup>5</sup> in the catchment area, invitations were despatched to all identified health care providers in the catchment area. However, 13 doctors, 9 health assistants, 6 LHVs/midwives/nurses and 26 TBAs attended and completed the pre-test. As there were fewer health care providers who completed the post-test, consequently the number of completed pre and post test questionnaires were :

1. Doctors	-	12
2. Health assistants	-	8
3. LHVs/midwives/nurses	-	6
4. TBAs	-	22

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<sup>5</sup> Doctors, health assistants, LHVs/midwives/nurses, TBAs

### **Editing and Coding**

Data editing and cleaning was done in several stages independently for the pre and post questionnaires:

1. On-site by co-ordinator of the training program
2. In the department by the co-ordinator of the training program
3. In the coding process

Coding was necessary for purposes of the marks allocated to each question per case study. For this purpose, detailed discussions were held by the SMP technical team to re-categorise the marks allocated based on the quality of the clinical responses. Hence, different weightages were given to different questions based on the SMP technical team's clinical assessment. Such re-categorisation was conducted independently for the two sets of questionnaires. Details of the re-categorisation for marks is shown in Appendix B.

### **Data Entry and Processing**

Once coding was completed and verified, data were double entered by two different data entry operators using the data entry program of *EpiInfo*. The data sets were validated twice using the *EpiInfo* software package. Discrepancies identified were then reconciled through recourse to the original questionnaires. In addition, consistency checks were also run to identify any problems not elicited in the validation process prior to data analysis.

### **Problems during field work**

There were several problems identified during the conduct of the evaluations:

1. Unfamiliarity with the format of the pre and post test questionnaires for doctors and LHV/midwives/nurses.
2. Lack of understanding regarding content of the questions resulting in a "lost" feeling of how to respond.
3. The choice of wording in the responses were not straightforward.
4. A feeling of "awe" among the TBAs and health assistants due to the respect for the facilitators resulting in inadequate/inaccurate responses.

### **Analysis**

The data was analysed by the following methods:

1. Paired t-tests for the total scores
2. Percent change for each case study
3. Percent change for each question

These analyses were run independently for each of the four cadres of health care providers. The results presented will compare the improvement or lack thereof in knowledge disseminated through the training sessions.

# KNOWLEDGE, ATTITUDE AND PRACTICE EVALUATION

## Questionnaire Design

The questionnaire development represented an iterative process involving the SMP technical team. The final questionnaire was the result of several revisions, especially for the vignettes. Pre-testing was conducted for the questionnaires of doctors and LHVs/midwives/nurses for discerning the responses, especially for the vignettes, and flow of the questions. Initially, in-depth interviews were conducted among five doctors, five LHVs/nurses/midwives and five TBAs to ascertain their knowledge regarding obstetric complications, referrals patterns, antenatal care and high risk pregnancies. The information gleaned from these interviews were then incorporated in the development of the questionnaire. [Appendix C - KAP questionnaires].

The fundamental themes in the questionnaire were defined based on the objectives of the training program. These included:

1. Socio-demographic characteristics
2. Education, training and experience
3. Antenatal Care - high risk pregnancy, management and referral patterns for obstetric complications
4. Intrapartum Care - delivery practices, management and referral patterns for obstetric complications
5. Postpartum Care - management and referral patterns for obstetric complications

Responses to the management and referral patterns during antenatal, intrapartum and postpartum phases of pregnancy were generally elicited through vignettes and open-ended questions. Initially, the doctors/health assistants questionnaire was developed and subsequently modified versions for LHVs/midwives/nurses and TBAs were developed. The specific areas of modifications were related to the level of training and health care provided by the above-mentioned two cadres of health care providers. These were:

1. Vignettes
2. Quality of antenatal care offered

There were a total of six vignettes :

- |                   |                              |
|-------------------|------------------------------|
| 1. Vignette One   | Pre-eclampsia                |
| 2. Vignette Two   | Eclampsia                    |
| 3. Vignette Three | Prolonged / obstructed labor |
| 4. Vignette Four  | Threatened abortion          |
| 5. Vignette Five  | Postpartum hemorrhage        |
| 6. Vignette Six   | Septicemia                   |

There was no difference in vignettes One through Six for doctors, health assistants and LHVs/midwives/nurses. However, for TBAs there were modifications in the vignettes relating to

prolonged/obstructed labor and postpartum hemorrhage while the septicemia vignette was not included [Appendix C - KAP questionnaires].

### Field Work

The pre KAPs were conducted principally by a single doctor<sup>6</sup> who, subsequently conducted all the post KAPs. Identification of the health care providers in the catchment area was an on-going process throughout the intervention period as migration, even in this short duration of one year, took place. The pre-KAPs were completed prior to the commencement of the training program (May - June, 1997) whilst the post-KAP was administered after completion of the obstetrics component of the training program (May - July, 1998). Most of the interviews for the health care providers were conducted during the day except for a few doctors and health assistants whose interviews were conducted in the late evenings. In addition, the interviews were generally completed in one sitting though in a few cases two sittings were needed. [Appendix D for details of field work].

### Sample Size

The training program to be implemented was targeted to all identified health care providers serving the catchment population. The total number of HCPs identified were 90, of which TBAs not only comprised the largest group but 91.4% of them attended the training program<sup>7</sup>. Overall, 62 of 90 identified HCPs serving the catchment area attended the training program.

Health Care Provider Cadre	Under Training		Not under Training		Total n
	n	%	n	%	
Doctors	15	60.0	10	40.0	25
Health Assistants	9	56.3	7	43.7	16
LHVs/Midwives/Nurses	6	42.9	8	57.1	14
Traditional Birth Attendants	32	91.4	3	8.6	35
Total	62	68.9	28	31.1	90

### Editing and Coding

Data editing and cleaning was done in several stages:

1. A quick review on-site
2. An in-depth review in the department
3. In the coding process

<sup>6</sup> There were 13 KAPs which were conducted by two doctors, whilst one doctor conducted 61 KAPs

<sup>7</sup> Identification of TBAs serving in the catchment was not complete hence the total number of TBAs could possibly be greater than 35.

Coding was necessary for several of the open-ended questionnaires as well as for the vignettes. Specifically, for the vignettes, re-categorization was conducted based on the gold standard of clinical management but also adjusted to the typology of responses. The re-categorization of vignettes was a time-consuming process involving innumerable meetings of the SMP technical team and the research officer involved in the conduct of this portion of the project<sup>8</sup>.

There were generally three themes elicited from the responses of the vignettes:

1. Referral pattern - classified as immediate, delayed and none
2. Knowledge of outcome - classified as good, average and poor
3. Type of management - classifies as good, average and poor

In addition, review of the open-ended management questions also elicited harmful practices. Details of the re-categorization criteria for each vignette are in Appendix E.

### **Data Entry and Processing**

Once coding was completed and verified, data were double entered by two different data entry operators using the data entry program of *EpiInfo*. The data sets were validated twice using the *EpiInfo* software package. Discrepancies identified were then reconciled through recourse to the original questionnaires. In addition, consistency checks were also run to identify any problems not elicited in the validation process prior to data analysis.

### **Problems during field work**

1. Reluctance on part of some of the HCPs to be interviewed due to their cynical attitude regarding implementation of a training program. It is important to note that this attitude changed following the training program with those HCPs who had not attended our training program in spite of several invitations regretting that they did not attend the training program and enquiring when the next training program would start.
2. Length of the interview resulting generally in at least two sittings.
3. Difficulty in establishing the identity of health assistants
4. Migration
5. Non-availability of some HCPs despite making appointments.

### **Analysis**

The data was analysed by the following methods:

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<sup>8</sup> Dr Nuzhat Mirza

1. Percent change for specific knowledge related questions regarding common obstetric complications and high risk pregnancies.
2. Percent change for appropriate management and referral patterns for the four major obstetric complications
3. Percent change in medications provided as part of immediate management for the four major obstetric complications.

These analyses were run independently for each of the four cadres of health care providers. The results presented will examine the improvement or lack thereof in knowledge disseminated through the training sessions comparing the information in the pre and post KAPs.

Though there are variations in the number of pre and post KAPs conducted within each cadre of HCPs, the data we are presenting is restricted only to those HCPs on whom we have completed pre and post KAPs [Appendix D]. Furthermore, to objectively examine whether our training program improved the knowledge regarding high risk pregnancies, and management and referral patterns for the four major obstetric complications, we are also presenting percent change in the above-mentioned themes by training status.

The criteria for training status was based on the number of training sessions attended [see Appendix A for the contents of the training sessions]:

1. Trained                     $\geq$  two days of the intensive training course  
Video film screening of “*Mamta ki Hifazat*”<sup>9</sup>  
 $\geq$  60% of the eleven subsequent sessions
2. Semi-trained            Attended training sessions but did not fulfill our criteria for trained
3. Untrained                No session attended

The number of HCPs, by cadre, fulfilling the above-mentioned criteria are presented in Appendix D. We will be limiting our results to those who fulfill our criteria for trained and untrained. Furthermore, as the number of untrained TBAs is only one, we are not presenting any percent change in level of improvement or lack thereof in the above-mentioned themes for this sub-category.

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<sup>9</sup> Video film illustrating delay factors for maternal mortality - eclampsia and postpartum hemorrhage

# RESULTS

## INTENSIVE TRAINING COURSE<sup>10</sup>

### Mean Scores

Overall, a higher scoring was observed in the post test as compared to the pre-test for all four cadres of HCPs. The differences were significant in the doctors, health assistants and TBAs cadres but not in the LHV/midwives/nurses cadre. For example, in the post-test doctors scored 49.17 whilst in the pre-test the average score was 37.5 (p-value 0.02). Similarly, TBAs scored 38.23 in the post-test and 32.41 in the pre-test (p-value 0.01). [Table 1]

### Overall Knowledge Regarding Obstetric Complications

#### *Case Study - Antepartum hemorrhage*

Significant differences were observed in the change in knowledge regarding antepartum hemorrhage among doctors and health assistants. However, though the post-test scores (10.33) were higher than the pre-test scores (8.67) but the difference was not statistically significant (p-value 0.1), most probably due to small numbers. Disappointingly, the TBAs scored, on average, lower on the post-score (5.68) than on the pre-test (6.86). [Table 1]

#### *Case Study - Prolonged / Obstructed Labor*

The doctors scores improved significantly from 11.67 in the pre-test to 16.0 in the post test (p-values 0.03). Though the other three cadres of HCPs did score higher on the post-test as compared to the pre-test, the difference was not statistically significant. [Table 1]

#### *Case Study - Eclampsia*

Though the post-test scores were higher for all four cadres of HCPs, statistical significance was achieved only for the TBAs who showed a marked improvement from the pre-test score of 7.05 to post-test score of 10.86 (p-value 0.01). [Table 1]

#### *Case Study - Puerperal Sepsis*

The TBAs again scored significantly higher in the post-test (7.27) as compared to the pre-test (5.5) (p-value 0.04). However, though the scores for the other HCPs improved in the post-test, the doctors, disappointingly scored only 0.5 marks higher in the post-test average scores as compared to the pre-test average scores. [Table 1]

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Tables are in Appendix F

## Knowledge Regarding Immediate Management<sup>11</sup>

### *Doctors*

Overall, regarding immediate management for the four case studies, there was a marked improvement in knowledge though in certain cases, reported knowledge of “poor” practices also rose. For example, putting up an IV drip in the case study of antepartum hemorrhage rose by 83.3% whilst performing a breast examination for puerperal sepsis rose by 500%. On the other hand, such practices as maintaining airway or turning patient on her side for the case study of eclampsia declined by 11.1% and 42.9% respectively. Where “poor” practices are concerned, reported knowledge regarding giving ergometrine for prolonged/obstructed labor fell by 50% though performing vaginal examination for antepartum hemorrhage was reported by two doctors in the post test but by only one doctor in the pre-test (100% rise). [Table 2]

### *Health Assistants*

Overall, regarding immediate management for the four case studies, there was a significant improvement in knowledge though in certain cases, reported knowledge of “poor” practices also rose. For example, putting up an IV drip in cases of antepartum hemorrhage rose by 250% whilst giving aspirin/analgesics for puerperal sepsis rose by 250%. On the other hand, improvement in such practices as turning patient on her side for the case study of eclampsia declined by 25% though maintaining airway and giving injection diazepam rose by 33.3% and 400% respectively. Where “poor” practices are concerned, reported knowledge regarding giving ergometrine for prolonged/obstructed labor fell by 100%. [Table 3]

### *Lady Health Visitors/Midwives/Nurses*

Overall, though there was improvement in the level of knowledge regarding immediate management for the four case studies, but since the existing knowledge was relatively high, the improvement was not marked. For example, putting up an IV drip in cases of antepartum hemorrhage rose by 100%% whilst giving aspirin/analgesics for puerperal sepsis rose by 200%. On the other hand, improvement in such practices as getting blood cross-matched for the case study of antepartum hemorrhage improved by 100% though there was a decline in knowledge (66.7%) for turning patient on side for the case study of eclampsia. Where “poor” practices are concerned, reported knowledge regarding giving ergometrine for prolonged/obstructed labor fell by 100% whilst performing vaginal examination for the case study of antepartum hemorrhage also fell (50%). [Table 4]

### *Traditional Birth Attendants*

Overall, regarding immediate management for the four case studies, there was moderate improvement in knowledge though in certain cases, reported knowledge of “poor” practices also rose. For example, putting up an IV drip in cases of antepartum hemorrhage rose by 33.3%

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<sup>11</sup> Referral pattern not reported as the HCPs reported “referral to JPMC” considering this choice as the “expected” response.

whilst turning patient on her side for the case study of eclampsia rose by 140%. Furthermore, such “poor” practices as injecting ergometrine or Vitamin K for the case study of antepartum hemorrhage fell by 100% and 60% respectively. Furthermore, though four of the 22 TBAs reported giving injection ergometrine in the pre-test only one TBA so reported in the post-test. [Table 5]. It is important to note that there are few TBAs who indulge in these “poor” practices.

# KNOWLEDGE, ATTITUDE AND PRACTICE EVALUATION

## DOCTORS<sup>12</sup>

### Section I : Background Characteristics

The majority of doctors in the catchment area of Korangi 8, Karachi were male and  $\geq 30$  years though in the pre-KAPs nearly 30% of the doctors interviewed were under 30 years. There was a marked improvement (180%) in the number of doctors who reported attending refresher courses, generally reflecting those doctors who attended our training program. Furthermore, there was a decrease in “no time” (55%) or “opportunity not available” (87.5%) as the professed reasons for not attending refresher courses. Interestingly, nearly 78% of doctors reported that they attended meetings/seminars in the pre-KAP. [Table I.1)

### Section II : General Information

Vaginal hemorrhage and pre-eclampsia/eclampsia were the two obstetric complications where a marked improvement in knowledge was observed. For example, though among all doctors there was no improvement in knowledge of hemorrhage, but among the sub-category of trained doctors there was a 100% improvement. A similar trend was also observed in the complication entity of pre-eclampsia / eclampsia (hypertension and eclampsia) and swelling. Table II.1.

Change in knowledge regarding high risk pregnancies was, disappointingly, minimal. For example, though knowledge regarding risk factors such as short height, short birth interval or grand multiparity showed none or marginal improvement, knowledge regarding previous caesarean section improved by 150% and 200% among all and trained doctors respectively. Table II.2

Knowledge regarding referrals for obstetric complications showed a moderate improvement among all doctors. However, when comparing the overall results between trained and untrained doctors, a significant improvement was observed among trained as compared to untrained doctors. For example, knowledge regarding referrals for postpartum hemorrhage improved by 66.7%, 200% and 100% among all, trained and untrained doctors respectively. On the other hand, doctors did not report they would refer patients with puerperal sepsis either in the pre or post KAP. Table II.3

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<sup>2</sup> Tables are in Appendix G

### Section III: Vignettes<sup>13</sup>

#### Pre-eclampsia [Tables III.1, III.2 and III.3]

A marked improvement was observed in the management and referral patterns for pre-eclampsia based on responses to the pre-eclampsia vignette. For example, though a decrease in “*immediate referral*” (without any emergency treatment or after some initial treatment) was reported but significantly more doctors reported “*delayed referrals*” (referral two hours to 7 days with management to assess referral needs) irrespective of training status. On the other hand, the improvement in type of management with respect to “*good*” (blood pressure measurement, sedatives and referral) was 166.6%, 100% and 0% among all, trained and untrained doctors respectively. Table III.1

We classified immediate management offered to pre-eclamptic women as comprising analgesics (including aspirin), sedatives and referral. Though there was minimal improvement among the trained doctors regarding prescribing analgesics but for sedative and referrals there was a tremendous improvement - none of the trained doctors mentioned this line of management in the pre-KAPs but, of the eight doctors trained, six and all eight mentioned prescribing sedatives and referral respectively as their line of treatment. Table III.2

Knowledge regarding adverse outcomes for mothers with pre-eclampsia improved remarkably, especially among the trained doctors. For example, fits/seizures improved by 250%, 250% and 50% while maternal deaths improved by 150%, 400% and fell by 100% among all, trained and untrained doctors respectively. Furthermore, knowledge that stillbirths also could be an adverse outcome rose by 88.9%, 100% and 66.7% among all, trained and untrained doctors respectively. Table III.3

#### Eclampsia [Tables III.4 and III.5]

The improvement in management observed for the vignette on eclampsia was substantial. All the trained doctors (8) reported “*good*” management (valium and refer) while 50% of the untrained doctors reported “*good*” management. It is interesting to note here, that all doctors, irrespective of training status, did not report either in the pre or post KAPs “*poor*” management. Table III.4

On the other hand, knowledge of checking vital signs, maintaining airway, intravenous valium or immediate referral was poor. In fact, three of the eight trained doctors did mention maintaining airway in the pre-KAPs but none did in the post-KAPs. Table III.5

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<sup>13</sup> For details regarding categorization of vignettes refer to Appendix E

Prolonged / Obstructed labor [Tables III.6, III.7 and III.8]

Overall, basic knowledge regarding prolonged/obstructed labor was comparatively high among doctors as observed from the level of knowledge in the pre-KAPs. However, significant improvement in knowledge was also observed in certain categories. For example, we classified "*immediate referral*" as refer straight away with or without some initial, harm- less management. Though overall improvement in knowledge for "*immediate referral*" was 14.3% among all doctors, this rose to 60% among the trained doctors but fell to 20% among the untrained doctors. Furthermore, though no change in knowledge of outcome categorised as "*good*" among all doctors was observed but among trained doctors "*good*" knowledge of outcome rose by 66.7% though fell by 100% among untrained doctors. [Table III.6].

Transverse lie reported as a reason for prolonged / obstructed labor improved by 300% among the untrained doctors but only by 166.7% among trained doctors. However, cephalo-pelvic disproportion mentioned as a reason for prolonged / obstructed rose by 166.7% among trained doctors but fell by 100% among untrained doctors. [Table III.7]. The knowledge that ruptured uterus was an adverse outcome for prolonged / obstructed labor rose by 150% among trained doctors but fell by 100% among the untrained doctors. [Table III.8].

Threatened Abortion [Tables III.9]

Generally speaking knowledge regarding severity of problem and management improved for all three categories of doctors. However, the percent change in knowledge regarding "*good*" assessment of the severity of problem was higher among the untrained doctors (50%) as compared to the trained doctors (16.7%). [Table III.9].

Postpartum Hemorrhage [Tables III.10, III.11 and III.12]

Improvement in knowledge regarding postpartum hemorrhage especially in the context of referral patterns, management and reasons improved significantly among the trained doctors though improvement was also observed among the untrained doctors. For example, improvement in knowledge regarding "*immediate*" referral rose by 300% among all doctors though the largest improvement was observed among the trained doctors - none reported "*immediate*" referral in the pre-KAP but in the post-KAP 7/8 doctors so reported. Interestingly, "*good*" management did not show any improvement among the trained doctors - all eight doctors reported "*good*" management in the pre and post KAPs. However, among the untrained doctors, "*good*" management fell by 83.3%. [Table III.10]. Furthermore, regarding the type of immediate management - all eight trained doctors reported giving oxytocics in the post KAP whilst only 1/6 untrained doctors so reported. Disappointingly, "*massage uterus*" as an immediate management method was reported by only a single trained doctor both in the pre and post KAPs. [Table III.11].

Knowledge of reasons for postpartum hemorrhage also significantly improved. For example, knowledge regarding retained placenta rose by 116.7%, 200% and 100% among all, trained and untrained doctors respectively. [Table III.12]

Puerperal Sepsis [Tables III.13, III.14 and III.15]

Generally the improvement in knowledge regarding puerperal sepsis was moderate. For example, “*good*” management for puerperal sepsis rose by 50% among the trained doctors and fell by 33.3% among the untrained doctors. On the other hand, “*good*” knowledge of cause of delay rose by 66.7% among the untrained doctors but fell by 14.3% among the trained doctors. [Table III.13]. Furthermore, no hand washing prior to delivery cited as a reason for puerperal sepsis rose by 200% among the untrained doctors but only by 40% among the trained doctors. [Table III.14]. Disappointingly, a decrease in knowledge regarding methods for “*immediate*” management was observed both among trained and untrained doctors except for abdominal examination where a 16.7% improvement among trained doctors was observed. [Table III.15].

## HEALTH ASSISTANTS<sup>14</sup>

### Section I : Background Characteristics

All the health assistants in the catchment area of Korangi 8, Karachi were male and most of them were  $\geq 30$  years. There was a marked improvement (600%) in the number of health assistants who reported attending refresher courses, generally reflecting those health assistants who attended our training program. Furthermore, there was a decrease in “no time” (44.4%) or “opportunity not available” (90%) as the professed reasons for not attending refresher courses.

[Table I.1)

### Section II : General Information

Edema and malpresentation were the two obstetric complications where a marked improvement in knowledge was observed. For example, there was a 200% improvement in knowledge of malpresentation among all health assistants, but the improvement was restricted only to the sub-category of trained health assistants (200%). However, knowledge regarding vaginal bleeding improved significantly more among untrained health assistants as compared to trained health assistants. Table II.1.

Change in knowledge regarding high risk pregnancies was, disappointingly, minimal. For example, knowledge regarding grand multiparity improved by 100% and 50% among all and trained health assistants respectively. However, other risk factors such as short height or short birth interval showed none or marginal improvement. Table II.2

Knowledge regarding referrals for obstetric complications showed a moderate improvement among all health assistants. However, when comparing the overall results between trained and untrained doctors, there was minimal improvement in level of knowledge among trained as compared to untrained health assistants. For example, improvement in referrals for antepartum hemorrhage improved by 75%, 100% and 200% among all, trained and untrained health assistants respectively. On the other hand, only one trained health assistant reported referrals for puerperal sepsis and that too only in the pre-KAP. Furthermore, referral for eclampsia was not mentioned by even a single health assistant [trained or untrained] either in the pre or post KAP. Table II.3

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<sup>14</sup> Tables are in Appendix H

### Section III: Vignettes<sup>15</sup>

#### Pre-eclampsia [Tables III.1, III.2 and III.3]

A moderate improvement was observed in the management and referral patterns for pre-eclampsia based on responses to the pre-eclampsia vignette. For example, though a decrease in “*immediate referral*” (without any emergency treatment or after some initial treatment) was reported but significantly more health assistants reported “*delayed referrals*” (referral two hours to 7 days with management to assess referral needs) irrespective of training status. On the other hand, the improvement in type of management with respect to “*good*” (blood pressure measurement, sedatives and referral) was 66.7% and 50% among all, trained and untrained health assistants respectively. Table III.1

We classified immediate management offered to pre-eclamptic women as comprising analgesics (including aspirin), sedatives and referral. Disappointingly, there was no improvement among the trained or untrained health assistants regarding prescribing analgesics, sedatives or referrals. Table III.2. Furthermore, there was even no improvement in knowledge regarding adverse outcomes for mothers with pre-eclampsia among the trained and untrained health assistants. Table III.3

#### Eclampsia [Tables III.4 and III.5]

The improvement in management reported for a pregnant women with eclampsia was substantial. Six of the eight trained health assistants (200%) reported “*good*” management (valium and refer) while there was a 50% decline in the level of such management reported by the untrained health assistants. It is interesting to note here, that all health assistants, irrespective of training status, did not report, either in the pre or post KAPs, “*poor*” management. Table III.4

On the other hand, knowledge of checking vital signs, maintaining airway, or immediate referral was poor. However, knowledge of IV valium as an immediate management method improved significantly among the trained (500%) as compared to the untrained (0%) health assistants. Table III.5

#### Prolonged / Obstructed labor [Tables III.6, III.7 and III.8]

We classified “*immediate referral*”, as refer straight away with or without some initial, harmless management. Though overall improvement in knowledge for “*immediate referral*” was 66.7% among all health assistants, this rose to 250% among the trained health assistants but fell to 0% among the untrained health assistants. Furthermore, a marked improvement in knowledge

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<sup>15</sup> For details regarding categorization of vignettes refer to Appendix E

of outcome categorised as “good” among all health assistants (500%) was observed but among trained health assistants “good” knowledge of outcome rose by 400% though only one of four untrained health assistants so reported in the post-KAP. [Table III.6].

Transverse lie reported as a reason for prolonged / obstructed labor improved by 300% among all health assistants though among trained health assistants improvement was 150%. However, cephalo-pelvic disproportion mentioned as a reason for prolonged / obstructed was not reported by even a single health assistant in the pre-KAP but in the post-KAP four, three and one health assistants (all, trained and untrained respectively) so reported. [Table III.7]. The knowledge that ruptured uterus was an adverse outcome for prolonged / obstructed labor rose by 400% among trained health assistants though only one untrained health assistant so reported in the post-KAP. [Table III.8].

#### Threatened Abortion [Tables III.9]

Generally speaking, knowledge regarding severity of problem and management showed minimal improvement for all three categories of health assistants. However, the percent change in knowledge regarding “good” management was significantly improved among trained health assistants (250%) with no change in knowledge among the untrained health assistants. Disappointingly, there was a decline in “good” assessment of the severity of problem among trained health assistants (12.5%) while an improvement (33.3%) among the untrained health assistants was observed. [Table III.9].

#### Postpartum Hemorrhage [Tables III.10, III.11 and III.12]

Improvement in knowledge regarding postpartum hemorrhage especially in the context of assessment of severity of problem, management and reasons improved significantly among the trained health assistants though improvement was also observed among the untrained health assistants. For example, “good” management improved by 100% among trained health assistants but among the untrained health assistants “good” management fell by 100%. Furthermore, “good” assessment of the severity of the problem rose by a massive 700% among the trained health assistants but no change in knowledge was observed among the untrained health assistants. [Table III.10]. Disappointingly, “massage uterus” as an immediate management method was reported by two health assistants, one each in the trained and untrained category of health assistants, but both so reported only in the pre-KAP. [Table III.11].

Knowledge of reasons for postpartum hemorrhage also significantly improved. For example, knowledge regarding retained placenta rose by 250%, 200% and 0% among all, trained and untrained health assistants respectively. [Table III.12]

Puerperal Sepsis

[Tables III.13, III.14 and III.15]

Generally the improvement in knowledge regarding puerperal sepsis was moderate to poor. For example, “good” management for puerperal sepsis rose by 400% among the trained health assistants while none and two of the four untrained health assistants so reported in the pre and post KAPs respectively. On the other hand, “good” knowledge of cause of delay rose remarkably among all three categories of health assistants, with the largest absolute improvement among the trained health assistants. [Table III.13]. Furthermore, no hand washing prior to delivery cited as a reason for puerperal sepsis rose by 100% among the untrained health assistants but only by 66.7% among the trained health assistants. [Table III.14]. Interestingly, there was no change in knowledge regarding methods for “immediate” management with respect to vital signs (temperature and pulse rate) and abdominal examination among trained health assistants but among untrained health assistants there was either no change (pulse rate and hydration status) or a decline (temperature and abdominal examination) in knowledge level. [Table III.15].

# LADY HEALTH VISITORS / MIDWIVES / NURSES<sup>16</sup>

## Section I : Background Characteristics

The majority of LHVs/midwives/nurses in the catchment area of Korangi 8, Karachi were  $\leq 40$  years. There were two LHVs, three nurses, two midwives and two nurse-midwife interviewed the pre-KAP though in the post-KAP the number of nurses fell to one while the number of nurse-midwife rose to three. There was a marked improvement (400%) in the number of LHVs/midwives/nurses attending refresher courses, generally reflecting those LHVs/midwives/nurses who attended our training program. Furthermore, there was a decrease in "no time" (40%) or "opportunity not available" (50%) as the professed reasons for not attending refresher courses. [Table I.1]

## Section II : General Information

The specific health care offered by the LHVs/midwives/nurses during the antenatal care clinics ((all LHVs/midwives/nurses reported that they conducted antenatal care clinics in the pre and post-KAP) showed moderate improvement except for advice on family planning. Advice about breast feeding improved by 100%, 50% but fell by 50% for all, trained and untrained LHVs/midwives/nurses respectively. On the other hand, improvement regarding tetanus toxoid injections rose by 40%, 33.3% and 100% among all, trained and untrained LHVs/midwives/nurses respectively. [Table II.1]

Change in knowledge regarding common obstetric complications were dismal except for hypertension where a significant improvement was observed - 200%, 200% and 100% among all, trained and untrained LHVs/midwives/nurses respectively. On the other hand, in the post-KAP, malpresentation was reported by two untrained LHVs/midwives/nurses but by none of the trained LHVs/midwives/nurses though in the pre-KAP, malpresentation was not reported as a common obstetric complication by any LHV/midwife/nurse. Disappointingly, there was a decline in knowledge regarding vaginal hemorrhage - 42.9%, 33.3% and 50% among all, trained and untrained LHVs/midwives/nurses respectively. Table II.2.

Change in knowledge regarding high risk pregnancies was, disappointingly, minimal. For example, none of the trained LHVs/midwives/nurses reported grand multiparity as a high risk pregnancy though three of the four trained LHVs/midwives/nurses so reported in the post-KAP. However, other risk factors such as short height, short birth interval or previous caesarean-section showed no improvement or a decline in knowledge. Table II.3

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<sup>16</sup> Tables are in Appendix I

Generally speaking, there was a decline in knowledge of obstetric complications necessitating referrals. For example, there was no change in knowledge regarding referrals for eclampsia (hypertension) among the untrained LHV/midwives/nurses but a decline in knowledge of 22.2% and 25% among all and trained LHV/midwives/nurses respectively. Table II.4

### Section III: Vignettes<sup>17</sup>

#### Pre-eclampsia [Tables III.1, III.2 and III.3]

A marked improvement was observed in the management and referral patterns for pre-eclampsia based on responses to the pre-eclampsia vignette. For example, a 50% improvement in knowledge regarding “*immediate referral*” (without any emergency treatment or after some initial treatment) was reported among trained LHV/midwives/nurses. Disappointingly, improvement in knowledge of outcome was poor - in fact, there was an overall decline in knowledge though among the trained LHV/midwives/nurses there was no change in knowledge. On the other hand, the improvement in type of management with respect to “*good*” (blood pressure measurement, sedatives and referral) was 400% and 300% among all and trained LHV/midwives/nurses respectively. Table III.1

We classified immediate management offered to pre-eclamptic women as comprising analgesics (including aspirin), sedatives and referral. Though there was a decline in knowledge regarding prescribing analgesics among the trained LHV/midwives/nurses but for sedative and referrals there was a significant improvement. Table III.2

Knowledge regarding adverse outcomes for mothers with pre-eclampsia improved moderately among the trained LHV/midwives/nurses. For example, among the trained LHV/midwives/nurses knowledge regarding stillbirths improved by 50% while there was no change in knowledge regarding fits/seizures or maternal deaths. Table III.3

#### Prolonged / Obstructed labor [Tables III.4, III.5 and III.6]

We classified “*immediate referral*”, as refer straight away with or without some initial, harmless management. Though overall improvement in knowledge for “*immediate referral*” was 166.7% among all LHV/midwives/nurses, this rose to 300% and 200% among the trained and untrained LHV/midwives/nurses respectively. Furthermore, though no change in knowledge of outcome categorised as “*good*” among untrained LHV/midwives/nurses was observed but among trained LHV/midwives/nurses “*good*” knowledge of outcome rose from no LHV/midwife/nurse reporting in the pre-KAP to three of the four trained LHV/midwives/nurses reporting in the post-KAP. [Table III.4].

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<sup>17</sup> For details regarding categorization of vignettes refer to Appendix E

Transverse lie reported as a reason for prolonged / obstructed labor improved by 50% among the untrained LHV/midwives/nurses but only by 33.3% among trained LHV/midwives/nurses. However, cephalo-pelvic disproportion mentioned as a reason for prolonged / obstructed rose by 300% and 100% among trained and untrained LHV/midwives/nurses respectively. [Table III.5]. Three of the four of the trained LHV/midwives/nurses reported ruptured uterus as an adverse outcome for prolonged / obstructed labor though none so reported in the pre-KAP. [Table III.6].

#### Threatened Abortion [Tables III.7]

Generally speaking knowledge regarding severity of problem and management improved for all three categories of LHV/midwives/nurses. For example, regarding "good" management the change was maximal among trained LHV/midwives/nurses - none reported "good" in the pre-KAP though all four so reported in the post-KAP. [Table III.7].

#### Postpartum Hemorrhage [Tables III.8, III.9 and III.10]

Improvement in knowledge regarding postpartum hemorrhage especially in the context of severity of problem, management and reasons improved significantly among the trained LHV/midwives/nurses though improvement was also observed among the untrained LHV/midwives/nurses. For example, improvement in knowledge regarding "good" assessment of severity of problem referral rose by 250% among all LHV/midwives/nurses though the largest improvement (300%) was observed among the trained LHV/midwives/nurses. Interestingly, "good" management improved by 100% among the trained LHV/midwives/nurses though there was no improvement among the untrained LHV/midwives/nurses. [Table III.8]. Furthermore, regarding immediate management - "massage uterus" as a technique improved by 200%, 100% and 100% among all, trained and untrained LHV/midwives/nurses respectively. [Table III.9].

Knowledge of reasons for postpartum hemorrhage significantly improved. For example, knowledge regarding vaginal/cervical tear rose by 40% and 100% among all and trained LHV/midwives/nurses respectively. Interestingly, all trained and untrained LHV/midwives/nurses reported retained placenta as a reason for postpartum hemorrhage in the pre and post-KAPs. [Table III.10]

#### Puerperal Sepsis [Tables III.11, III.12 and III.13]

Generally the improvement in knowledge regarding puerperal sepsis among the trained LHV/midwives/nurses was minimal with the exception of knowledge regarding management. For example, "good" management for puerperal sepsis rose by 250%, 200% and 200% among all, trained and untrained LHV/midwives/nurses. [Table III.11]. A decline in knowledge regarding reasons for puerperal sepsis was observed among the trained LHV/midwives/nurses

though more untrained LHVs/midwives/nurses reported no hand washing prior to delivery or instruments not sterilised in the post-KAP as compared to the pre-KAP. [Table III.12]. However, an improvement in knowledge regarding methods for “*immediate*” management was observed among the trained LHVs/midwives/nurses but a decline among the untrained LHVs/midwives/nurses [Table III.13].

## TRADITIONAL BIRTH ATTENDANTS<sup>18</sup>

### Section I : Background Characteristics

The majority of TBAs in the catchment area of Korangi 8, Karachi were  $\geq 40$  years. There were eight TBAs who were widows. None of the TBAs reported that they had attended any refresher course prior to our training program whilst 27 of the 28 TBAs interviewed in the post-KLAP so reported. Interestingly, “*opportunity not available*” (68%) and “*no time*” (50%) were the major professed reasons for not attending refresher courses in the pre-KAP though the single TBA who did not attend our training program reported that refresher courses were “*not useful*” or “*expensive*”. [Table I.1]

### Section II : General Information

The specific health care offered by the TBAs during the antenatal period showed improvement except for advice on family planning or seeing women for antenatal care. Advice about breast feeding improved by 20% and 66.6% for all and trained TBAs. On the other hand, improvement regarding tetanus toxoid injections rose by 400% and 400% among all and trained TBAs. In absolute term, this reflected the addition of four TBAs who so reported in the post-KAP. As there was only a single untrained TBA on whom we had pre and post-KAPs completed, we will only be reporting any significant changes in absolute numbers for the untrained TBA. [Table II.1]

Change in knowledge regarding common obstetric complications were dismal except for vaginal hemorrhage, edema and anemia. For example, there was a marked improvement (116.6%) in knowledge regarding vaginal hemorrhage among the trained TBAs. However, a decline in knowledge for decreased fetal movement (75%) and malpresentation (50%) was observed among the trained TBAs. Table II.2.

Change in knowledge regarding high risk pregnancies was, disappointingly, minimal. For example, though there was a 200%, 300% and 200% improvement in level of knowledge for short height, grand multiparity and previous caesarean -section respectively but in absolute terms this reflected only two, three and two additional TBAs so reporting. Table II.3

Generally speaking, there was a marked improvement in knowledge regarding danger signs during the three phases of pregnancy. For example, “*spotting*” as a danger sign during antenatal period improved by 46.2% though there was no change in knowledge regarding “*headache not responding to drugs*”. [Table II.4]. During the puerperium, significant improvement was observed for “*decrease in frequency or intensity of pains*” (333.3%) and “*vaginal bleeding*” (137.5%) though there was a decline in knowledge for decreased “*fetal movement*”. [Table II.5]

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<sup>18</sup> Tables are in Appendix J

Similarly, in the postpartum phase of pregnancy, marked improvement was observed for “*severe abdominal pain*” (675%) and “*high grade fever*” (155.5%). [Table II.6]. Furthermore, knowledge regarding signs depicting that the newborn is “*not healthy*” also improved significantly. For example, “*meconium stained*” was not reported by even a singly TBA in the pre-KAP but was reported by 23 TBAs in the post-KAP. [Table II.7]

### Section III: Vignettes<sup>19</sup>

#### Pre-eclampsia [Tables III.1, III.2 and III.3]

A marked improvement was observed in the knowledge of outcome but improvement was poor for management and referral patterns for pre-eclampsia based on responses to the pre-eclampsia vignette. For example, “good” knowledge of outcome rose by 140% among the trained TBAs. However, only a 15.8% improvement in knowledge regarding “*immediate referral*” (without any emergency treatment or after some initial treatment) was reported among trained TBAs. Table III.1

We classified immediate management offered to pre-eclamptic women as comprising analgesics (including aspirin), sedatives and referral. Though there was a decline in knowledge regarding prescribing analgesics and sedatives among the trained TBAs but for referrals there was no change - all 23 trained TBAs so reported in the pre and post KAPs. Table III.2

Knowledge regarding adverse outcomes for mothers with pre-eclampsia improved significantly among the trained TBAs. For example, among the trained TBAs knowledge regarding maternal deaths improved by 142.8%. Table III.3

#### Prolonged / Obstructed labor [Tables III.4 and III.5]

We classified “*immediate referral*”, as refer straight away with or without some initial, harmless management. Though overall improvement in knowledge for “*immediate referral*” was 69.2% among all TBAs, this rose to 100% among the trained TBAs. [Table III.4].

“*Transverse lie*” reported as a reason for prolonged / obstructed labor improved by 111.1% among the trained TBAs. However, “*small pelvic size*” showed a marked improvement (240%) among the trained TBAs. On the other hand, the untrained TBA only reported “*transverse lie*” as a reason for prolonged/obstructed labor. [Table III.5]. [Table III.6].

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For details regarding categorization of vignettes refer to Appendix E

Threatened Abortion [Tables III.6]

Generally speaking, change in knowledge regarding severity of problem and management was unremarkable as most of the TBAs reported “good” management or a “good” assessment of the severity of the problem in the pre-KAPs. For example, 20 of the 23 trained TBAs reported “good” management in the pre-KAP and this rose to 22 of the 23 TBAs in the post-KAP. [Table III.6].

Postpartum Hemorrhage [Tables III.7, III.8 and III.9]

Improvement in knowledge regarding postpartum hemorrhage especially in the context of severity of problem, management and reasons showed only marginal improvement among the trained TBAs. In fact, “immediate” referral declined by 33.3% though “delayed” referral rose by 50% among the trained TBAs. [Table III.7]. Furthermore, regarding immediate management - “massage uterus” as a technique improved by 200% and 275% among all and trained TBAs though the single untrained TBA also reported “massage uterus” in the post-KAP only. [Table III.9]. Giving oxytocics improved significantly among the trained TBAs - none of the trained TBAs reported prescribing oxytocics in the pre-KAPs though 6/23 trained TBAs so reported in the post-KAPs. [Table III.8]

Knowledge of reasons for postpartum hemorrhage improved marginally. For example, knowledge regarding vaginal/cervical tear rose by 16.7% and 20% among all and trained TBAs.. [Table III.9].

# DISCUSSION

## INTENSIVE TRAINING COURSE

Overall, despite only a three day intensive course, significant improvement in knowledge regarding obstetric complications and its immediate management are reported. However, there are differences in the level of improvement among the four cadres of HCPs. For example, though the initial scores of the LHV/midwives/nurses were higher than the other cadres of HCPs in the pre-test, there was no statistically significant improvement on comparing the pre-test with the post-test scores either in the overall scores or on individual case studies. This most probably reflects the small number of LHV/midwives/nurse who attended the training program. [Table 1].

In the case study of antepartum hemorrhage, the doctors scored the highest among all four cadres of HCPs, but strikingly, two doctors reported vaginal examination in the post-test as compared to a single doctor in the pre-test. [Table 2] Furthermore, 21 of the 22 TBAs also reported performing a vaginal examination for the case study of antepartum hemorrhage. [Table 5] This is significant as, during the intensive training course, it was emphasized that vaginal examination for antepartum hemorrhage is “dangerous” due to the possibility of placenta previa, and consequently should be avoided by them. This leads us to suggest that emphasis on type of physical examination needs to be addressed in future training programs, especially for doctors and TBAs.

In eclampsia, the only HCP who showed a statistically significant improvement were the TBAs - the significant improvement was for “turning patient on her side” (140%). [Tables 1 and 5]. This most probably reflects the ease with which the TBAs could, in fact, perform this immediate management and hence we assume that they retained this knowledge much more than the other HCPs.

## KNOWLEDGE, ATTITUDE AND PRACTICE EVALUATION

### DOCTORS

Generally, the level of improvement in the knowledge regarding management, referral patterns, reasons and cause of delay for the three major obstetric complications of hemorrhage, eclampsia, prolonged/obstructed labor was high except for puerperal sepsis where improvement was moderate to high.

The major themes where improvement in knowledge was observed was in management and referral patterns. For example, for prolonged/obstructed labor “good” management rose by 60%

among the trained doctors but fell by 20% among the untrained doctors [Table III.6]. Likewise, “good” management for puerperal sepsis rose by 50% among the trained doctors and fell by 33.3% among the untrained doctors illustrating the effectiveness of our training program in improving knowledge [Table III.13]. However, exploring the more basic management techniques, we have reported a disparity in the level of improvement. For example, “*massage uterus*” as an immediate management for postpartum hemorrhage was reported only by a single trained doctor both in the pre and post KAPs though by none of the untrained doctors [Table III.11]. “*Massage uterus*” was a key message that we were imparting in our training program but our results demonstrate that the doctors did not recognize or remember that an immediate management technique could be “*massage uterus*”.

It is important to note here that in our catchment area we identified two female doctors though none attended our training program. The doctors who attended our training program were all male. Thus, though they do not conduct delivery or provide postpartum care and, therefore cannot relate to problems occurring during these phases of pregnancy, we nevertheless feel that they need to be trained as referrals are made to them. In addition, uterine atony as a reason for postpartum hemorrhage was reported by negligible numbers of doctors (n=2) in the pre and post KAPs. The dismal lack of knowledge regarding the most common cause of postpartum hemorrhage by the doctors reflects, we feel, the poor knowledge of “*uterine massage*” as a possible management technique for postpartum hemorrhage. Consequently, the concept of a video film depicting basic skills at the primary care level to be used during the training program will, we hope, have an impact on the knowledge of this basic management skill. On the other hand, the level of improvement for provision of “oxytocics” as a therapeutic management skill was moderate - 33.3% improvement among trained doctors [Table III.11].

Overall, our training stressing appropriate referral had a significant impact on the level of knowledge of the trainees. For example, for postpartum hemorrhage, 7/8 trained doctors reported “*immediate referral*” in the post-KAP whilst none of them had so reported in the pre-KAP [Table III.10]. Similar levels of improvement was reported for the other obstetric complications.

Information regarding reason/s for the obstetric complication, adverse outcomes and cause of delay also improved significantly among the trained doctors illustrating the effectiveness of our training program in improving knowledge. For example, “*ruptured uterus*” being an adverse outcome for prolonged/obstructed labor improved by 150% among the trained doctors but fell by 100% among the untrained doctors [Table III.8]. “*Retained placenta*” stated as a reason for postpartum hemorrhage rose by 200% among the trained doctors and by 100% by the untrained doctors. [Table III.12]. On the other hand, “*no hand washing prior to delivery*” as a reason for puerperal sepsis rose minimally (40%) among the trained doctors but significantly (200%) among the untrained doctors, illustrating the need for change in the method/content of training for puerperal sepsis [Table III.14].

The improvement in overall knowledge regarding obstetric complications and risk factors for high-risk pregnancies, though discussed in our training program, showed little impact as only minimal change in level of improvement has been reported [Tables II.1 and II.2]. Consequently,

increasing the time devoted to sessions on these themes as well as greater utilization of visual aids needs to be advocated.

In summary, the level of improvement in knowledge for the major themes of referral and management is significant with minor exceptions except for puerperal sepsis where the improvement is moderate to minimal. Consequently, we feel that the training program for doctors, though needing minor modifications including the greater utilization of visual aids, as mentioned above, should be incorporated as a continuous medical education training program for primary care level practitioners.

## HEALTH ASSISTANTS

Overall, the level of improvement in the knowledge regarding management, referral patterns, reasons and cause of delay for the three major obstetric complications of hemorrhage, eclampsia, prolonged/obstructed labor was moderate except for puerperal sepsis where improvement was poor.

The major theme where improvement in knowledge was observed was in management. For example, for postpartum hemorrhage “good” management rose by 100% among the trained health assistants but fell by 100% among the untrained health assistants [Table III.10]. Likewise, “good” management for puerperal sepsis rose by 400% among the trained health assistants though two of the untrained health assistants so reported illustrating the effectiveness of our training program in improving knowledge [Table III.13]. However, exploring the more basic management techniques, we have reported a disparity in the level of improvement. For example, “massage uterus” as an immediate management for postpartum hemorrhage was reported only by a single trained and untrained health assistant but only in the pre-KAP. [Table III.11]. “Massage uterus” was a key message that we were imparting in our training program but our results demonstrate that the health assistants did not recognize or remember that an immediate management technique could be “massage uterus”.

It is important to note here that the health assistants who attended our training program were all male. Thus, though they do not conduct delivery or provide postpartum care and, therefore cannot relate to problems occurring during these phases of pregnancy, we nevertheless feel that they need to be trained as referrals are made to them. In addition, uterine atony as a reason for postpartum hemorrhage was reported by none of the health assistants in the pre and post KAPs. The dismal lack of knowledge regarding the most common cause of postpartum hemorrhage by any cadre of HCP, reflects, we feel, the poor knowledge of “uterine massage” as a possible management technique for postpartum hemorrhage. Consequently, the concept of a video film depicting basic skills at the primary care level to be used during the training program will, we hope, have an impact on the knowledge of this basic management skill.

Overall, our training stressing appropriate referral had a significant impact on the level of knowledge of the trainees with respect to referrals only for prolonged/obstructed labor. [Table

III.6] which suggests that methods/techniques for training of health assistants needs to be modified.

Information regarding reason/s for the obstetric complication, adverse outcomes and cause of delay also improved moderately among trained health assistants illustrating the effectiveness of our training program in improving knowledge. For example, “*ruptured uterus*” being an adverse outcome for prolonged/obstructed labor improved by 400% among the trained health assistants but only one untrained health assistant so reported in the post-KAP. [Table III.8]. “*Retained placenta*” stated as a reason for postpartum hemorrhage rose by 200% among the trained health assistants but there was no change in knowledge by the untrained health assistants. [Table III.12]. On the other hand, “*no hand washing prior to delivery*” as a reason for puerperal sepsis rose moderately (66.7%) among the trained health assistants but by 100% among the untrained health assistants, illustrating the need for change in the method/content of training for puerperal sepsis [Table III.14].

The improvement in overall knowledge regarding obstetric complications and risk factors for high-risk pregnancies, though discussed in our training program, showed little impact as only minimal change in level of improvement has been reported [Tables II.1 and II.2]. Consequently, increasing the time devoted to the sessions on these themes needs to be highlighted.

In summary, the level of improvement in knowledge for management is moderate with the exception for puerperal sepsis where the improvement is minimal. On the other hand, improvement for referrals was distressingly low as was improvement in “*immediate*” management. Consequently, we feel that the training program for health assistants needs significant modifications, especially in the method, content and technique of training. We, therefore, are in a dilemma whether to include health assistants in future Safe Motherhood Training programs as the effectiveness illustrated herein is moderate to minimal. However, on consultation with the trainers it was suggested that though the health assistants attended the training program, their comprehension of the finer details of the content of the curricula was poor and hence the suggestion that they not be included in future Safe Motherhood training programs.

## LADY HEALTH VISITORS / MIDWIVES / NURSES

Generally, the level of improvement in the knowledge regarding management, referral patterns, reasons and cause of delay for the three major obstetric complications of hemorrhage, pre-eclampsia and prolonged/obstructed labor was high except for puerperal sepsis where improvement was moderate.

The major themes where improvement in knowledge was observed was in management and reasons for the specific obstetric complication. For example, for postpartum hemorrhage “*good*” management rose by 100% among the trained LHVs/midwives/nurses but no change among the untrained LHVs/midwives/nurses [Table III.8]. Likewise, “*immediate*” referral for prolonged/obstructed labor rose by 300% among the trained LHVs/midwives/nurses but also rose by 200% among the untrained LHVs/midwives/nurses. [Table III.4]. Similarly, knowledge

regarding “good” assessment of the severity of the postpartum hemorrhage rose by 300% among the trained LHV/midwives/nurses with no change observed among the untrained LHV/midwives/nurses. [Table III.8]. On the other hand, the level of improvement among trained LHV/midwives/nurses for reasons for puerperal sepsis was disappointing and suggests that more attention needs to be given in the training program to puerperal sepsis. [Table III.12].

However, exploring the more basic management techniques, we observed an overall marked improvement in knowledge. For example, improvement in knowledge regarding “*massage uterus*” as an immediate management for postpartum hemorrhage was minimal for doctors and health assistants but among the trained and untrained LHV/midwives/nurses there was a marked improvement. [Table III.9]. “*Massage uterus*” was a key message that we were imparting in our training program but our results demonstrate that the LHV/midwives/nurses recognized or remembered that an immediate management technique could be “*massage uterus*”..

The improvement in overall knowledge regarding obstetric complications and the need for referrals, and risk factors for high-risk pregnancies, though discussed in our training program, showed little impact as only minimal change in level of improvement has been reported [Tables II.1, II.2 and II.3]. Consequently, increasing the time devoted to the sessions on these themes needs to be highlighted.

In summary, the level of improvement in knowledge for the major themes of referral and management is significant with minor exceptions except for puerperal sepsis where the improvement is minimal. Consequently, we suggest that the training program for LHV/midwives/nurses, though needing minor modifications including the need for greater utilization of visual aids, as mentioned above, should be incorporated as a continuous training program for LHV/midwives/nurses.

## TRADITIONAL BIRTH ATTENDANTS

Generally, the level of improvement in the knowledge regarding management and referral patterns was poor except for postpartum hemorrhage where there was a significant improvement in the assessment of immediate management - specifically “*massage uterus*” and “*provision of oxytocics*” [Tables III.8]. On the other hand, knowledge regarding reasons for prolonged/obstructed labor improved significantly [Table III.5] but recognition of obstetric complications [Table II.2] or reasons for high risk pregnancy [Table II.3] was poor.

Interestingly, recognition of danger signs for the mother or baby during antenatal, puerperium or postnatal period improved significantly. For example, improvement in knowledge regarding spotting during the antenatal period was 46.2%, for decrease in frequency or intensity of pain was 333.3% during the puerperium and for purulent vaginal discharge during the postnatal period was 160%. [Tables II.4, II.5 and II.6]

Overall, our training program stressing appropriate management and referral moderately improved knowledge for these themes but a more significant improvement was observed for the recognition of danger signs during antenatal, natal and postnatal periods as well as for the newborn. We believe that for TBAs recognition of such signs is a major improvement. Consequently we suggest modifications in our training program so that it is more geared to the level of the TBAs. Specifically, modifications need to be addressed to the content and teaching methodologies specifically focusing on greater utilization of visual aids. Furthermore, we believe that a continuous education training program for TBAs along with close supervision be incorporated for TBAs in any Safe Motherhood project/s. A case study illustrating behavior change for management and referral of prolonged labor by a TBA is described in Appendix K.

## CONCLUSION

Generally speaking, the improvement in knowledge regarding management and referral patterns among the four cadres of HCPs was significant though there were exceptions especially among health assistants and TBAs. However, the overall improvement is extremely encouraging for advocating such training programs among primary care practitioners for Safe Motherhood.

The “true” effectiveness of our training program could only have been demonstrated by a critical assessment of behavior change in the context of documented improvement in prompt and timely referral to JPMC for life-threatening obstetric complications. The lack of an assessment of behavior change is mainly due to our inability to implement the clinic and JPMC based health information system<sup>20</sup> [HIS]. Thus, we cannot suggest that such training programs will increase the number of women with obstetric complications who utilize appropriate medical services which was the goal of our project but can report that improvement in knowledge in management and referral patterns, especially among doctors and LHV/midwives/nurses, has been substantial.

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<sup>20</sup> Due to bureaucratic issues in instituting the HIS in JPMC and lack of support from the clinics in the catchment area.

## Health Care Providers Training Program

Month	Topic	Objectives
July, 97	Intensive Training Course	<ol style="list-style-type: none"> <li>1. Understand the role of HCPs in the promotion of Safe Motherhood practices in Pakistan</li> <li>2. Differentiate between mild, moderate and severe complications</li> <li>3. Manage mild complication appropriately</li> <li>4. Refer moderately severe and severe complication to appropriate facility after immediate, appropriate action/management</li> </ol>
August, 97	"Mamta ki Hifazat" Video	<ol style="list-style-type: none"> <li>1. Reinforce the information and messages given in the intensive training course</li> <li>2. Provide information regarding high risk pregnancies</li> </ol>
September, 97	Antenatal Care	<ol style="list-style-type: none"> <li>1. Take proper history</li> <li>2. Perform proper examination</li> <li>3. Request relevant laboratory tests</li> <li>4. Give advise and treatment</li> <li>5. Identify high risk pregnancies</li> <li>6. Refer to hospital all high risk pregnancies and those who develop complications during the course of pregnancy</li> </ol>
October, 97	Counseling/IEC Materials	<ol style="list-style-type: none"> <li>1. Become familiar with technical and social dimensions of the IEC materials</li> <li>2. Understand the advantages of the preventive and complications posters</li> <li>3. Understand the advantages of the emergency booklet and the antenatal card</li> <li>4. Counsel / advise mothers and their husbands for using the IEC materials</li> </ol>
November, 97	Family Planning	<ol style="list-style-type: none"> <li>1. Understand the need for contraception</li> <li>2. Know the different methods of contraception</li> <li>3. Understand briefly the indications, contraindications and side effects of each type of contraceptive method</li> <li>4. Help the client select an appropriate method</li> <li>5. Provide condoms and oral contraceptive pills</li> <li>6. Refer to appropriate facility for insertion of IUCD and tubal ligation</li> </ol>
December, 97	Breast-feeding	<ol style="list-style-type: none"> <li>1. Recognize the benefits of breast-feeding for both mother and baby</li> <li>2. Recognize the disadvantages of not breast-feeding</li> <li>3. Prepare the mother for breast-feeding in the antenatal period</li> <li>4. Recognize problems seen during breast-feeding</li> <li>5. Counsel/advise mothers about breast-feeding</li> </ol>

Month	Topic	Objectives
January, 98	Care of Newborn	<ol style="list-style-type: none"> <li>1. Understand the care and need of the baby at birth</li> <li>2. Counsel mother regarding appropriate cord care</li> <li>3. Demonstrate resuscitation of an asphyxiated baby</li> <li>4. Manage minor problems in the neonatal period</li> <li>5. Describe the immunization schedule for the child</li> </ol>
February, 98	Re-Cap: Intensive Training Course Mamta ki Hifazat Video	<ol style="list-style-type: none"> <li>1. To reiterate the information and messages given in the intensive training course</li> <li>2. To reinforce them with the help of the video film</li> </ol>
March, 98	IEC Materials	<ol style="list-style-type: none"> <li>1. Become familiar with the technical and social dimensions of the IEC materials</li> <li>2. Understand the advantages of the preventive poster</li> <li>3. Understand the advantages of the emergency booklet and antenatal card</li> <li>4. Counsel/advise mothers about complications</li> </ol>
April, 98	Reproductive Tract Infections	<ol style="list-style-type: none"> <li>1. Define reproductive tract infections</li> <li>2. Differentiate between physical and pathological vaginal discharges</li> <li>3. Identify the causes of vaginal discharge</li> <li>4. Manage common causes of vaginal discharge</li> <li>5. Refer resistant cases to JPMC</li> </ol>
May, 98	Infertility	<ol style="list-style-type: none"> <li>1. Define primary and secondary infertility</li> <li>2. Understand the common causes of primary and secondary infertility</li> <li>3. Take a pertinent history</li> <li>4. Counsel the couple regarding factors affecting conception</li> <li>5. Ask for semen analysis</li> <li>6. Select cases to be referred to gynecologist for further management</li> </ol>

Month	Topic	Objectives
June. 98	<p>Session I: Menstrual Disorders</p> <p>Session II: Breast Cancers Cervical Cancers Fistulae Utero-vaginal Prolapse</p>	<p>Session I</p> <p><b>Menstrual Disorders</b></p> <ol style="list-style-type: none"> <li>1. Enumerate the common menstrual disorders</li> <li>2. Understand the causes of the common menstrual disorders</li> <li>3. Give emergency treatment to control menorrhagia</li> <li>4. Perform simple investigations for diagnosing the disorders or facilitating treatment</li> <li>5. Identify and refer</li> </ol> <p>Session II</p> <p><b>Breast Cancers</b></p> <ol style="list-style-type: none"> <li>1. Be able to counsel all women for self-examination of breast</li> <li>2. Be familiar with the method of examination of breast</li> <li>3. Understand that any lump in the breast or discharge from the nipple maybe a sign of breast cancer</li> <li>4. Refer any women who complains of lump in the breast to a surgeon</li> </ol> <p><b>Cervical Cancers</b></p> <ol style="list-style-type: none"> <li>1. Understand that cervical cancer is the most common cancer of the genital tract in Pakistan</li> <li>2. Understand that it can be prevented by screening high risk women</li> <li>3. Understand that it can be diagnosed early if symptoms and signs are recognized</li> <li>4. Refer to a gynecologist any woman who has symptoms/suggestions of cervical cancer</li> </ol> <p><b>Fistulae</b></p> <ol style="list-style-type: none"> <li>1. Understand that fistulae are abnormal communications between two organs of the body</li> <li>2. Understand the cause of fistulae</li> <li>3. Recognize the symptoms of fistulae</li> <li>4. Recognize that fistulae are preventable</li> <li>5. Refer all cases with symptoms suggestive of fistulae to a gynecologist</li> </ol> <p><b>Utero-vaginal prolapse</b></p> <ol style="list-style-type: none"> <li>1. Understand the causes of utero-vaginal prolapse</li> <li>2. Recognize the signs and symptoms of prolapse</li> <li>3. Refer all such cases to a gynecologist</li> </ol>
September, 98	<p>Screening of Obstetrics Skills Video Distribution of Certificates</p>	<p>Demonstrate basic skills at the primary care level for prevention and management of obstetric complications</p>

# Intensive Training Course - Evaluation Questionnaire

Doctors, Health Assistants, Lady Health Visitors/Midwives/Nurses

## INSTRUCTIONS

You have THIRTY MINUTES to complete the Pretest.

- Four case studies are given to you.
- Read each case study carefully.
- Each case study has three/four sections OR questions which is followed by a list of responses.
- Select the required NUMBER of responses from the list and place a tick mark (✓) in the box against each.

**PLEASE COMPLETE ALL SECTIONS OF EACH CASE STUDY.**

THANK YOU.

I.D. Code -----

Name -----

## CASE STUDY ONE

Hamida, 30 years old and eight months pregnant, is brought to your clinic. This is Hamida's fifth pregnancy. Hamida's neighbour informs you that whilst cooking, Hamida started vaginal bleeding and soaked her shalwar. She has no pain (contraction).

**Q 1. What is the most likely cause of this condition? Select one from the following list:**

1. Threatened Abortion
2. Inevitable Abortion
3. Ante Partum Hemorrhage due to placenta previa
4. Ante Partum Hemorrhage due to abruptio placenta
5. Heavy "show"
6. Bleeding due to cervical polyp
7. Premature Labour

**Q 2. What immediate actions would you take for Hamida?**

- i) NO Action required.
- ii) **If you consider that Hamida's condition requires actions, from the following, select upto six you consider the most appropriate.**
1. Advise patient of risk
  2. Check Vital signs
  3. Check foetal heart sounds
  4. Conduct abdominal examination
  5. Perform Vaginal examination
  6. Check for amount of Vaginal bleeding on Pads / Shalwar
  7. Put up an IV drip
  8. Order urine examination
  9. Check Hemoglobin
  10. Get blood cross matched
  11. Give blood transfusion
  12. Order Ultrasound
  13. Give Tablet "Ponstan"
  14. Give injection "Syntocinon"
  15. Give injection "vitamin K"
  16. Give injection "valium"

Q 3. After immediate management of Hamida, what further steps will you take? Select one from the following list

- 1. Send her home after immediate selected action
- 2. Send her home and advise to see her doctor the following day
- 3. Admit her to your own clinic
- 4. Transfer her to a nearby clinic
- 5. Refer her to JPMC

## CASE STUDY TWO

Nasima is expecting her first child. She is full-term pregnant. She started labour pains 20 hours earlier which were very strong for about 4 hours, but now have become weaker. Nasima has still not delivered and has been brought to your clinic.

**Q 1. Which is the most likely diagnosis? Select one from the following list:**

1. False Labour
2. Prolonged Labour
3. Obstructed Labour
4. Normal Labour

**Q 2. What could be the causes of this condition? Select two you think most appropriate?**

1. No cause - this is normal in a primigravida
2. Breech Presentation
3. Occipito posterior position
4. Face presentation
5. Cord presentation
6. Cephalo pelvic disproportion
7. In co-ordinate uterine action
8. Small baby

**Q 3. What IMMEDIATE actions would you take for Nasima? Select up to six which you consider most appropriate.**

1. Check Vital signs
2. Check for signs of dehydration
3. Check presentation of foetus by abdominal examination
4. Check station of head by abdominal examination
5. Perform vaginal examination
6. Give antibiotics
7. Set up an IV drip line
8. Give oxygen
9. Give injection Syntocinon
10. Give I.M. Ergometrine
11. Any other action, Please specify

Q 4. After immediate management of Nasima, what *further steps* will you take? Select one from the following list

- 1. Monitor and wait further
- 2. Refer Nasima to a nearby Maternity Home
- 3. Refer Nasima to JPMC

### CASE STUDY THREE

You have just delivered 17 years Ulfat of a live baby boy. She had come to you two hours earlier with labour pains and oedema all over the body. On checking her BP on admission, it was found to be 170/110 mm Hg. Soon after delivery she has a seizure/fit.

**Q 1. Which is the most likely diagnosis? Select one from the following list:**

1. Epilepsy
2. Eclampsia
3. Cereberal Malaria
4. Cereberal Haemorrhage
5. Tetanus
6. Hysteria

**Q 2. What IMMEDIATE actions would you take for Ulfat? Select up to six which you consider most appropriate.**

1. Take history from attendant about similar fits in this pregnancy
2. Take history from attendant of fits even when NOT pregnant
3. Perform abdominal examination
4. Perform vaginal examination
5. Maintain airway
6. Turn her on her side
7. Check BP
8. Catheterize
9. Give injection Diazepam (valium)
10. Give injection Ergometrine
11. Give oxygen
12. Any other Specify : \_\_\_\_\_

**Q 3. After immediate management of Ulfat, what further steps will you take? Select one from the following list**

1. Continue to keep her with you and treat her
2. Refer her to JPMC straightway
3. Refer her to JPMC if she has further fits

## CASE STUDY FOUR

Kulsum delivered a baby girl at home four days earlier and is breast feeding her baby. She has come to your clinic with high fever, headache, shivering and lower abdominal pain for two days. She has vomited twice and the lochia has been foul smelling.

Q 1. Which is the most likely cause of this condition? Select one from the following list:

1. Appendicitis
2. Urinary tract infection
3. Malaria
4. Mastitis
5. Genital tract Infection
6. Gastritis

Q 2. What IMMEDIATE actions would you take for Kulsum? Select up to six which you consider most appropriate.

1. Check Temperature
2. Check BP
3. Perform breast exam
4. Perform abdominal exam
5. Perform vaginal examination.
6. Give Paracetamol/ Aspirin tablet.
7. Give antimalarial tablets.
8. Do cold sponging if temperature is high.
9. Give antibiotic by injection
10. Give oral antibiotic.
11. Start I.V Infusion
12. Give Injection Diazepam.

Q 3. After immediate management of Kulsum, what further steps will you take? Select one from the following list

1. Send her home with treatment
2. Admit her to your clinic for monitoring and treatment
3. Send her to JPMC

# **Intensive Training Course - Evaluation Questionnaire**

## **Traditional Birth Attendants**

### **INSTRUCTIONS**

You have **THIRTY MINUTES** to complete the Pretest.

- Four case studies are given to you.
- Read each case study carefully.
- Each case study has three/four sections OR questions which is followed by a list of responses.
- Select the required **NUMBER** of responses from the list and place a tick mark (✓) in the box against each.

**PLEASE COMPLETE ALL SECTIONS OF EACH CASE STUDY.**

THANK YOU.

I.D. Code -----

Name -----

## CASE STUDY ONE

Hamida, 30 years old and eight months pregnant, is brought to your clinic. This is Hamida's fifth pregnancy. Hamida's neighbour informs you that whilst cooking, Hamida started vaginal bleeding and soaked her shalwar. She has no pain (contraction).

### I. What immediate actions would you take for Hamida?

- i) NO Action required.
- ii) If you consider that Hamida's condition requires actions, from the following, select upto four you consider the most appropriate.
  - 1. Conduct abdominal examination
  - 2. Perform Vaginal examination
  - 3. Check for amount of Vaginal bleeding on Pads / Shalwar
  - 4. Put up an IV drip
  - 5. Give injection "Syntocinon"
  - 6. Give injection " vitamin K"
  - 7. Get blood cross matched
  - 8. Give injection " valium"

### II. After immediate management of Hamida, what further steps will you take? Select one from the following list

- 1. Go her home after giving her immediate selected action
- 2. Transfer her to a nearby clinic
- 3. Refer her to JPMC

## CASE STUDY TWO

Nasima is expecting her first child. She is full-term pregnant. She started labour pains 20 hours earlier. which were very strong for about four hours, but now have become weaker. Nasima has still not delivered and has been brought to your clinic.

**I. What could be the causes of this condition? Select two you think most appropriate?**

1. No cause - this is normal in a primigravida
2. Breech Presentation
3. Big head
4. Occipito posterior position
5. In co-ordinate uterine action

**II. What IMMEDIATE actions would you take for Nasima? Select up to four which you consider most appropriate.**

1. Check station of head by abdominal examination
2. Check presentation of foetus by abdominal examination
3. Perform vaginal examination
4. Set up an IV drip line
5. Check Vital signs
6. Give injection Syntocinon
7. Give I.M. Ergometrine

**III. After immediate management of Nasima, what further steps will you take? Select one from the following list**

1. Monitor and wait further
2. Refer Nasima to a nearby Maternity Home
3. Refer Nasima to JPMC

### CASE STUDY THREE

You have just delivered 17 years Ulfat of a live baby boy. She had come to you 2 hours earlier with labour pains and oedema all over the body. On checking her BP on admission, it was found to be 170/110 mm Hg. Soon after delivery she has a seizure/fit.

I **What IMMEDIATE actions would you take for Ulfat? Select up to four which you consider most appropriate.**

1. Take history from attendant of fits even when NOT pregnant
2. Take history from attendant about similar fits in this pregnancy
3. Perform abdominal examination
4. Perform vaginal examination
5. Turn her on her side
6. Check BP
7. Give injection Diazepam (valium)

II **After immediate management of Ulfat, what further steps will you take? Select one from the following list**

1. Continue to keep her with you and treat her
2. Refer her to JPMC straightway
3. Refer her to JPMC if she has further fits

## CASE STUDY FOUR

Kulsum delivered a baby girl at home four days earlier and is breast feeding her baby. She has come to your clinic with high fever, headache, shivering and lower abdominal pain for two days. She has vomited twice and the lochia has been foul smelling.

I **What IMMEDIATE actions would you take for Kulsum? Select up to four which you consider most appropriate.**

1. Check Temperature
2. Perform breast exam
3. Perform abdominal exam
4. Perform vaginal examination
5. Give Paracetamol/ Aspirin tablet
6. Give antimalarial tablets
7. Start I.V Infusion
8. Give Injection Diazepam

II **After immediate management of Kulsum, what further steps will you take? Select one from the following list**

1. Send her home after counseling
2. Take her to the nearby clinic for treatment.
3. Send her to JPMC.

**Intensive Training Course - Evaluation**  
**Re-categorization of Marks**  
**Doctors, Health Assistants, Lady Health Visitors/Midwives/Nurses**

There are four case studies in the intensive training course evaluation test. For each case study, the maximal total number of points are provided as well as the maximum points possible for each question. It is **important** to note that even though responses could potentially add up to a scoring beyond that which is maximum for a particular question (i.e. if respondent gives more responses than requested for a question and they all happen to be positively scored responses), the individual scoring should not provide scores that are more than what is the maximum score for that question. If for a particular question, the HCP has marked five responses instead of four then the response with highest score would be considered while marking the scores.

**Case Study # 1 [Overall Score = 15]**  
**Questions 1 - 3**

*Question # 1 [Maximum score = 3]*

Choice #	Score
1	0
2	0
3	3
4	3
5	0
6	0
7	0

*Question # 2 [Maximum score = 10]*

Choice #	Score
1	1
2	3
3	1
4	1
5	-5
6	1
7	3
8	0
9	0
10	1
11	-1
12	0
13	0
14	-5
15	0
16	0

*Question #3 [Maximum score = 2]*

Choice #	Score
1	-1
2	-1
3	0
4	0
5	2

**Case Study II [Overall Score = 20]**  
**Questions 1 - 4**

*Question # 1 [Maximum Score = 4]*

Choice #	Score
1	0
2	4
3	4
4	0

*Question #2 [Maximum Score = 4]*

Choice #	Score
1	-2
2	2
3	2
4	2
5	0
6	2
7	2
8	-2

*Question #3 [Maximum Score = 10]*

Choice #	Score
1	3
2	2
3	1
4	1
5	0
6	1
7	2
8	1
9	-5
10	-5
11	0

*Question #4 [Maximum Score = 2]*

Choice #	Score
1	0
2	1
3	2

**Case Study III [Overall Score = 20]**  
**Questions 1 - 3**

*Question #1 [Maximum Score = 4]*

Choice #	Score
1	1
2	4
3	-1
4	0
5	0
6	0

*Question #2 [Maximum Score = 10]*

Choice #	Score
1	1
2	1
3	0
4	0
5	2
6	2
7	2
8	0
9	2
10	-5
11	1
12	0

*Question #3 [Maximum Score = 6]*

Choice #	Score
1	-6
2	6
3	0

**Case Study IV [Overall Score = 15]**  
**Questions 1 - 3**

*Question #1 [Maximum Score = 3]*

Choice #	Score
1	1
2	1
3	0
4	1
5	3
6	-1

*Question #2 [Maximum Score = 10]*

Choice #	Score
1	2
2	0
3	1
4	2
5	0
6	2
7	0
8	2
9	1
10	0
11	0
12	0

*Question #3 [Maximum Score =2]*

Choice #	Score
1	-2
2	1
3	2

**Intensive Training Course - Evaluation**  
**Re-categorization of Marks**  
**Traditional Birth Attendants**

There are four case studies in the intensive training course evaluation test. For each case study, the maximal total number of points are provided as well as the maximum points possible for each question. It is **important** to note that even though responses could potentially add up to a scoring beyond that which is maximum for a particular question (i.e. if respondent gives more responses than requested for a question and they all happen to be positively scored responses), the individual scoring should not provide scores that are more than what is the maximum score for that question. If for a particular question, the HCP has marked five responses instead of four then the response with highest score would be considered while marking the scores.

**Case Study # 1 [Overall Score = 15]**  
**Questions 2 - 3**

*Question # 2 [Maximum score = 10]*

Choice #	Score
1	4
2	-5
3	4
4	0
5	-5
6	1
7	0
8	1

*Question #3 [Maximum score = 5]*

Choice #	Score
1	0
2	0
3	5

**Case Study II [Overall Score = 20]**  
**Questions 2 - 4**

*Question #2 [Maximum Score = 5]*

Choice #	Score
1	-2
2	2
3	2
4	1
5	3

*Question #3 [Maximum Score = 10]*

Choice #	Score
1	3
2	3
3	2
4	0
5	2
6	-5
7	-5

*Question #4 [Maximum Score = 5]*

Choice #	Score
1	0
2	1
3	5

**Case Study III [Overall Score = 15]**  
**Questions 2 - 3**

*Question #2 [Maximum Score = 7]*

Choice #	Score
1	1
2	1
3	0
4	0
5	2
6	2
7	2

*Question #3 [Maximum Score = 8]*

Choice #	Score
1	-8
2	8
3	0

**Case Study IV [Overall Score = 10]**  
**Questions 2 - 3**

*Question #2 [Maximum Score = 6]*

Choice #	Score
1	1
2	1
3	2
4	0
5	2
6	0
7	0
8	0

*Question #3 [Maximum Score = 4]*

Choice #	Score
1	-4
2	1
3	4

IDCODE:

**KAP QUESTIONNAIRE OF PROVIDERS**

**DOCTORS**

Visit #	Date	Status
1	___ / ___ / ___	1. Complete 2. Incomplete 3. Refusal
2	___ / ___ / ___	1. Complete 2. Incomplete 3. Refusal
3	___ / ___ / ___	1. Complete 2. Incomplete 3. Refusal

**PERSONAL DATA**

<b>Name of Respondent</b>		
<b>Age of Respondent (years)</b>		
<b>Gender of Respondent</b>	1. Male    2. Female	
<b>Marital Status</b>	1. Single    2. Married    3. Widow(er)    4. Divorcee	
<b>Field Site</b>	<b>Korangi Sector # 8</b> 1. BIL A    2. BIL B    3. GUL C    4. GUL D    5. GUL E 6. GUL F    7. BAN    8. MAG    9. Others (Specify)	
<b>Site of Interview</b>	1. Health Facility    2. Community	
<b>Home Address</b>		
<b>Phone</b>		
<b>Work Address</b>		
<b>Phone</b>		
<b>Name of Interviewer</b>	1. NM                      2. SZ                      3. NQ	

## SECTION A: EDUCATION, TRAINING AND EXPERIENCE

S#	Questions and Filters	Coding Categories	Answers
1	Qualification:	1. MBBS 2. MCPS/DGO 3. MRCOG/FCPS 4. Others (Specify)	
For quacks, homeopaths working as doctors write their actual qualification in Q1 House job:			
2	Training in Ob/ gyn?	1. House Job => Table A 2. P.G. Training => Q3 3. Other training (Specify) => Table A 999.NA	
3	Duration of post graduate training in Ob/gyn (after house job)?	1. Less than 1 year 2. 1-5 years 3. > 5years 999.NA.	

Any training other than Ob/gyn:

TABLE A:	Col. I	Col. II	Col. III
	Have you attended any of the following?  1. Yes 2. No	How many since graduation ?  (#) 999. NA	Reason(s) for not attending:  1. No time 2. Opportunity not available 3. Not interested 4. Not useful 5. Expensive 6. Others (Specify) 999. NA  (list all possible responses)
1. Refresher courses	<u>4</u>	<u>6</u>	<u>8</u>
1 Meetings/Seminars/Symposiums	<u>5</u>	<u>7</u>	<u>9</u>

If Col. I = 2, then Col. II = 999. NA

If Col. I = 1, then Col. III = 999. NA

TABLE B:	CURRENT JOB STATUS				PREVIOUS JOB STATUS			
	Col. I a	Col. II a	Col. III a	Col. IV a	Col. I b	Col. II b	Col. III b	Col. IV b
	Where do you currently work?  1. Yes 2. No	How long have you been working in each facility?  1. <1 year 2. 1-5 years 3. >5 years 999.NA	How do you work?  1. Independently 2. Under supervision 999.NA	How long have you been working independently?  1. <1 year 2. 1-5 years 3. >5 years 999.NA	What is your previous work experience?  1. Yes 2. No	How long did you work in each facility?  1. <1 year 2. 1-5 years 3. >5 years 999.NA	How did you work?  1. Independently 2. Under supervision 999.NA	How long did you work independently?  1. <1 year 2. 1-5 years 3. >5 years 999.NA
1. Hospital	<u>10a</u>	<u>14a</u>	<u>18a</u>	<u>22a</u>	<u>10b</u>	<u>14b</u>	<u>18b</u>	<u>22b</u>
2. Clinic	<u>11a</u>	<u>15a</u>	<u>19a</u>	<u>23a</u>	<u>11b</u>	<u>15b</u>	<u>19b</u>	<u>23b</u>
3. Maternity home	<u>12a</u>	<u>16a</u>	<u>20a</u>	<u>24a</u>	<u>12b</u>	<u>16b</u>	<u>20b</u>	<u>24b</u>
4. Others (Specify)	<u>13a</u>	<u>17a</u>	<u>21a</u>	<u>25a</u>	<u>13b</u>	<u>17b</u>	<u>21b</u>	<u>25b</u>

If Col. Ia = 2, then Cols. IIa, IIIa & IVa = 999.NA

If Col. IIIa = 2, then Col. IVa = 999.NA

If Col. Ib = 2, then Cols. IIb, IIIb & Col. IVb = 999.NA

If Col. IIIb = 2, then Col. IVb = 999.NA

S#	Questions and Filters	Coding Categories	Answers
26	How many (on average) deliveries do you conduct/ month?	# of deliveries / month 88. Don't conduct deliveries (if Q26=88 then skip Qs. 118-120)	
27a	Have you ever been called to assist in the deliveries?	1. Yes => Q26b 2. No => Q27	
27c	How many on average deliveries are you called for/year?	# of deliveries/year	
27c	What are the reasons that you and called for assisting in the deliveries? (Specify)  (list all possible responses)	1. Give synto/ methergin; enhance labor pains 2. Check B.P. 3. Fits 4. Bleeding 5. Check/resuscitate baby 6. Others a. Vomiting b. Analgesic injections c. Any thing else (Specify)	
27	How many on average abortions do you manage/month ?	# of abortions / month 88. Don't deal	
28	What is the major type of abortion seen by you?	1. Spontaneous 2. Induced 3. Others (Specify) 88. Don't know	

**SECTION B: ANTENATAL CARE**

S#	Questions and Filters	Coding Categories	Answers
29	Do you see women for antenatal check ups?	1. Yes => Q30 2. No => Q44	
30	When do the majority of patients come for their first antenatal visits (booking) of their case?	1. 1 <sup>st</sup> trimester 2. 2 <sup>nd</sup> trimester 3. 3 <sup>rd</sup> trimester	

TABLE C:	Col. I	Col. II
	<p><b>How often do you call patients for their antenatal visits (in a normal pregnancy) during:</b></p> <p>1. Every month 2. Every 2 weeks 3. Every week 4. Others (Specify) 88. Do not call</p>	<p><b>How often do the majority of patients come for antenatal visits(in a normal pregnancy) during:</b></p> <p>1. Every month 2. Every 2 weeks 3. Every week 4. Others (Specify) 88. Do not come</p>
1. 1 <sup>st</sup> trimester	<u>31</u>	<u>34</u>
2. 2 <sup>nd</sup> trimester	<u>32</u>	<u>35</u>
3. 3 <sup>rd</sup> trimester	<u>33</u>	<u>36</u>

S#	Questions and Filters	Coding Categories	Answers
37	What antenatal care(ANC) do you provide in the first antenatal visit (in normal pregnancy)?  (list all possible responses)	<ol style="list-style-type: none"> <li>1. General exam</li> <li>2. Cardiovascular exam</li> <li>3. Pulmonary exam</li> <li>4. Hemoglobin</li> <li>5. Blood pressure</li> <li>6. Checking weight</li> <li>7. Urine for protein</li> <li>8. Urine for glucose</li> <li>9. Blood glucose</li> <li>10. Others (Specify)</li> </ol>	
38	In primiparas what additional investigations would you do?	<ol style="list-style-type: none"> <li>1. Rh factor</li> <li>2. Blood grouping</li> <li>3. Others (Specify)</li> </ol>	
39	Do you use any antenatal visit cards?	<ol style="list-style-type: none"> <li>1. Yes =&gt; Q40</li> <li>2. No =&gt; Q44</li> </ol>	
40	What information does the ANC card have on it?  (list all possible responses)	<ol style="list-style-type: none"> <li>1. Height</li> <li>2. Weight</li> <li>3. Urine for albumin</li> <li>4. Urine for glucose</li> <li>5. Height of fundus</li> <li>6. Presentation/position of fetus</li> <li>7. Fetal heart sounds</li> <li>8. Blood pressure</li> <li>9. Edema (Specify)</li> <li>10. Blood group</li> <li>11. Others (Specify)</li> </ol>	
41	Do you give the ANC cards to women to take home with them?	<ol style="list-style-type: none"> <li>1. Yes =&gt; Q42</li> <li>2. No =&gt; Q44</li> </ol>	
42	Do the majority of women bring their ANC cards with them on their subsequent visits?	<ol style="list-style-type: none"> <li>1. Yes =&gt; Q44</li> <li>2. No =&gt; Q43</li> </ol>	
43	The <b>main</b> reason for not bringing the ANC cards  (list all possible responses)	<ol style="list-style-type: none"> <li>1. Do not understand the importance of bringing it</li> <li>2. Forget to bring it</li> <li>3. Find it useless</li> <li>4. Others (Specify)</li> </ol>	
44	What condition do the majority of pregnant patients coming to you have?	<ol style="list-style-type: none"> <li>1. Normal pregnancy</li> <li>2. Complications (Specify)</li> </ol>	

S#	Questions and Filters	Coding Categories	Answers
-5a	<p>What are the three most common complications (in pregnancy) seen in your practice?</p> <p>(list according to priority)</p>	<ol style="list-style-type: none"> <li>1. Bleeding</li> <li>2. Swelling (Specify)</li> <li>3. Decreased fetal movement</li> <li>4. Jaundice</li> <li>5. Anemia</li> <li>6. Malpresentation</li> <li>7. High blood pressure</li> <li>8. Abdominal pain</li> <li>9. Vaginal discharge</li> <li>10. Diabetes</li> <li>11. APH</li> <li>12. Increased pressure feeling in the abdomen</li> <li>13. Eclampsia</li> <li>14. Some medical problem with mother</li> <li>15. Twins</li> <li>16. Weakness in mother</li> <li>17. Depression/tension</li> <li>18. Others (Specify)</li> <li>88. Don't know</li> </ol>	
-5b	<p>Do you think that there are some specific medical reasons that women can have difficulty with their pregnancy/labor?</p> <p>(list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. No reasons</li> <li>2. Age under 18</li> <li>3. First birth</li> <li>4. Height under 5 feet (short stature)</li> <li>5. Old for first birth</li> <li>6. Five or more previous deliveries</li> <li>7. History of delivery by operation</li> <li>8. History of premature birth</li> <li>9. History at least two miscarriages</li> <li>10. History of LBW baby excluding premature</li> <li>11. Previous child under 1 year of age</li> <li>12. Others (Specify)</li> <li>88. Don't know</li> </ol>	
-6	<p>Do you advise ALL mothers about breast feeding?</p>	<ol style="list-style-type: none"> <li>1. Yes =&gt; Q47</li> <li>2. No =&gt; Q48</li> </ol>	
-7	<p>When do you <b>start</b> advising about breast feeding in majority of cases?</p>	<ol style="list-style-type: none"> <li>1. 1<sup>st</sup> visit</li> <li>2. 2<sup>nd</sup> trimester</li> <li>3. 3<sup>rd</sup> trimester</li> <li>4. Postnatally</li> </ol>	
-8	<p>Do you examine mothers' breasts antenatally to prepare them for breast feeding?</p>	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> </ol>	

S#	Questions and Filters	Coding Categories	Answers
49	Do you give tetanus toxoid (TT) immunization to ALL mothers?	1. Yes => Q51 2. No => Q50	
50	What are your reasons for not giving tetanus immunization?  (list all possible responses)	1. Unavailability of TT injection 2. Unavailability of staff 3. Patient's non compliance 4. Already fully immunized 5. Patient's refusal 6. Others (Specify) 88. Don't know	
51	Do you advise about interval between pregnancies/ limiting of pregnancies?	1. Yes => Q52 2. No => Q55	
52	When do you <b>start</b> giving the advice about interval between pregnancies?	1. Antenatally => Q53 2. Postnatally => Q54 3. Only when asked for it => Q55	
53	When would you advise?	1. 1 <sup>st</sup> trimester => Q55 2. 2 <sup>nd</sup> trimester => Q55 3. 3 <sup>rd</sup> trimester => Q55	
54	When would you advise?	1. Immediately after delivery 2. Within 1 <sup>st</sup> week	
55	Are women referred to you for pregnancy related problems?	1. Yes => Q56 2. No => Q57	
56	Where do the majority come from?  (Only one response)	1. Another doctor 2. Another hospital 3. LHV/Midwives 4. Dai 5. Self referred 6. Others (Specify)	
57	Are you called by LHVs/ Midwives / Dais for a home visit?	1. Yes => Q58 2. No => Q59	
58	What are the reasons for referrals?  (list all possible responses)	1. Bleeding in early pregnancy 2. Bleeding in late pregnancy 3. Hypertension in pregnancy 4. Diabetes in pregnancy 5. Others (Specify)	

**Vignette # 1:**

**Sakina, a 17 year-old woman who got married nearly a year ago is pregnant for the first time. She is 32 weeks pregnant. Today, she woke up with severe headache. She has had swelling of the hands and face for about 2 weeks. She is very frightened and urgently comes to you. She reports her blood pressure to be 140/95 mm Hg.**

59	<p>What would you do?</p> <p>(list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. Give aspirin/analgesics =&gt; Q60</li> <li>2. Put her to bed =&gt; Q61</li> <li>3. Blood pressure measurement taken =&gt; Q62</li> <li>4. Give diuretics (Specify route and name) =&gt; Q63</li> <li>5. Give sedatives (specify route and name) =&gt; Q64</li> <li>6. Give hypotensives (Specify route and name) =&gt; Q65</li> <li>7. Admit in own setup =&gt; Q66</li> <li>8. Refer =&gt; Q67</li> <li>9. Others (Specify) =&gt; Q69</li> </ol>	
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Describe the method of management

60	How many days for aspirin/analgesics?	# of days	
61	How many days you will put her to bed?	# of days	
62	How many days for B.P. measurement ?	# of days	
63	How many days for diuretics ?	# of days	
64	How many days for sedatives ?	# of days	
65	How many days for hypotensives?	# of days	
66	How many days admit in own setup ?	# of days	

S#	Questions and Filters	Coding Categories	Answers
67	Where would you refer the patient?	<ol style="list-style-type: none"> <li>1. Private clinic/ Maternity home</li> <li>2. Private Hospital</li> <li>3. Government clinic</li> <li>4. Government Hospital</li> <li>5. Others (Specify)</li> </ol>	
68	Who would accompany the patient?	<ol style="list-style-type: none"> <li>1. You or any other doctor</li> <li>2. Health personnel (Specify)</li> <li>3. Family member</li> <li>4. Others (Specify)</li> </ol>	
69	<p>What advise would you give Sakina after initial management:</p> <p>(list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. To show herself to you regularly</li> <li>2. Decrease work load</li> <li>3. Get her blood pressure checked regularly</li> <li>4. Continue diuretics</li> <li>5. Continue aspirin</li> <li>6. Continue antihypertensives</li> <li>7. Others (Specify)</li> <li>88. Don't know</li> </ol>	
70	<p>What possible problems do you foresee in future for Sakina?</p> <p>(list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. Small baby</li> <li>2. Still birth</li> <li>3. Bleeding (APH)</li> <li>4. Fits / seizures (maternal)</li> <li>5. Premature delivery</li> <li>6. Maternal death</li> <li>7. Prolonged labour</li> <li>8. Others (Specify)</li> <li>88. Don't know</li> </ol>	
71	Have you ever seen a pregnant woman with such a complication?	<ol style="list-style-type: none"> <li>1. Yes =&gt; Q72</li> <li>2. No =&gt; Q74</li> </ol>	
72	When did you last see one?	<ol style="list-style-type: none"> <li>1. Past 6 months</li> <li>2. months-1 year</li> <li>3. &gt; 1 year</li> </ol>	
73	What did you do in that case.	<ol style="list-style-type: none"> <li>1. Referral (to JPMC or next higher level of provider)</li> <li>2. Hypotensives (name and route)</li> <li>3. Analgesics (name and route)</li> <li>4. Sedatives (Specify)</li> <li>5. Diuretics (name and route)</li> <li>6. Referral with hypotensives (Specify)</li> <li>7. Referral with analgesics (Specify)</li> <li>8. Referral with sedatives (Specify)</li> <li>9. Referral with diuretics (Specify)</li> <li>10. Did not give any treatment or refer</li> <li>11. Others (Specify)</li> </ol>	

**Vignette # 2**

**Hajra is full term pregnant and has started to have labor pains. Her mother-in-law, neighbor and sister Aisha have come to assist her. This is Hajra's fifth pregnancy. All of a sudden, Hajra had fits/seizures & this is when you were called in. You took care that the airway is patent (patient has no problems in respiration). She has been positioned on her side, in the meantime you inform Aisha that the patient has to be taken to the hospital immediately. Aisha reports back to you that Hajra's husband is not at home and the mother in law thinks it is unnecessary to take Hajra to hospital, after all this is her 5<sup>th</sup> pregnancy & she has been fine previously, she surely would be fine once the "gin/aaseb" goes away.**

74	<p>How would you deal with the situation?</p> <p>(list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. Wait till the husband comes along =&gt; Q75</li> <li>2. Discuss with the mother-in-law =&gt; Q78</li> <li>3. Let the family deal with it &amp; inform you once they have decided about it =&gt; Q78</li> <li>4. Call the husband immediately =&gt;Q77</li> <li>5. Take the patient in spite of mother-in-law's opposition =&gt; Q78</li> <li>6. Others (Specify) =&gt; Q78</li> </ol>	
<p>Describe the method of dealing with the situation:</p>			
75	<p>Why would you wait for the husband to come?</p> <p>(list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. For financial reasons =&gt; Q78</li> <li>2. Because the family wants it =&gt; Q78</li> <li>3. His permission is necessary =&gt; Q78</li> <li>4. Husband might not want to take his wife to hospital =&gt;Q76</li> <li>5. You want him to accompany the patient =&gt;Q78</li> <li>6. Others =&gt; Q78</li> </ol>	
76	<p>Why would he not want to take the wife to the hospital?</p> <p>(list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. Poor care at the hospital =&gt; Q78</li> <li>2. Financial reasons =&gt; Q78</li> <li>3. Others (Specify) =&gt; Q78</li> </ol>	

S#	Questions and Filters	Coding Categories	Answers
77	Why would you call for the husband immediately?  (list all possible responses)	<ol style="list-style-type: none"> <li>1. For financial reasons</li> <li>2. Because of the seriousness of the situation</li> <li>3. His permission is necessary</li> <li>4. Husband might not want to take her to the hospital</li> <li>5. You want him to accompany the patient</li> <li>6. Others (Specify)</li> </ol>	
78	Have you come across any such situations in the past 6 months?	<ol style="list-style-type: none"> <li>1. Yes =&gt; Q79</li> <li>2. No =&gt; Q80</li> </ol>	
79	How many times?	# of cases => Q80	
80	How would you manage the patient?  (list all possible responses)	<ol style="list-style-type: none"> <li>1. Maintain airway clear (Maybe put a padded spatula/ spoon in the patient's mouth)</li> <li>2. Note vitals: blood pressure, pulse rate, temperature</li> <li>3. Check urine output</li> <li>4. Oxygen mask, if needed</li> <li>5. Give I/V fluids (Specify)</li> <li>6. Give medications (Specify)</li> <li>7. Admit the patient under your own care</li> <li>8. Refer to the hospital after your treatment</li> <li>9. Refer the patient immediately</li> <li>10. Others (Specify)</li> <li>88. Don't know</li> </ol>	
	Describe method of management:		

<b>TABLE D:</b>	<b>Col. I</b>	<b>Col. II</b>	<b>Col. III</b>
	Would you give the following: 1. Yes 2. No	Dosage (mg ) 999.NA	For how many days? (#) 999.NA
1. I/V Valium	<u>81</u>	<u>85</u>	<u>89</u>
2. Oral Valium	<u>82</u>	<u>86</u>	<u>90</u>
3. Magnesium Sulfate I/V	<u>83</u>	<u>87</u>	<u>91</u>
4. Phenytoin I/V	<u>84</u>	<u>88</u>	<u>92</u>

If Col. I = 2, then Cols. II and III will be 999.NA

**Vignette # 3**

**Wasima, a primi with full term pregnancy has been in labor for 24 hours and not yet delivered. The dai who was called in when labor started is now worried and sends Wasima's husband to bring you home.**

Q3	<p>How would you react?</p> <p>(list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. Listen to what the dai has to say to you =&gt;Q94</li> <li>2. You would by pass her and see the patient on your own =&gt;Q94</li> <li>3. Ask all the attendants to wait (outside the room) while you attend to the patient =&gt; Q94</li> <li>4. Refer the patient right away =&gt;Q97</li> <li>5. Others (Specify) =&gt; Q94</li> </ol>	
<p>Describe method of management</p>			
-3a	<p>Which injection will you give?</p> <p>(if injection is mentioned in method of management)</p>	<ol style="list-style-type: none"> <li>1. Synto/ methergin I/V</li> <li>2. Synto/ methergin I/M</li> <li>3. Others (Specify)</li> </ol>	
-2	<p>Would you ask for the dai's assistance if needed?</p>	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> </ol>	
-5	<p>Would you hold somebody responsible for not calling you earlier?</p>	<ol style="list-style-type: none"> <li>1. Yes =&gt; Q96</li> <li>2. No =&gt; Q97</li> </ol>	
-6	<p>Who would you hold responsible?</p>	<ol style="list-style-type: none"> <li>1. Husband</li> <li>2. Other family members (Specify)</li> <li>3. Dai</li> <li>4. All of the above</li> <li>5. Others (Specify)</li> </ol>	

S#	Questions and Filters	Coding Categories	Answers
97	Why would you refer the patient?  (Only one response)	<ol style="list-style-type: none"> <li>1. You don't deal with such patients</li> <li>2. She needs operative procedure which is not possible at your facility</li> <li>3. She would die and the family will blame it on you</li> <li>4. Others (Specify)</li> </ol>	
98	What could be the causes of delay in delivery?  (list all possible responses)	<ol style="list-style-type: none"> <li>1. Breech</li> <li>2. Transverse</li> <li>3. Twins</li> <li>4. Large Baby</li> <li>5. CPD</li> <li>6. Uterine dysfunction</li> <li>7. Not in true labour</li> <li>8. Others (Specify)</li> <li>88. Don't know</li> </ol>	
99	Do you think this is a worrisome condition?	<ol style="list-style-type: none"> <li>1. Yes =&gt; Q100</li> <li>2. No =&gt; Q101</li> </ol>	
100	For whom is it worrisome?	<ol style="list-style-type: none"> <li>1. Only for mother</li> <li>2. Only for child</li> <li>3. For both</li> <li>4. No body</li> <li>5. For some one else (Specify)</li> </ol>	
101	In your opinion what kind of problems Wasima may face?  (list all possible responses)	<ol style="list-style-type: none"> <li>1. PPH =&gt;Q104</li> <li>2. Ruptured Uterus =&gt;Q104</li> <li>3. Problems with next pregnancy =&gt;Q104</li> <li>4. Trauma to child =&gt;Q104</li> <li>5. Congenital anomaly in child =&gt;Q104</li> <li>6. Fistula formation =&gt;Q102</li> <li>7. Anything else (Specify) =&gt;Q104</li> </ol>	
102	How can the fistula formation be prevented during pregnancy?	<ol style="list-style-type: none"> <li>1. Proper ANC to identify women with risks of prolonged/obstructed labor</li> <li>2. Properly trained personnel taking care of prolonged/obstructed labor</li> <li>3. Others (Specify)</li> </ol>	
103	How can fistula formation be prevented after delivery?	<ol style="list-style-type: none"> <li>1. Timely referral of patient with prolonged labor to hospital</li> <li>2. Putting indwelling catheter for a few days in women who had prolonged/obstructed labor</li> <li>3. Others (Specify)</li> </ol>	

**Vignette # 4**

**Musarrat who is 20 years old is pregnant for the first time. She does not have elders (mother-in-law etc.) at home & so lives alone with her husband. She is now three months pregnant and has had spotting for the past one week now.**

104	Do you think it is a serious condition ?	<ol style="list-style-type: none"> <li>1. Yes =&gt; Q105</li> <li>2. No =&gt; Q106</li> </ol>	
105	<p>Why do you think this situation is serious ?</p> <p>(list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. It may complicate the pregnancy in future (Specify)</li> <li>2. Musarrat may become anemic</li> <li>3. Musarrat may bleed (antenatally) in future</li> <li>4. She has an increased risk of having a spontaneous abortion</li> <li>5. Baby will be small</li> <li>6. Others (Specify)</li> </ol>	
106	<p>How would you manage her?</p> <p>(list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. Give advise about rest</li> <li>2. Tell her not to worry about it</li> <li>3. Follow her up in 1 weeks time</li> <li>4. Others (Specify)               <ol style="list-style-type: none"> <li>a. Treatment</li> <li>b. Advice</li> <li>c. Examination</li> <li>d. Any thing else (Specify)</li> </ol> </li> </ol>	

### SECTION C: DELIVERY CARE

S#	Questions and Filters	Coding Categories	Answers
107	Do you have operation theater facilities?	<ol style="list-style-type: none"> <li>1. Yes =&gt; Q108</li> <li>2. No =&gt; Q109</li> </ol>	
108	Do you perform the following procedures?  (list all possible responses)	<ol style="list-style-type: none"> <li>1. Evacuation</li> <li>2. D&amp;C</li> <li>3. Cesarean section</li> <li>4. Manual removal of placenta</li> <li>5. Any other (Specify)</li> </ol>	
109	How do you sterilize your instruments?  (list all possible responses)	<ol style="list-style-type: none"> <li>1. Boiling =&gt; Q110</li> <li>2. Autoclave =&gt; Q112</li> <li>3. Immersing in antiseptic solution =&gt; Q111</li> <li>4. No special method of sterilization =&gt; Q112</li> <li>5. Others (Specify) =&gt; Q112</li> </ol>	
110	For how long do you boil?	# of minutes	
111	For how long do you immerse the instruments in an antiseptic solution?	# of minutes	
112	Where do you refer your problem cases in the majority of cases?  (list the name if possible)	<ol style="list-style-type: none"> <li>1. Private hospital</li> <li>2. Govt. Hospital</li> <li>3. Others (Specify)</li> </ol>	
113	What are the 4 most common reasons for referral in order of priority?	<ol style="list-style-type: none"> <li>1. Pre-eclampsia</li> <li>2. Eclampsia</li> <li>3. Emergency C-section</li> <li>4. APH</li> <li>5. Obstructed labor</li> <li>6. PPH</li> <li>7. Puerperal sepsis</li> <li>8. Others (Specify)</li> </ol>	
114	Who accompanies your referral cases in majority of cases generally?	<ol style="list-style-type: none"> <li>1. You yourself</li> <li>2. Another doctor</li> <li>3. Staff member</li> <li>4. Family member(s) only</li> <li>5. Both you and family members</li> <li>6. Others (Specify)</li> </ol>	

S#	Questions and Filters	Coding Categories	Answers
115	Is there transport available for referral in your facility <b>all the time (24 hrs)</b> ?	1. Yes 2. No	
116	What type of transport do you generally send your patient in?	1. Patients' personal transport 2. Facility's transport 3. Edhi ambulance 4. Other ambulance 5. Others (Specify)	
117	How long does it take (on avg.) to get transport for referral?	# of minutes	
If Q26 = 88 then skip Qs. 118, 119 & 120			
118	Generally what do you do for the placenta immediately after the delivery of child?	1. Wait => Q119 2. Controlled traction on cord => Q120 3. Traction on cord => Q120 4. Pressure on abdomen => Q120 5. Others (Specify) => Q120	
119	How long do you wait for the placenta to deliver by itself? (Specify)	# of minutes => Q120	
120	If placenta does not come, what do you do?	1. Remove manually 2. Others (Specify)	
121	If the mother bleeds heavily after the delivery of baby then what do you do?	1. Give injection (Specify) => Q122 2. Remove manually => Q125 3. Others (Specify) => Q125	
122	Do you usually give any injection after the delivery of the placenta?	1. Yes => Q123 2. No => Q125	
123	How do you give this injection?	1. Intra muscular 2. Intravenous	
124	What are these injections called?  (list all possible responses)	1. Methergin 2. Syntocinon 3. Anaroxil /Transamine 4. Don't know 5. Others (Specify)	
125	If mother bleeds heavily after delivery of placenta what do you do?  (list all possible responses)	1. Give injection (Specify) 2. Call another doctor 3. Call LHV 4. Massage uterus 5. Pack uterus 6. Refer 7. Others (Specify)	

**Vignette # 5**

**You have just delivered a woman of her 5<sup>th</sup> baby. The placenta has been expelled and the baby is well and crying. While you are bathing the baby, the woman complains of "ghabraahat" and feeling weak. Upon lifting the "razai" that you have covered the woman with, you see that the bed sheets are soaked with blood.**

126	<p>What would you do?</p> <p>(list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. Massage the uterus =&gt; Q129</li> <li>2. Do a vaginal exam to see where the blood is coming from =&gt; Q129</li> <li>3. Remove blood clots (if seen) =&gt; Q129</li> <li>4. Raise the foot of the bed =&gt; Q129</li> <li>5. Keep the mother warm =&gt; Q129</li> <li>6. Give a hot drink of tea with sugar =&gt; Q129</li> <li>7. Give injection =&gt; Q127</li> <li>8. Introduce medicine in the vagina (Specify) =&gt; Q129</li> <li>9. Pack the vagina =&gt; Q129</li> <li>10. Draw blood samples for cross matching =&gt; Q131</li> <li>11. Arrange for blood transfusion =&gt; Q131</li> <li>12. Put up I/V line =&gt; Q129</li> <li>13. Other (Specify) =&gt; Q129</li> </ol>	
	Describe method of management		
127	What kind of injection ?	<ol style="list-style-type: none"> <li>1. Methergin/Syntocinon</li> <li>2. Others (Specify)</li> </ol>	
28	Who would get the injection?	<ol style="list-style-type: none"> <li>1. You have it yourself</li> <li>2. Patient's family brings it</li> <li>3. Others (Specify)</li> </ol>	
29	Would you call another doctor/ LHV/ Nurse?	<ol style="list-style-type: none"> <li>1. Yes =&gt; Q130</li> <li>2. No =&gt; Q131</li> </ol>	

S#	Questions and Filters	Coding Categories	Answers
130	When would you call another Nurse/ LHV/ Doctor?	1. Immediately 2. After your treatment	
131	Who would arrange for blood transfusion?	1. Yourself 2. Medical Assistant 3. Family of patient 4. Others (Specify)	
132	Do you have arrangement for blood transfusion at you facility?	1. Yes 2. No	
133	Would you refer the patient to the hospital?	1. Yes => Q134 2. No => Q135	
134	When would you refer the patient to the hospital?	1. Immediately 2. After your treatment	
135	What do you think is the reason for this bleeding? (list all possible responses)	1. Vaginal/Cervical tear 2. Rupture of uterus 3. Part of placenta retained 4. Baby girl 5. Others (Specify)	

**SECTION D: POSTNATAL CARE**

<b>S#</b>	<b>Questions and Filters</b>	<b>Coding Categories</b>	<b>Answers</b>
136	Do you call patients for postnatal check up?	1. Yes => Q137 2. No => Q138	
137	How many days after the delivery do you call the mother for a postnatal visit?	1. 1 week after delivery 2. 2 weeks after delivery 3. 6 weeks after delivery 4. Others (Specify)	
138	Do you counsel patients postnatally?	1. Yes => Q139 2. No => Q172	
139	What counseling do you do? Please specify in order of priority:  (list all possible responses)	1. Breast feeding / management of breasts engorgement => Q139a 2. Immunization of the child => Q139a 3. Mother's diet => Q139a 4. Birth spacing => Q139a 5. Others (Specify) => Q139a	
139a	Have you had any maternal deaths in the past one year?  (Bari Eid to Bari Eid)	1. Yes => Q139b 2. No => Q139d	
139b	How many?	# of deaths	
139c	What were the cause of maternal deaths?  (list all possible responses)	1. APH 2. PPH 3. Infection/sepsis 4. Eclampsia (seizures, high blood pressure) 5. Others (Specify)	
139d	Have you had any still births in the past one year/  (Bari Eid to Bari Eid)	1. Yes => 139e 2. No => 139g	
139e	How many were fresh still births ?	# of fresh still births	
139f	How many were macerated still births?	# of macerated still births	

S#	Questions and Filters	Coding Categories	Answers
139	How many early neonatal deaths in last one year?  (Bari Eid to Bari Eid)	# of early neonatal births	
139	How many babies are born each month (in your setup)?	# of babies born/month	
139	Have you noticed any change in attitude of J.P.M.C. staff on referring Obs case (to ward 8)? (to be asked from those who mention J.P.M.P.C. as a referral site)	1. Yes (Specify) 2. No (Specify)	

**\*POSTNATAL METHOD OF CONTRACEPTION:**

TABLE E:	Col. I	Col. II	Col. III	Col. IV
	What method of contraception do you advise to a primi-parous breast feeding mother?  1. Yes 2. No	What method of contraception do you advise to a primi-parous non breast feeding mother?  1. Yes 2. No	What method of contraception do you advise to a multi -parous breast feeding mother?  1. Yes 2. No	What method of contraception do you advise to a multi- parous non-breast-feeding mother?  1. Yes 2. No
1. Lactation	<u>140</u>	<u>148</u>	<u>156</u>	<u>164</u>
2. Barrier method	<u>141</u>	<u>149</u>	<u>157</u>	<u>165</u>
3. Abstinence	<u>142</u>	<u>150</u>	<u>158</u>	<u>166</u>
4. Progesterone only pills	<u>143</u>	<u>151</u>	<u>159</u>	<u>167</u>
5. Contraceptive injections	<u>144</u>	<u>152</u>	<u>160</u>	<u>168</u>
6. IUCD Copper T	<u>145</u>	<u>153</u>	<u>161</u>	<u>169</u>
7. Tubal ligation	<u>146</u>	<u>154</u>	<u>162</u>	<u>170</u>
8. Others (Specify)	<u>147</u>	<u>155</u>	<u>163</u>	<u>171</u>

to be asked from those who mentioned code 4, Q139

**Vignette # 6**

**Zarina delivered a baby boy few days ago. It was a long and arduous labor. Her sister came to call you today as Zarina is not well & is suffering from high fever, shivers, headaches. She also vomited thrice since last evening. Her abdomen is distended and she complains of foul smelling vaginal discharge.**

172	<p>Why do you think she may have this problem?</p> <p>(list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. Lack of proper asepsis during delivery</li> <li>2. No hand washing prior to the delivery</li> <li>3. Long labor</li> <li>4. Instruments (e.g. blade etc.) not properly sterilized</li> <li>5. The place where delivery took place was not clean</li> <li>6. Use of dirty pads/cloths</li> <li>7. Malaria</li> <li>8. Others (Specify)</li> </ol>	
173	<p>How would you proceed ?</p> <p>(list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. Go immediately =&gt; Q174</li> <li>2. Go later in the evening =&gt; Q174</li> <li>3. Give medications to the sister in law for now &amp; then see her later in the evening =&gt; Q174</li> <li>4. Reassure sister-in-law not to worry and go back home &amp; do nothing actively =&gt; Q190</li> <li>5. Call her to your health facility=&gt;Q174</li> <li>6. Others (Specify) =&gt; Q174</li> </ol>	
174	<p>What would you examine her for?</p> <p>(list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. Temperature</li> <li>2. Pulse rate</li> <li>3. Hydration status:dry mouth, skin/adequate urine output</li> <li>4. Vaginal exam</li> <li>5. Abdominal exam</li> <li>6. Others (Specify)</li> </ol>	
<p>Describe method of management</p>			

<b>Table F:</b>	<b>Col. I</b>	<b>Col. II</b>	<b>Col. III</b>
	Which treatment would you give her 1. Yes 2. No	Dosage (mg) 999. NA	Days (#) 999. NA
1. Antibiotics :			
a. Oral (Specify)	<u>175a</u>	<u>180a</u>	<u>185a</u>
b. I/M (Specify)	<u>175b</u>	<u>180b</u>	<u>185b</u>
c. I/V (Specify)	<u>175c</u>	<u>180c</u>	<u>185c</u>
2. Analgesics :			
a. Oral (Specify)	<u>176a</u>	<u>181a</u>	<u>186a</u>
b. I/M (Specify)	<u>176b</u>	<u>181b</u>	<u>186b</u>
c. I/V (Specify)	<u>176c</u>	<u>181c</u>	<u>186c</u>
3. I/V Fluids (Specify)	<u>177</u>	<u>182</u>	<u>187</u>
4. Vitamins :			
a. Oral (Specify)	<u>178a</u>	<u>183a</u>	<u>188a</u>
b. I/M (Specify)	<u>178b</u>	<u>183b</u>	<u>188b</u>
c. I/V (Specify)	<u>178c</u>	<u>183c</u>	<u>188c</u>
5. Others (Specify)	<u>179</u>	<u>184</u>	<u>189</u>

∴ Col. I. = 2, then Cols. II and III = 999. NA

∴ dosage or days are s.o.s or stat, write 88

S#	Questions and Filters	Coding Categories	Answers
190	How cooperative was the respondent?	<ol style="list-style-type: none"><li>1. Very cooperative</li><li>2. Cooperative</li><li>3. Indifferent</li></ol>	
	Interviewer's comments:		

Thank you very much

IDCODE:

**KAP QUESTIONNAIRE OF PROVIDERS**

**HEALTH ASSISTANTS**

Visit #	Date	Status
1	___ / ___ / ___	1. Complete 2. Incomplete 3. Refusal
2	___ / ___ / ___	1. Complete 2. Incomplete 3. Refusal
3	___ / ___ / ___	1. Complete 2. Incomplete 3. Refusal

**PERSONAL DATA**

<b>Name of Respondent</b>	_____	
<b>Age of Respondent (years)</b>	_____	_____
<b>Gender of Respondent</b>	1. Male    2. Female	
<b>Marital Status</b>	1. Single    2. Married    3. Widow(er)    4. Divorcee	
<b>Field Site</b>	<p align="center"><b>Korangi Sector # 8</b></p> <p>1. BIL A    2. BIL B    3. GUL C    4. GUL D    5. GUL E</p> <p>6. GUL F    7. BAN    8. MAG    9. Others</p> <p>(Specify)</p>	
<b>Site of Interview</b>	1. Health Facility    2. Community	
<b>Home Address</b>	_____	
<b>Phone</b>	_____	
<b>Work Address</b>	_____	
<b>Phone</b>	_____	
<b>Name of Interviewer</b>	1. NM                      2. SZ                      3.	_____
	NQ	

**SECTION A: EDUCATION, TRAINING AND EXPERIENCE.**

S#	Questions and Filters	Coding Categories	Answers
1	Qualification:	1. MBBS 2. MCPS/DGO 3. MRCOG/FCPS 4. Others (Specify)	
For quacks, homeopaths working as doctors write their actual qualification in Q1 House job:			
2	Training in Ob/ gyn?	1. House Job => Table A 2. P.G. Training => Q3 3. Other training (Specify) => Table A 999.NA	
3	Duration of post graduate training in Ob/gyn (after house job)?	1. Less than 1 year 2. 1-5 years 3. > 5years 999.NA.	

Any training other than Ob/gyn:

TABLE A:	Col. I	Col. II	Col. III
	Have you attended any of the following?  1. Yes 2. No	How many since graduation ?  (#) 999. NA	Reason(s) for not attending:  1. No time 2. Opportunity not available 3. Not interested 4. Not useful 5. Expensive 6. Others (Specify) 999. NA  (list all possible responses)
1. Refresher courses	<u>4</u>	<u>6</u>	<u>8</u>
1. Meetings/Seminars/Symposiums	<u>5</u>	<u>7</u>	<u>9</u>

If Col. I =2, then Col. II = 999. NA

If Col. I =1, then Col. III = 999. NA

TABLE B:	CURRENT JOB STATUS				PREVIOUS JOB STATUS			
	Col. I a	Col. II a	Col. III a	Col. IV a	Col. I b	Col. II b	Col. III b	Col. IV b
	Where do you currently work?  1. Yes 2. No	How long have you been working in each facility?  1. <1 year 2. 1-5 years 3. >5 years 999.NA	How do you work?  1. Independently 2. Under supervision 999.NA	How long have you been working independently?  1. <1 year 2. 1-5 years 3. >5 years 999.NA	What is your previous work experience?  1. Yes 2. No	How long did you work in each facility?  1. <1 year 2. 1-5 years 3. >5 years 999.NA	How did you work?  1. Independently 2. Under supervision 999.NA	How long did you work independently?  1. <1 year 2. 1-5 years 3. >5 years 999.NA
1. Hospital	<u>10a</u>	<u>14a</u>	<u>18a</u>	<u>22a</u>	<u>10b</u>	<u>14b</u>	<u>18b</u>	<u>22b</u>
2. Clinic	<u>11a</u>	<u>15a</u>	<u>19a</u>	<u>23a</u>	<u>11b</u>	<u>15b</u>	<u>19b</u>	<u>23b</u>
3. Maternity home	<u>12a</u>	<u>16a</u>	<u>20a</u>	<u>24a</u>	<u>12b</u>	<u>16b</u>	<u>20b</u>	<u>24b</u>
4. Others (Specify)	<u>13a</u>	<u>17a</u>	<u>21a</u>	<u>25a</u>	<u>13b</u>	<u>17b</u>	<u>21b</u>	<u>25b</u>

If Col. Ia = 2, then Cols. IIa, IIIa & IVa = 999.NA

If Col. IIIa = 2, then Col. IVa = 999.NA

If Col. Ib = 2, then Cols. IIb, IIIb & Col. IVb = 999.NA

If Col. IIIb = 2, then Col. IVb = 999.NA

S#	Questions and Filters	Coding Categories	Answers
26	How many (on average) deliveries do you conduct/ month?	# of deliveries / month 88. Don't conduct deliveries (if Q26=88 then skip Qs. 118-120)	
26a	Have you ever been called to assist in the deliveries?	1. Yes => Q26b 2. No => Q27	
26b	How many on average deliveries are you called for/year?	# of deliveries/year	
26c	What are the reasons that you and called for assisting in the deliveries? (Specify)  (list all possible responses)	1. Give synto/ methergin; enhance labor pains 2. Check B.P. 3. Fits 4. Bleeding 5. Check/resuscitate baby 6. Others a. Vomiting b. Analgesic injections c. Any thing else (Specify)	
27	How many on average abortions do you manage/month ?	# of abortions / month 88. Don't deal	
28	What is the major type of abortion seen by you?	1. Spontaneous 2. Induced 3. Others (Specify) 88. Don't know	

**SECTION B: ANTENATAL CARE**

<b>S#</b>	<b>Questions and Filters</b>	<b>Coding Categories</b>	<b>Answers</b>
29	Do you see women for antenatal check ups?	1. Yes => Q30 2. No => Q44	
30	When do the majority of patients come for their first antenatal visits (booking) of their case?	1. 1 <sup>st</sup> trimester 2. 2 <sup>nd</sup> trimester 3. 3 <sup>rd</sup> trimester	

<b>TABLE C:</b>	<b>Col. I</b>	<b>Col. II</b>
	<p><b>How often do you call patients for their antenatal visits (in a normal pregnancy) during:</b></p> <p>1. Every month 2. Every 2 weeks 3. Every week 4. Others (Specify) 88. Do not call</p>	<p><b>How often do the majority of patients come for antenatal visits(in a normal pregnancy) during:</b></p> <p>1. Every month 2. Every 2 weeks 3. Every week 4. Others (Specify) 88. Do not come</p>
1. 1 <sup>st</sup> trimester	<u>31</u>	<u>34</u>
2. 2 <sup>nd</sup> trimester	<u>32</u>	<u>35</u>
3. 3 <sup>rd</sup> trimester	<u>33</u>	<u>36</u>

S#	Questions and Filters	Coding Categories	Answers
37	<p>What antenatal care(ANC) do you provide in the first antenatal visit (in normal pregnancy)?</p> <p>(list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. General exam</li> <li>2. Cardiovascular exam</li> <li>3. Pulmonary exam</li> <li>4. Hemoglobin</li> <li>5. Blood pressure</li> <li>6. Checking weight</li> <li>7. Urine for protein</li> <li>8. Urine for glucose</li> <li>9. Blood glucose</li> <li>10. Others (Specify)</li> </ol>	
38	<p>In primiparas what additional investigations would you do?</p>	<ol style="list-style-type: none"> <li>1. Rh factor</li> <li>2. Blood grouping</li> <li>3. Others (Specify)</li> </ol>	
39	<p>Do you use any antenatal visit cards?</p>	<ol style="list-style-type: none"> <li>1. Yes =&gt; Q40</li> <li>2. No =&gt; Q44</li> </ol>	
40	<p>What information does the ANC card have on it?</p> <p>(list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. Height</li> <li>2. Weight</li> <li>3. Urine for albumin</li> <li>4. Urine for glucose</li> <li>5. Height of fundus</li> <li>6. Presentation/position of fetus</li> <li>7. Fetal heart sounds</li> <li>8. Blood pressure</li> <li>9. Edema (Specify)</li> <li>10. Blood group</li> <li>11. Others (Specify)</li> </ol>	
41	<p>Do you give the ANC cards to women to take home with them?</p>	<ol style="list-style-type: none"> <li>1. Yes =&gt; Q42</li> <li>2. No =&gt; Q44</li> </ol>	
42	<p>Do the majority of women bring their ANC cards with them on their subsequent visits?</p>	<ol style="list-style-type: none"> <li>1. Yes =&gt; Q44</li> <li>2. No =&gt; Q43</li> </ol>	
43	<p>The <b>main</b> reason for not bringing the ANC cards</p> <p>(list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. Do not understand the importance of bringing it</li> <li>2. Forget to bring it</li> <li>3. Find it useless</li> <li>4. Others (Specify)</li> </ol>	

S#	Questions and Filters	Coding Categories	Answers
44	What condition do the majority of pregnant patients coming to you have?	<ol style="list-style-type: none"> <li>1. Normal pregnancy</li> <li>2. Complications (Specify)</li> </ol>	
45a	<p>What are the three most common complications (in pregnancy) seen in your practice?</p> <p>(list according to priority)</p>	<ol style="list-style-type: none"> <li>1. Bleeding</li> <li>2. Swelling (Specify)</li> <li>3. Decreased fetal movement</li> <li>4. Jaundice</li> <li>5. Anemia</li> <li>6. Malpresentation</li> <li>7. High blood pressure</li> <li>8. Abdominal pain</li> <li>9. Vaginal discharge</li> <li>10. Diabetes</li> <li>11. APH</li> <li>12. Increased pressure feeling in the abdomen</li> <li>13. Eclampsia</li> <li>14. Some medical problem with mother</li> <li>15. Twins</li> <li>16. Weakness in mother</li> <li>17. Depression/tension</li> <li>18. Others (Specify)</li> <li>38. Don't know</li> </ol>	

S#	Questions and Filters	Coding Categories	Answers
45b	<p>Do you think that there are some specific medical reasons that women can have difficulty with their pregnancy/labor?</p> <p>(list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. No reasons</li> <li>2. Age under 18</li> <li>3. First birth</li> <li>4. Height under 5 feet (short stature)</li> <li>5. Old for first birth</li> <li>6. Five or more previous deliveries</li> <li>7. History of delivery by operation</li> <li>8. History of premature birth</li> <li>9. History at least two miscarriages</li> <li>10. History of LBW baby excluding premature</li> <li>11. Previous child under 1 year of age</li> <li>12. Others (Specify)</li> <li>88. Don't know</li> </ol>	
46	Do you advise <b>ALL</b> mothers about breast feeding?	<ol style="list-style-type: none"> <li>1. Yes =&gt; Q47</li> <li>2. No =&gt; Q48</li> </ol>	
47	When do you <b>start</b> advising about breast feeding in majority of cases?	<ol style="list-style-type: none"> <li>1. 1<sup>st</sup> visit</li> <li>2. 2<sup>nd</sup> trimester</li> <li>3. 3<sup>rd</sup> trimester</li> <li>4. Postnatally</li> </ol>	
48	Do you examine mothers' breasts antenatally to prepare them for breast feeding?	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> </ol>	
49	Do you give tetanus toxoid (TT) immunization to <b>ALL</b> mothers?	<ol style="list-style-type: none"> <li>1. Yes =&gt; Q51</li> <li>2. No =&gt; Q50</li> </ol>	

S#	Questions and Filters	Coding Categories	Answers
50	What are your reasons for not giving tetanus immunization?  (list all possible responses)	1. Unavailability of TT injection 2. Unavailability of staff 3. Patient's non compliance 4. Already fully immunized 5. Patient's refusal 6. Others (Specify) 88. Don't know	
51	Do you advise about interval between pregnancies/ limiting of pregnancies?	1. Yes => Q52 2. No => Q55	
52	When do you <b>start</b> giving the advice about interval between pregnancies?	1. Antenatally => Q53 2. Postnatally => Q54 3. Only when asked for it => Q55	
53	When would you advise?	1. 1 <sup>st</sup> trimester => Q55 2. 2 <sup>nd</sup> trimester => Q55 3. 3 <sup>rd</sup> trimester => Q55	
54	When would you advise?	1. Immediately after delivery 2. Within 1 <sup>st</sup> week	
55	Are women referred to you for pregnancy related problems?	1. Yes => Q56 2. No => Q57	
56	Where do the majority come from?  (Only one response)	1. Another doctor 2. Another hospital 3. LHV\Midwives 4. Dai 5. Self referred 6. Others (Specify)	
57	Are you called by LHV's/ Midwives / Dais for a home visit?	1. Yes => Q58 2. No => Q59	
58	What are the reasons for referrals?  (list all possible responses)	1. Bleeding in early pregnancy 2. Bleeding in late pregnancy 3. Hypertension in pregnancy 4. Diabetes in pregnancy 5. Others (Specify)	

**Vignette # 1:**

**Sakina, a 17 year old woman who got married nearly a year ago is pregnant for the first time She is 32 weeks pregnant . Today, she woke up with severe headache. She has had swelling of the hands and face for about 2 weeks. She is very frightened and urgently comes to you. She reports her blood pressure to be 140 /95 mm Hg.**

59	<p>What would you do?</p> <p>(list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. Give aspirin/analgesics =&gt; Q60</li> <li>2. Put her to bed =&gt; Q61</li> <li>3. Blood pressure measurement taken =&gt; Q62</li> <li>4. Give diuretics (Specify route and name) =&gt; Q63</li> <li>5. Give sedatives (specify route and name) =&gt; Q64</li> <li>6. Give hypotensives (Specify route and name) =&gt; Q65</li> <li>7. Admit in own setup =&gt; Q66</li> <li>8. Refer =&gt; Q67</li> <li>9. Others (Specify) =&gt; Q69</li> </ol>	
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Describe the method of management

60	How many days for aspirin/analgesics?	# of days	
61	How many days you will put her to bed?	# of days	
62	How many days for B.P. measurement ?	# of days	
63	How many days for diuretics?	# of days	
64	How many days for sedatives?	# of days	

S#	Questions and Filters	Coding Categories	Answers
65	How many days for hypotensives?	# of days	
66	How many days admit in own setup ?	# of days	
67	Where would you refer the patient?	<ol style="list-style-type: none"> <li>1. Private clinic/ Maternity home</li> <li>2. Private Hospital</li> <li>3. Government clinic</li> <li>4. Government Hospital</li> <li>5. Others (Specify)</li> </ol>	
68	Who would accompany the patient?	<ol style="list-style-type: none"> <li>1. You or any other doctor</li> <li>2. Health personnel (Specify)</li> <li>3. Family member</li> <li>4. Others (Specify)</li> </ol>	
69	<p>What advise would you give Sakina after initial management:</p> <p>(list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. To show herself to you regularly</li> <li>2. Decrease work load</li> <li>3. Get her blood pressure checked regularly</li> <li>4. Continue diuretics</li> <li>5. Continue aspirin</li> <li>6. Continue antihypertensives</li> <li>7. Others (Specify)</li> <li>8. Don't know</li> </ol>	
70	<p>What possible problems do you foresee in future for Sakina?</p> <p>(list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. Small baby</li> <li>2. Still birth</li> <li>3. Bleeding (APH)</li> <li>4. Fits / seizures (maternal)</li> <li>5. Premature delivery</li> <li>6. Maternal death</li> <li>7. Prolonged labour</li> <li>8. Others (Specify)</li> <li>8. Don't know</li> </ol>	
71	Have you ever seen a pregnant woman with such a complication?	<ol style="list-style-type: none"> <li>1. Yes =&gt; Q72</li> <li>2. No =&gt; Q74</li> </ol>	
72	When did you last see one?	<ol style="list-style-type: none"> <li>1. Past 6 months</li> <li>2. months-1year</li> <li>3. &gt; 1 year</li> </ol>	

S#	Questions and Filters	Coding Categories	Answers
73	What did you do in that case.	<ol style="list-style-type: none"> <li>1. Referral (to JPMC or next higher level of provider)</li> <li>2. Hypotensives (name and route)</li> <li>3. Analgesics (name and route)</li> <li>4. Sedatives (Specify)</li> <li>5. Diuretics (name and route)</li> <li>6. Referral with hypotensives (Specify)</li> <li>7. Referral with analgesics (Specify)</li> <li>8. Referral with sedatives (Specify)</li> <li>9. Referral with diuretics (Specify)</li> <li>10. Did not give any treatment or refer</li> <li>11. Others (Specify)</li> </ol>	

**Vignette # 2**

**Hajra is full term pregnant and has started to have labor pains. Her mother-in-law, neighbor and sister Aisha have come to assist her. This is Hajra's fifth pregnancy. All of a sudden, Hajra had fits/seizures & this is when you were called in. You took care that the airway is patent (patient has no problems in respiration). She has been positioned on her side, in the meantime you inform Aisha that the patient has to be taken to the hospital immediately. Aisha reports back to you that Hajra's husband is not at home and the mother in law thinks it is unnecessary to take Hajra to hospital, after all this is her 5<sup>th</sup> pregnancy & she has been fine previously, she surely would be fine once the "gin/aaseb" goes away.**

<p>4</p>	<p>How would you deal with the situation?</p> <p>(list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. Wait till the husband comes along =&gt; Q75</li> <li>2. Discuss with the mother-in-law =&gt; Q78</li> <li>3. Let the family deal with it &amp; inform you once they have decided about it =&gt; Q78</li> <li>4. Call the husband immediately =&gt;Q77</li> <li>5. Take the patient in spite of mother-in-law's opposition =&gt; Q78</li> <li>6. Others (Specify) =&gt; Q78</li> </ol>	
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Describe the method of dealing with the situation:

S#	Questions and Filters	Coding Categories	Answers
75	<p>Why would you wait for the husband to come?</p> <p>( list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. For financial reasons =&gt; Q78</li> <li>2. Because the family wants it =&gt; Q78</li> <li>3. His permission is necessary =&gt; Q78</li> <li>4. Husband might not want to take his wife to hospital =&gt;Q76</li> <li>5. You want him to accompany the patient =&gt;Q78</li> <li>6. Others =&gt; Q78</li> </ol>	
76	<p>Why would he not want to take the wife to the hospital?</p> <p>(list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. Poor care at the hospital =&gt; Q78</li> <li>2. Financial reasons =&gt; Q78</li> <li>3. Others (Specify) =&gt; Q78</li> </ol>	
S#	Questions and Filters	Coding Categories	Answers
77	<p>Why would you call for the husband immediately?</p> <p>(list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. For financial reasons</li> <li>2. Because of the seriousness of the situation</li> <li>3. His permission is necessary</li> <li>4. Husband might not want to take her to the hospital</li> <li>5. You want him to accompany the patient</li> <li>6. Others (Specify)</li> </ol>	
78	<p>Have you come across any such situations in the past 6 months?</p>	<ol style="list-style-type: none"> <li>1. Yes =&gt; Q79</li> <li>2. No =&gt; Q80</li> </ol>	
79	<p>How many times?</p>	# of cases => Q80	

S#	Questions and Filters	Coding Categories	Answers
80	<p>How would you manage the patient?</p> <p>(list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. Maintain airway clear (Maybe put a padded spatula/ spoon in the patient's mouth)</li> <li>2. Note vitals: blood pressure, pulse rate, temperature</li> <li>3. Check urine output</li> <li>4. Oxygen mask, if needed</li> <li>5. Give I/V fluids (Specify)</li> <li>6. Give medications (Specify)</li> <li>7. Admit the patient under your own care</li> <li>8. Refer to the hospital after your treatment</li> <li>9. Refer the patient immediately</li> <li>10. Others (Specify)</li> <li>88. Don't know</li> </ol>	
	<p>Describe method of management:</p>		

TABLE D:	Col. I	Col. II	Col. III
	Would you give the following: 1. Yes 2. No	Dosage (mg ) 999.NA	For how many days? (#) 999.NA
1. I/V Valium	<u>81</u>	<u>85</u>	<u>89</u>
2. Oral Valium	<u>82</u>	<u>86</u>	<u>90</u>
3. Magnesium Sulfate I/V	<u>83</u>	<u>87</u>	<u>91</u>
4. Phenytoin I/V	<u>84</u>	<u>88</u>	<u>92</u>

If Col. I = 2, then Cols. II and III will be 999.NA

**Vignette # 3**

**Wasima, a primi with full term pregnancy has been in labor for 24 hours and not yet delivered. The dai who was called in when labor started is now worried and sends Wasima's husband to bring you home.**

93	How would you react?  (list all possible responses)	<ol style="list-style-type: none"><li>1. Listen to what the dai has to say to you =&gt;Q94</li><li>2. You would by pass her and see the patient on your own =&gt;Q94</li><li>3. Ask all the attendants to wait (outside the room) while you attend to the patient =&gt; Q94</li><li>4. Refer the patient right away =&gt;Q97</li><li>5. Others (Specify) =&gt; Q94</li></ol>	
Describe method of management			
94	Which injection will you give?  (if injection is mentioned in method of management)	<ol style="list-style-type: none"><li>1. Synto/ methergin I/V</li><li>2. Synto/ methergin I/M</li><li>3. Others (Specify)</li></ol>	
94	Would you ask for the dai's assistance if needed?	<ol style="list-style-type: none"><li>1. Yes</li><li>2. No</li></ol>	
95	Would you hold somebody responsible for not calling you earlier?	<ol style="list-style-type: none"><li>1. Yes =&gt; Q96</li><li>2. No =&gt; Q97</li></ol>	

S#	Questions and Filters	Coding Categories	Answers
96	Who would you hold responsible?	<ol style="list-style-type: none"> <li>1. Husband</li> <li>2. Other family members (Specify)</li> <li>3. Dai</li> <li>4. All of the above</li> <li>5. Others (Specify)</li> </ol>	
97	Why would you refer the patient?  (Only one response)	<ol style="list-style-type: none"> <li>1. You don't deal with such patients</li> <li>2. She needs operative procedure which is not possible at your facility</li> <li>3. She would die and the family will blame it on you</li> <li>4. Others (Specify)</li> </ol>	
98	What could be the causes of delay in delivery?  (list all possible responses)	<ol style="list-style-type: none"> <li>1. Breech</li> <li>2. Transverse</li> <li>3. Twins</li> <li>4. Large Baby</li> <li>5. CPD</li> <li>6. Uterine dysfunction</li> <li>7. Not in true labour</li> <li>8. Others (Specify)</li> <li>88. Don't know</li> </ol>	
99	Do you think this is a worrisome condition?	<ol style="list-style-type: none"> <li>1. Yes =&gt; Q100</li> <li>2. No =&gt; Q101</li> </ol>	
100	For whom is it worrisome?	<ol style="list-style-type: none"> <li>1. Only for mother</li> <li>2. Only for child</li> <li>3. For both</li> <li>4. No body</li> <li>5. For some one else (Specify)</li> </ol>	
101	In your opinion what kind of problems Wasima may face?  (list all possible responses)	<ol style="list-style-type: none"> <li>1. PPH =&gt;Q104</li> <li>2. Ruptured Uterus =&gt;Q104</li> <li>3. Problems with next pregnancy =&gt;Q104</li> <li>4. Trauma to child =&gt;Q104</li> <li>5. Congenital anomaly in child =&gt;Q104</li> <li>6. Fistula formation =&gt;Q102</li> <li>7. Anything else (Specify) =&gt;Q104</li> </ol>	

S#	Questions and Filters	Coding Categories	Answers
102	How can the fistula formation be prevented during pregnancy?	<ol style="list-style-type: none"> <li>1. Proper ANC to identify women with risks of prolonged/obstructed labor</li> <li>2. Properly trained personnel taking care of prolonged/obstructed labor</li> <li>3. Others (Specify)</li> </ol>	
103	How can fistula formation be prevented after delivery?	<ol style="list-style-type: none"> <li>1. Timely referral of patient with prolonged labor to hospital</li> <li>2. Putting indwelling catheter for a few days in women who had prolonged/obstructed labor</li> <li>3. Others (Specify)</li> </ol>	

**Vignette # 4**

**Musarrat who is 20 years old is pregnant for the first time. She does not have elders (mother-in-law etc.) at home & so lives alone with her husband . She is now three months pregnant and has had spotting for the past one week now.**

104	Do you think it is a serious condition ?	1. Yes => Q105 2. No => Q106	
105	Why do you think this situation is serious ?  (list all possible responses)	1. It may complicate the pregnancy in future (Specify) 2. Musarrat may become anemic 3. Musarrat may bleed (antenatally) in future 4. She has an increased risk of having a spontaneous abortion 5. Baby will be small 6. Others (Specify)	
106	How would you manage her?  (list all possible responses)	1. Give advise about rest 2. Tell her not to worry about it 3. Follow her up in 1 weeks time 4. Others (Specify) a. Treatment b. Advice c. Examination d. Any thing else (Specify)	

**SECTION C: DELIVERY CARE**

S#	Questions and Filters	Coding Categories	Answers
107	Do you have operation theater facilities?	1. Yes => Q108 2. No => Q109	
108	Do you perform the following procedures?  (list all possible responses)	1. Evacuation 2. D&C 3. Cesarean section 4. Manual removal of placenta 5. Any other (Specify)	
109	How do you sterilize your instruments?  (list all possible responses)	1. Boiling => Q110 2. Autoclave => Q112 3. Immersing in antiseptic solution => Q111 4. No special method of sterilization => Q112 5. Others (Specify) => Q112	
110	For how long do you boil?	# of minutes	
111	For how long do you immerse the instruments in an antiseptic solution?	# of minutes	
112	Where do you refer your problem cases in the majority of cases?  (list the name if possible)	1. Private hospital 2. Govt. Hospital 3. Others (Specify)	
113	What are the 4 most common reasons for referral in order of priority?	1. Pre-eclampsia 2. Eclampsia 3. Emergency C-section 4. APH 5. Obstructed labor 6. PPH 7. Puerperal sepsis 8. Others (Specify)	

S#	Questions and Filters	Coding Categories	Answers
114	Who accompanies your referral cases in majority of cases generally?	<ol style="list-style-type: none"> <li>1. You yourself</li> <li>2. Another doctor</li> <li>3. Staff member</li> <li>4. Family member(s) only</li> <li>5. Both you and family members</li> <li>6. Others (Specify)</li> </ol>	
115	Is there transport available for referral in your facility <b>all the time (24 hrs)</b> ?	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> </ol>	
116	What type of transport do you generally send your patient in?	<ol style="list-style-type: none"> <li>1. Patients' personal transport</li> <li>2. Facility's transport</li> <li>3. Edhi ambulance</li> <li>4. Other ambulance</li> <li>5. Others (Specify)</li> </ol>	
117	How long does it take (on avg.) to get transport for referral?	# of minutes	
If Q26 = 88 then skip Qs. 118, 119 & 120			
118	Generally what do you do for the placenta immediately after the delivery of child?	<ol style="list-style-type: none"> <li>1. Wait =&gt; Q119</li> <li>2. Controlled traction on cord =&gt; Q120</li> <li>3. Traction on cord =&gt; Q120</li> <li>4. Pressure on abdomen =&gt; Q120</li> <li>5. Others (Specify) =&gt; Q120</li> </ol>	
119	How long do you wait for the placenta to deliver by itself? (Specify)	# of minutes =>Q120	
120	If placenta does not come, what do you do?	<ol style="list-style-type: none"> <li>1. Remove manually</li> <li>2. Others (Specify)</li> </ol>	
121	If the mother bleeds heavily after the delivery of baby then what do you do?	<ol style="list-style-type: none"> <li>1. Give injection (Specify) =&gt; Q122</li> <li>2. Remove manually =&gt; Q125</li> <li>3. Others (Specify ) =&gt; Q125</li> </ol>	

S#	Questions and Filters	Coding Categories	Answers
122	Do you usually give any injection after the delivery of the placenta?	<ol style="list-style-type: none"> <li>1. Yes =&gt; Q123</li> <li>2. No =&gt; Q125</li> </ol>	
123	How do you give this injection?	<ol style="list-style-type: none"> <li>1. Intra muscular</li> <li>2. Intravenous</li> </ol>	
124	What are these injections called?  ( list all possible responses)	<ol style="list-style-type: none"> <li>1. Methergin</li> <li>2. Syntocinon</li> <li>3. Anaroxil /Transamine</li> <li>4. Don't know</li> <li>5. Others (Specify)</li> </ol>	
125	If mother bleeds heavily after delivery of placenta what do you do?  (list all possible responses)	<ol style="list-style-type: none"> <li>1. Give injection (Specify)</li> <li>2. Call another doctor</li> <li>3. Call LHV</li> <li>4. Massage uterus</li> <li>5. Pack uterus</li> <li>6. Refer</li> <li>7. Others (Specify)</li> </ol>	

**Vignette # 5**

**You have just delivered a woman of her 5<sup>th</sup> baby. The placenta has been expelled and the baby is well and crying. While you are bathing the baby, the woman complains of "ghabraahat" and feeling weak. Upon lifting the "razai" that you have covered the woman with, you see that the bed sheets are soaked with blood.**

126	<p>What would you do?</p> <p>(list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. Massage the uterus =&gt; Q129</li> <li>2. Do a vaginal exam to see where the blood is coming from =&gt; Q129</li> <li>3. Remove blood clots (if seen) =&gt; Q129</li> <li>4. Raise the foot of the bed =&gt; Q129</li> <li>5. Keep the mother warm =&gt; Q129</li> <li>6. Give a hot drink of tea with sugar =&gt; Q129</li> <li>7. Give injection =&gt; Q127</li> <li>8. Introduce medicine in the vagina (Specify) =&gt; Q129</li> <li>9. Pack the vagina =&gt; Q129</li> <li>10. Draw blood samples for cross matching =&gt; Q131</li> <li>11. Arrange for blood transfusion =&gt; Q131</li> <li>12. Put up I/V line =&gt; Q129</li> <li>13. Other (Specify) =&gt; Q129</li> </ol>	
	Describe method of management		

S#	Questions and Filters	Coding Categories	Answers
127	What kind of injection ?	1. Methergin/Syntocinon 2. Others (Specify)	
128	Who would get the injection?	1. You have it yourself 2. Patient's family brings it 3. Others (Specify)	
129	Would you call another doctor/ LHV/ Nurse?	1. Yes => Q130 2. No => Q131	
130	When would you call another Nurse/ LHV/ Doctor?	1. Immediately 2. After your treatment	
131	Who would arrange for blood transfusion?	1. Yourself 2. Medical Assistant 3. Family of patient 4. Others (Specify)	
132	Do you have arrangement for blood transfusion at you facility?	1. Yes 2. No	
133	Would you refer the patient to the hospital?	1. Yes => Q134 2. No => Q135	
134	When would you refer the patient to the hospital?	1. Immediately 2. After your treatment	
135	What do you think is the reason for this bleeding?  (list all possible responses)	1. Vaginal/Cervical tear 2. Rupture of uterus 3. Part of placenta retained 4. Baby girl 5. Others (Specify)	

**SECTION D: POSTNATAL CARE**

<b>S#</b>	<b>Questions and Filters</b>	<b>Coding Categories</b>	<b>Answers</b>
136	Do you call patients for postnatal check up?	1. Yes => Q137 2. No => Q138	
137	How many days after the delivery do you call the mother for a postnatal visit?	1. 1 week after delivery 2. 2 weeks after delivery 3. 6 weeks after delivery 4. Others (Specify)	
138	Do you counsel patients postnatally?	1. Yes => Q139 2. No => Q172	
139	What counseling do you do? Please specify in order of priority:  (list all possible responses)	1. Breast feeding / management of breasts engorgement => Q139a 2. Immunization of the child => Q139a 3. Mother's diet => Q139a 4. Birth spacing => Q139a 5. Others (Specify) => Q139a	
139a	Have you had any maternal deaths in the past one year?  (Bari Eid to Bari Eid)	1. Yes => Q139b 2. No => Q139d	
139b	How many?	# of deaths	
139c	What were the cause of maternal deaths?  (list all possible responses)	1. APH 2. PPH 3. Infection/sepsis 4. Eclampsia (seizures, high blood pressure) 5. Others (Specify)	

S#	Questions and Filters	Coding Categories	Answers
139d	Have you had any still births in the past one year/  (Bari Eid to Bari Eid)	1. Yes => 139e 2. No => 139g	
139e	How many were fresh still births ?	# of fresh still births	
139f	How many were macerated still births?	# of macerated still births	
139g	How many early neonatal deaths in last one year?  (Bari Eid to Bari Eid)	# of early neonatal births	
139h	How many babies are born each month (in your setup)?	# of babies born/month	
139i	Have you noticed any change in attitude of J.P.M.C. staff on referring Obs case (to ward 8)? (to be asked from those who mention J.PMP.C. as a referral site)	1. Yes (Specify) 2. No (Specify)	

**\*POSTNATAL METHOD OF CONTRACEPTION:**

<b>TABLE E:</b>	<b>Col. I</b>	<b>Col. II</b>	<b>Col. III</b>	<b>Col. IV</b>
	What method of contraception do you advise to a primiparous breast feeding mother?  1. Yes 2. No	What method of contraception do you advise to a primiparous non breast feeding mother?  1. Yes 2. No	What method of contraception do you advise to a multiparous breast feeding mother?  1. Yes 2. No	What method of contraception do you advise to a multiparous non-breast-feeding mother?  1. Yes 2. No
1. Just lactation	<u>140</u>	<u>148</u>	<u>156</u>	<u>164</u>
2. Barrier method	<u>141</u>	<u>149</u>	<u>157</u>	<u>165</u>
3. Abstinence	<u>142</u>	<u>150</u>	<u>158</u>	<u>166</u>
4. Progesterone only pills	<u>143</u>	<u>151</u>	<u>159</u>	<u>167</u>
5. Contraceptive injections	<u>144</u>	<u>152</u>	<u>160</u>	<u>168</u>
6. IUCD/ Copper T	<u>145</u>	<u>153</u>	<u>161</u>	<u>169</u>
7. Tubal ligation	<u>146</u>	<u>154</u>	<u>162</u>	<u>170</u>
8. Others (Specify)	<u>147</u>	<u>155</u>	<u>163</u>	<u>171</u>

\* to be asked from those who mentioned code 4, Q139

**Vignette # 6**

**Zarina delivered a baby boy few days ago. It was a long and arduous labor. Her sister came to call you today as Zarina is not well & is suffering from high fever, shivers, headaches. She also vomited thrice since last evening. Her abdomen is distended and she complains of foul smelling vaginal discharge.**

172	<p>Why do you think she may have this problem?</p> <p>(list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. Lack of proper asepsis during delivery</li> <li>2. No hand washing prior to the delivery</li> <li>3. Long labor</li> <li>4. Instruments (e.g. blade etc.) not properly sterilized</li> <li>5. The place where delivery took place was not clean</li> <li>6. Use of dirty pads/cloths</li> <li>7. Malaria</li> <li>8. Others (Specify)</li> </ol>	
173	<p>How would you proceed ?</p> <p>(list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. Go immediately =&gt; Q174</li> <li>2. Go later in the evening =&gt; Q174</li> <li>3. Give medications to the sister in law for now &amp; then see her later in the evening =&gt; Q174</li> <li>4. Reassure sister-in-law not to worry and go back home &amp; do nothing actively =&gt; Q190</li> <li>5. Call her to your health facility=&gt;Q174</li> <li>6. Others (Specify) =&gt; Q174</li> </ol>	

S#	Questions and Filters	Coding Categories	Answers
174	What would you examine her for?  (list all possible responses)	1. Temperature 2. Pulse rate 3. Hydration status:dry mouth, skin/ adequate urine output 4. Vaginal exam 5. Abdominal exam 6. Others (Specify)	
	Describe method of management		

<b>Table F:</b>	<b>Col. I</b>	<b>Col. II</b>	<b>Col. III</b>
	Which treatment would you give her  1. Yes 2. No	Dosage  (mg) 999. NA	Days  (#) 999. NA
1. Antibiotics :			
a. Oral (Specify)	<u>175a</u>	<u>180a</u>	<u>185a</u>
b. I/M (Specify)	<u>175b</u>	<u>180b</u>	<u>185b</u>
c. I/V (Specify)	<u>175c</u>	<u>180c</u>	<u>185c</u>
2. Analgesics :			
a. Oral (Specify)	<u>176a</u>	<u>181a</u>	<u>186a</u>
b. I/M (Specify)	<u>176b</u>	<u>181b</u>	<u>186b</u>
c. I/V (Specify)	<u>176c</u>	<u>181c</u>	<u>186c</u>
3. I/V Fluids (Specify)	<u>177</u>	<u>182</u>	<u>187</u>
4. Vitamins :			
a. Oral (Specify)	<u>178a</u>	<u>183a</u>	<u>188a</u>
b. I/M (Specify)	<u>178b</u>	<u>183b</u>	<u>188b</u>
c. I/V (Specify)	<u>178c</u>	<u>183c</u>	<u>188c</u>
5. Others (Specify)	<u>179</u>	<u>184</u>	<u>189</u>

If Col. I. = 2, then Cols. II and III = 999. NA

If dosage or days are s.o.s or stat. write 88

S#	Questions and Filters	Coding Categories	Answers
190	How cooperative was the respondent?	1. Very cooperative 2. Cooperative 3. Indifferent	
	Interviewer's comments:		

Thank you very much

IDCODE:

**KAP QUESTIONNAIRE OF PROVIDERS**

**LHV / Nurses / Midwives**

Visit #	Date	Status
1	___ / ___ / ___	1. Complete 2. Incomplete 3. Refusal
2	___ / ___ / ___	1. Complete 2. Incomplete 3. Refusal
3	___ / ___ / ___	1. Complete 2. Incomplete 3. Refusal

**PERSONAL DATA**

<b>PERSONAL DATA</b>		
Name of Respondent		
Age of Respondent (years)		
Marital Status	1. Single 2. Married 3. Widow(er) 4. Divorcee	
Designation	1. LHV 2. Nurse 3. Midwife 4. Nurse -Midwife	
Field Site	<p align="center"><b>Korangi Sector # 8</b></p> 1. BIL A 2. BIL B 3. GUL C 4. GUL D 5. GUL E 6. GUL F 7. BAN 8. MAG 9. Others (Specify)	
Site of Interview	1. Health Facility 2. Community	
Home Address		
Phone		
Work Address		
Phone		
Name of Interviewer	1. NM. 2. SZ. 3. NQ	

## SECTION A: BACKGROUND INFORMATION

#	Questions and Filters	Coding categories	Answers
1	What is the main language that you speak at home?	<ol style="list-style-type: none"> <li>1. Urdu</li> <li>2. Pushto</li> <li>3. Baluchi</li> <li>4. Sindhi</li> <li>5. Punjabi</li> <li>6. Hindko</li> <li>7. Brohi</li> <li>8. Saraiki</li> <li>9. Gujrati</li> <li>10. Kathiawari</li> <li>11. Memoni</li> <li>12. Persian</li> <li>13. Others (Specify)</li> </ol>	
2	What is your level of education?	<ol style="list-style-type: none"> <li>1. Illiterate (including Madrasa)</li> <li>2. Can just read a newspaper</li> <li>3. Can just read newspaper &amp; write letter</li> <li>4. Class I to IV</li> <li>5. Class V to X</li> <li>6. Class XI to XII</li> <li>7. Graduate</li> <li>8. Technical diploma</li> </ol>	
3	What language did you receive your education in?	<ol style="list-style-type: none"> <li>1. Urdu</li> <li>2. English</li> <li>3. Urdu and English</li> <li>4. Others (Specify)</li> </ol>	
4	Have you received any training?	<ol style="list-style-type: none"> <li>1. Yes =&gt; Q5</li> <li>2. No =&gt; Q10</li> </ol>	
5	What type of training was this?	<ol style="list-style-type: none"> <li>1. LHV</li> <li>2. Nursing</li> <li>3. Midwifery diploma</li> <li>4. Nursing and midwifery</li> <li>5. Others (Specify)</li> </ol>	
6	What was the duration of your initial training?	# of months	
7	Where were you trained?  (list all possible responses with their names, if applicable)	<ol style="list-style-type: none"> <li>1. Hospital</li> <li>2. Local Clinic</li> <li>3. MCHC</li> <li>4. Home</li> <li>5. Others (Specify)</li> </ol>	

#	Questions and Filters	Coding categories	Answers
8	By whom were you trained?  (list all possible responses)	1. Ob/gyn Specialist 2. Doctor 3. LHV 4. Nurse 5. Mid wife 6. Others (Specify)	
9	How long ago were you trained?	1. Less than 1 year ago 2. 1-5 years ago 3. 6-10 years ago 4. More than 10 years ago	
10	How long have you been practicing?	1. Less than one year 2. 1-5 years 3. 6-10 years 4. More than 10 years	
11	Have you attended any refresher course after your initial training?	1. Yes => Q12 2. No => Q15	
12	How many?	# of courses	
13	How many hours on average?	# of hours	
14	When did you last attend it?	1. Within past 6 months => Q17 2. Past 1 year => Q17 3. More than 1 year ago => Q17	
15	The reason for not attending it?	1. Lack of time 2. No opportunity 3. Financial reasons 4. Not interested 5. Others (Specify)	
16	Would you be interested in attending any refresher courses if made available?	1. Yes 2. No	
17	What is the main reason you wanted to become an LHV/ Nurse Midwife?	1. Economic/Poverty 2. Interest in Profession 3. Serve community 4. Family profession 5. Others (Specify)	

TABLE A :	CURRENT JOB STATUS				PREVIOUS JOB STATUS			
	Col. Ia	Col. IIa	Col.IIIa	Col.IVa	Col.Ib	Col.IIb	Col.IIIb	Col.IVb
	Where do you currently work?  1. Yes 2. No	How long have you been working in each facility?  1. <1 year 2. 1-5 years 3. >5 years 999.NA	How do you work ?  1. Independently 2. Undersupervision	How long have you been working independently?  1. <1 year 2. 1-5 years 3. >5 years 999.NA	What is your previous work experience?  1. Yes 2. No	How long did you work in each facility?  1. <1 year 2. 1-5 years 3. >5 years 999.NA	How did you work?  1. Independently 2. Undersupervision	How long did you work independently?  1. <1 year 2. 1-5 years 3. >5 years 999.NA
1. Hospital	<u>18a</u>	<u>23a</u>	<u>28a</u>	<u>33a</u>	<u>18b</u>	<u>23b</u>	<u>28b</u>	<u>33b</u>
2. Clinic	<u>19a</u>	<u>24a</u>	<u>29a</u>	<u>34a</u>	<u>19b</u>	<u>24b</u>	<u>29b</u>	<u>34b</u>
3. Maternity home	<u>20a</u>	<u>25a</u>	<u>30a</u>	<u>35a</u>	<u>20b</u>	<u>25b</u>	<u>30b</u>	<u>35b</u>
4. Patient's home	<u>21a</u>	<u>26a</u>	<u>31a</u>	<u>36a</u>	<u>21b</u>	<u>26b</u>	<u>31b</u>	<u>36b</u>
5. Others (Specify)	<u>22a</u>	<u>27a</u>	<u>32a</u>	<u>37a</u>	<u>22b</u>	<u>27b</u>	<u>32b</u>	<u>37b</u>

If Col. Ia=2, then Cols. IIa, IIIa & IVa=999.NA  
If Col. IIIa=2, then Col. IVa=999.NA  
If Col. Ib=2, then Cols. IIb, IIIb & IVb=999.NA  
If Col. IIIb=2, then Col. IVa=999.NA

**SECTION B: ANTENATAL CARE**

#	Questions and Filters	Coding categories	Answers
38	Do you see women in antenatal period?	1. Yes => Q39 2. No => Q40	
39	Generally at what month of pregnancy do you see them for their first antenatal visit?	# of month of pregnancy	
40	Do women call/come to you when they are pregnant?	1. Yes 2. No	
41	How many times do you usually visit/call a woman during a normal pregnancy?	1. 3 times 2. 3- 6 times 3. More than 6 times 4. None	
42	Do pregnant women only call/visit you when they experience a problem?	1. Yes 2. No	
43	What are the most common medical problems that you are consulted for?  (list all possible responses)	1. Bleeding 2. Swelling (Specify) 3. Decreased fetal movement 4. Jaundice 5. Anemia 6. Malpresentation 7. High blood pressure 8. Abdominal pain 9. Increased pressure feeling in the abdomen 10. Vaginal discharge 11. Diabetes 12. APH 13. Eclampsia 14. Some medical problem with mother 15. Twins 16. Weakness in mother 17. Depression/tension 18. Others (Specify)	

#	Questions and Filters	Coding categories	Answers
44	Do you think <del>that</del> there are some specific medical reasons that women can have difficulty with their pregnancy?  (list all possible responses)	<ol style="list-style-type: none"> <li>1. No reasons</li> <li>2. Age under 18</li> <li>3. First birth</li> <li>4. Height under 5 feet (short stature)</li> <li>5. Old for first birth</li> <li>6. Five or more previous deliveries</li> <li>7. History of delivery by operation</li> <li>8. History of premature birth</li> <li>9. History of at least two miscarriages</li> <li>10. History of LBW baby excluding premature</li> <li>11. Previous child under 1 year of age</li> <li>12. Others (Specify)</li> <li>88. Don't know</li> </ol>	
45	What care do you provide?  (list all possible responses)	<ol style="list-style-type: none"> <li>1. Abdominal exam =&gt; Q46</li> <li>2. Vaginal exam =&gt; Q47</li> <li>3. Check Hemoglobin =&gt; Q47</li> <li>4. Blood pressure =&gt; Q47</li> <li>5. Weight =&gt; Q47</li> <li>6. Urine protein =&gt; Q47</li> <li>7. Urine sugar =&gt; Q47</li> <li>8. Iron tablets =&gt; Q47</li> <li>9. Iron injections =&gt; Q47</li> <li>10. Folic acid tablets =&gt; Q47</li> <li>11. Counseling =&gt; Q47</li> <li>12. Others (Specify) =&gt; Q47</li> </ol>	
46	What do you think is important in an abdominal examination in antenatal period?  (list all possible responses)	<ol style="list-style-type: none"> <li>1. Height of fundus</li> <li>2. Presenting part</li> <li>3. Fetal heart sounds</li> <li>4. Others (Specify)</li> <li>88. Don't know</li> </ol>	
47	What do you counsel about?  (list all possible responses)	<ol style="list-style-type: none"> <li>1. Diet =&gt; Q60</li> <li>2. Interval between pregnancies =&gt; Q58</li> <li>3. Immunization =&gt; Q51</li> <li>4. Breast feeding =&gt; Q48</li> <li>5. Child immunization =&gt; Q62</li> <li>6. No response =&gt; Q62</li> <li>7. Others (Specify) =&gt; Q62</li> </ol>	
48	Do you advise ALL mothers about breast feeding?	<ol style="list-style-type: none"> <li>1. Yes =&gt; Q50</li> <li>2. No =&gt; Q49</li> </ol>	
49	What are the reasons for not advising all mothers?  (list all possible responses)	<ol style="list-style-type: none"> <li>1. Mother is too weak</li> <li>2. The baby is too weak</li> <li>3. Maternal illness (Specify)</li> <li>4. Others (Specify)</li> </ol>	

#	Questions and Filters	Coding categories	Answers
50	<p>What are the reasons for advising breast feeding?</p> <p>(list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. It is good for the baby</li> <li>2. It is good for the mother</li> <li>3. Beneficial to both</li> <li>4. Others (Specify)</li> </ol>	
Skip to Q62 after this if Q51a is not to be asked			
51a	Do you think ALL women need any immunization during their pregnancies?	<ol style="list-style-type: none"> <li>1. Yes =&gt; Q51b</li> <li>2. No =&gt; Q57</li> </ol>	
51b	If yes, then specify the type of immunization?	<ol style="list-style-type: none"> <li>1. Iron injections</li> <li>2. Tetanus toxoid injections</li> <li>3. Others (Specify)</li> <li>88. Don't know</li> </ol>	
52	What is the reason that this injection should be given?	<ol style="list-style-type: none"> <li>1. Health of mother ("taqat kay injection")</li> <li>2. Health of baby</li> <li>3. Health of mother and baby</li> <li>4. Protection against tetanus</li> <li>5. Others (Specify)</li> <li>88. Don't know</li> </ol>	
53	Who gives tetanus toxoid injection to your patients?	<ol style="list-style-type: none"> <li>1. Give yourself =&gt; Q54</li> <li>2. Refer (specify where) =&gt; Q56</li> <li>3. Don't give =&gt; Q57</li> </ol>	
54	How many tetanus toxoid injections do you give per pregnant women?	# of injections	
<i>During which months of pregnancy do you usually give tetanus toxoid injections?</i>			
55a	1 <sup>st</sup> injection	# of month of pregnancy	
55b	2 <sup>nd</sup> injection	# of month of pregnancy	
56	How many women have you referred for tetanus toxoid immunization during the past year?	# of women	
57	<p>What are the reasons for not giving tetanus toxoid immunization to mothers?</p> <p>(list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. Unavailability of the tetanus toxoid injection</li> <li>2. Unavailability of the staff to inject the vaccine</li> <li>3. Patient has fever</li> <li>4. Patient is already fully immunized</li> <li>5. Patient refuses</li> <li>6. Others (Specify)</li> <li>88. Don't know</li> </ol>	

#	Questions and Filters	Coding categories	Answers
Skip to Q62 after this if Q58 is not to be asked			
58	When do you give family planning advice?	<ol style="list-style-type: none"> <li>1. Antenatally</li> <li>2. Postnatally</li> <li>3. Both</li> <li>4. Only when asked for it</li> <li>5. Others (Specify)</li> </ol>	
59	Why is family planning advice important? (list all possible responses)	<ol style="list-style-type: none"> <li>1. Mother's health</li> <li>2. Child's health</li> <li>3. Both</li> <li>4. Limitation of population growth</li> <li>5. Others (Specify)</li> </ol>	
60	Do you think women should change their diet during pregnancy?	<ol style="list-style-type: none"> <li>1. Yes =&gt; Q61a-61f</li> <li>2. No =&gt; Q62</li> </ol>	
<i>Do you think that for:</i>			
61a	Milk, their diet should _	<ol style="list-style-type: none"> <li>1. Increase</li> <li>2. Decrease</li> <li>3. Remain the same</li> </ol>	
61b	Green, leafy vegetables, their diet should _	<ol style="list-style-type: none"> <li>1. Increase</li> <li>2. Decrease</li> <li>3. Remain the same</li> </ol>	
61c	Bread/Cereals, their diet should _	<ol style="list-style-type: none"> <li>1. Increase</li> <li>2. Decrease</li> <li>3. Remain the same</li> </ol>	
61d	Meat, their diet should _	<ol style="list-style-type: none"> <li>1. Increase</li> <li>2. Decrease</li> <li>3. Remain the same</li> </ol>	
61e	Eggs, their diet should _	<ol style="list-style-type: none"> <li>1. Increase</li> <li>2. Decrease</li> <li>3. Remain the same</li> </ol>	
61f	Others (specify), their diet should _	<ol style="list-style-type: none"> <li>1. Increase</li> <li>2. Decrease</li> <li>3. Remain the same</li> </ol>	
62	During pregnancy, should medication be routinely given to pregnant women?	<ol style="list-style-type: none"> <li>1. Yes =&gt; Q63</li> <li>2. No =&gt; Q65</li> </ol>	
63	What type of medication should be given routinely?	<ol style="list-style-type: none"> <li>1. Iron</li> <li>2. Folic Acid</li> <li>3. Multivitamins</li> <li>4. Others (Specify)</li> </ol>	

#	Questions and Filters	Coding categories	Answers
64	Do you give routine medication?	1. Yes 2. No	
65	How many antenatal patients do you see in a year?	# of antenatal patients / year	

**Vignette #1:**

**Sakina, a 17 year old woman who got married nearly a year ago is pregnant for the first time She is 32 weeks pregnant . Today, she woke up with severe headache. She has had swelling of the hands and face for about 2 weeks. She is very frightened and urgently comes to you.**

66	<p>What would you do?</p> <p>(list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. Give aspirin /analgesics =&gt;Q67</li> <li>2. Put her to bed = &gt;Q68</li> <li>3. Have her blood pressure measurement taken =&gt;Q69</li> <li>4. Give diuretics (specify route and name) =&gt; Q70</li> <li>5. Give sedatives (specify route and name) =&gt;Q71</li> <li>6. Give hypotensives (specify route and name) =&gt; Q72</li> <li>7. Admit in own setup =&gt; Q73</li> <li>8. Refer =&gt; Q74</li> <li>9. Others (Specify) =&gt;Q77</li> </ol>	
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Describe method of management

67	How many days for aspirin/analgesics	# of days	
68	How many days put her to bed?	# of days	
69	How many days have her B.P. measurement taken?	# of days	
70	How many days for diuretics?	# of days	
71	How many days for sedatives?	# of days	
72	How many days for hypotensives?	# of days	
73	How many days admit in own setup?	# of days	
74	Where would you refer the patient?	<ol style="list-style-type: none"> <li>1. Private clinics/maternity home</li> <li>2. Private hospital</li> <li>3. Govt clinics</li> <li>4. Govt. Hospital</li> </ol>	
75	Would you accompany the patient?	<ol style="list-style-type: none"> <li>1. Yes =&gt; Q76</li> <li>2. No =&gt; Q77</li> </ol>	

#	Questions and Filters	Coding categories	Answers
76	Why would you accompany the patient?	<ol style="list-style-type: none"> <li>1. For the patient and her family's satisfaction</li> <li>2. For your own satisfaction</li> <li>3. To help get immediate attention at the referral site</li> <li>4. Others (Specify)</li> </ol>	
77	<p>What possible problems do you foresee in future for Sakina?</p> <p>(list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. Small baby</li> <li>2. Still birth</li> <li>3. Bleeding (APH)</li> <li>4. Fits/seizures (maternal)</li> <li>5. Premature delivery</li> <li>6. Maternal death</li> <li>7. Prolonged labor</li> <li>8. Others (Specify)</li> <li>88. Don't know</li> </ol>	
78	Have you ever seen a pregnant women with such a complication ?	<ol style="list-style-type: none"> <li>1. Yes =&gt; Q79</li> <li>2. No =&gt; Q80</li> </ol>	
79	When did you last see one?	<ol style="list-style-type: none"> <li>1. Past 6 months</li> <li>2. 6 months-1 year</li> <li>3. &gt;1 year</li> </ol>	
80	<p>What did you do in that case?</p> <p>(list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. Referral (JPMC or next higher level of provider)</li> <li>2. Hypotensives (name and route)</li> <li>3. Analgesics (name and route)</li> <li>4. Sedatives (name and route)</li> <li>5. Diuretics (name and route)</li> <li>6. Referral with hypotensives</li> <li>7. Referral with analgesics</li> <li>8. Referral with sedatives</li> <li>9. Referral with diuretics</li> <li>10. Poor practice (did not give treatment, or refer)</li> <li>11. Others (Specify)</li> </ol>	

**Vignette # 2**

**Hajra is full term pregnant and has started to have labor pains. Her mother-in-law, neighbor and sister, Aisha have come to look after her. This is Hajra's fifth pregnancy. All of a sudden Hajra had fits /seizures & this is when you were called, in the meantime you inform Aisha that the patient has to be taken to the hospital immediately. Aisha reports back to you that Hajra's husband is not at home and the mother-in-law thinks it is unnecessary to take Hajra to hospital, after all this is her 5th pregnancy & she has been fine previously, she surely would be fine once the "gin/aaseb" goes away.**

81	<p>How would you deal with the situation ?</p> <p>(List all possible responses)</p>	<ol style="list-style-type: none"> <li>1. Wait till the husband comes along =&gt; Q82</li> <li>2. Discuss with the mother-in-law =&gt; Q85</li> <li>3. Let the family deal with it &amp; inform you once they have decided about it =&gt; Q85</li> <li>4. Call the husband immediately =&gt;Q84</li> <li>5. Take the patient inspite of mother-in-law's opposition =&gt;Q85</li> <li>6. Others (Specify)</li> </ol>	
<p>Describe the method of dealing with the situation:</p>			
82	<p>Why would you wait for the husband to come ?</p> <p>(List all possible responses)</p>	<ol style="list-style-type: none"> <li>1. For financial reasons =&gt; Q85</li> <li>2. Because the family wants it =&gt; Q85</li> <li>3. His permission is necessary =&gt;Q85</li> <li>4. Husband might not want to take her to the hospital =&gt;Q83</li> <li>5. You want him to accompany the patient =&gt;Q85</li> <li>6. Others (Specify) =&gt;Q85</li> </ol>	
83	<p>In your opinion why would he not want to take his wife to the hospital ?</p> <p>(List all possible responses)</p>	<ol style="list-style-type: none"> <li>1. Poor care at the hospital</li> <li>2. Financial reasons</li> <li>3. Others (Specify)</li> </ol>	

#	Questions and Filters	Coding categories	Answers
84	Why would you call for the husband immediately?  (list all possible responses)	1. For financial reasons 2. Because of the seriousness of the situation 3. His permission is necessary 4. Husband might not want to take her to the hospital 5. You want him to accompany the patient 6. Others (Specify)	
85	Have you come across any such situations in the past 6 months ?	1. Yes => Q86 2. No => Q87	
86	How many times	# of cases	
	Describe the method of management:		

**Vignette # 3**

**Wasima, a primi with full term pregnancy has been in labor for 24 hours and not yet delivered. The dai who was called in when labor started is now worried and sends the husband to bring you home.**

87	<p>How would you react?</p> <p>(list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. Listen to what the dai has to say you =&gt;Q88</li> <li>2. You would by pass her and see the patient on your own =&gt; Q88</li> <li>3. Ask all the attendants to wait (outside the room) while you attend to the patient =&gt;Q88</li> <li>4. Refer the patient right away =&gt;Q91</li> <li>5. Others (Specify) =&gt;Q88</li> </ol>	
Describe the method of management:			
87a	<p>What injection will you give?</p> <p>(to be asked if injection is mentioned in method of management)</p>	<ol style="list-style-type: none"> <li>1. Synto/ methergin I/V</li> <li>2. Synto/ methergin I/M</li> <li>3. Others (Specify)</li> </ol>	
88	<p>Would you ask for the dai's assistance if needed?</p>	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> </ol>	
89	<p>Would you hold somebody responsible for not calling you earlier?</p>	<ol style="list-style-type: none"> <li>1. Yes =&gt; Q90</li> <li>2. No =&gt; Q91</li> </ol>	
90	<p>Who would you hold responsible?</p>	<ol style="list-style-type: none"> <li>1. Husband</li> <li>2. Other family members (Specify)</li> <li>3. Dai</li> <li>4. All of the above</li> <li>5. Others (Specify)</li> </ol>	
91	<p>Why would you refer the patient?</p> <p>(list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. You don't deal with such patients</li> <li>2. She needs operative procedure which is not possible at your facility</li> <li>3. She would die and the family will blame it on you</li> <li>4. Others (Specify)</li> </ol>	

#	Questions and Filters	Coding categories	Answers
92	<p>What could be the causes of delay in delivery?</p> <p>(list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. Breech</li> <li>2. Transverse</li> <li>3. Twins</li> <li>4. Large Baby</li> <li>5. CPD</li> <li>6. Uterine dysfunction</li> <li>7. Not in true labor</li> <li>8. Others (Specify)</li> <li>88. Don't know</li> </ol>	
93	<p>Do you think this is a worrisome condition?</p>	<ol style="list-style-type: none"> <li>1. Yes =&gt; Q94</li> <li>2. No =&gt; Q95</li> </ol>	
94	<p>For whom is it worrisome?</p>	<ol style="list-style-type: none"> <li>1. Only for mother</li> <li>2. Only for child</li> <li>3. For both</li> <li>4. Nobody</li> <li>5. For some one else (Specify)</li> </ol>	
95	<p>In your opinion what kind of problems Wasima may face?</p> <p>(list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. PPH =&gt;Q98</li> <li>2. Rupture Uterus =&gt;Q98</li> <li>3. Problems with next pregnancy =&gt;Q98</li> <li>4. Trauma to child =&gt;Q98</li> <li>5. Congenital anomaly in child =&gt;Q98</li> <li>6. Fistula formation =&gt;Q96</li> <li>7. Anything else (Specify) =&gt; Q98</li> <li>88. Don't know</li> </ol>	
96	<p>How can the fistula formation be prevented during pregnancy?</p>	<ol style="list-style-type: none"> <li>1. Proper ANC to identify women with risk of prolonged/obstructed labor</li> <li>2. Properly trained personnel taking care of prolonged / obstructed labor</li> <li>3. Others (Specify)</li> </ol>	
97	<p>How can fistula formation be prevented after delivery ?</p>	<ol style="list-style-type: none"> <li>1. Timely referral of patient with prolonged labor to hospital</li> <li>2. Putting indwelling catheter for a few days in women who had prolonged/obstructed labor</li> <li>3. Others (Specify)</li> </ol>	

**Vignette # 4**

**Musarrat who is 20 years old is pregnant for the first time. She does not have elders (mother-in-law) at home & so lives alone with her husband. She is now three month pregnant and has had spotting for the past week now.**

98	Do you think it is a serious condition?	1. Yes => Q99 2. No => Q100	
99	Why do you think this situation is serious ?  (list all possible responses)	1. It may complication the pregnancy in future (Specify) 2. Musarrat may become anemic 3. Musarrat may bleed (antenatally) in future 4. Musarrat may abort 5. Others (Specify)	
100	How would you manage her?  (list all possible responses)	1. Give advice about rest 2. Tell her not to worry about it 3. Follow her up in 1 week's time 4. Others (Specify) a. Treatment b. Advice c. Examination d. Any thing else (Specify)	
<i>What do you do if a patient complains of leaking?</i>			
101a	Determine the type of leaking fluid by history	1. Yes 2. No 3. Don't know 4. No response	
101b	Determine the type of leaking fluid by vaginal examination	1. Yes 2. No 3. Don't know 4. No response	
101c	Conduct an abdominal examination	1. Yes 2. No 3. Don't know 4. No response	
101d	Refer the patient to clinic/ maternity home	1. Yes 2. No 3. Don't know 4. No response	
101e	Refer the patient to hospital	1. Yes 2. No 3. Don't know 4. No response	

#	Questions and Filters	Coding categories	Answers
101f	Give medication (Specify)	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> <li>3. Don't know</li> <li>4. No response</li> </ol>	
101g	No action except counseling (Specify)	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> <li>3. Don't know</li> <li>4. No response</li> </ol>	
102	<p>In your practice what are the <b>four</b> main reasons for referral?</p> <p>(list according to priority)</p>	<ol style="list-style-type: none"> <li>1. High blood pressure</li> <li>2. Anemia</li> <li>3. A.P.H</li> <li>4. Diabetes</li> <li>5. Edema</li> <li>6. Jaundice</li> <li>7. Previous cesarean section</li> <li>8. Breech</li> <li>9. Others (Specify)</li> </ol>	
103	How many cases have you referred in last one year?	# of cases referred /year	

**SECTION C: DELIVERY CARE**

S#	Questions and Filters	Coding categories	Answers
104	Do you conduct deliveries yourself?	1. Yes => Q105 2. No => Q107	
105	How many deliveries do you conduct in a year?	# of deliveries/ year	
106	Where do you conduct deliveries? (list all possible responses)	1. Patient's home 2. Clinic 3. Private hospital 4. Others (Specify)	
107	Do you wash your hands before examination / deliveries?	1. Yes 2. No	
108	Do you wear gloves?	1. Yes 2. No	
109	Do you use antiseptic (Dettol) for cleaning the patient?	1. Yes 2. No	
110	How do you sterilize the instruments?	1. Boil => Q111 2. Insert in antiseptic solution => Q112 3. Autoclave => Q113 4. Others (Specify) => Q113	
111	For how long do you boil?	# of minutes	
112	For how long do you immerse the instruments?	# of minutes	
113	What do you do if labor is slow? (list all possible responses)	1. Nothing 2. Give I/M injection (Specify) 3. Give I/V injection (Specify) 4. Consult doctor 5. Refer to hospital 6. Refer to maternity home/clinic 7. Others (Specify)	
114	What do you use to cut the cord?	1. Knife 2. Scissors 3. Razor blade 4. Other (Specify)	
115	How do you clamp the cord?	1. Thread 2. Cord clamp 3. Others (Specify)	

#	Questions and Filters	Coding categories	Answers
116	Do you give injection after delivery?	1. Yes =>Q117 2. No =>Q118	
117	What type of injection? (list all possible responses)	1. Ergometrine/Methergin 2. Oxytocin/Syntocinon 3. Others (Specify)	
118	Do you give episiotomy?	1. Yes => Q119 2. No => Table B 3. Others (Specify) => Q120	
119	Who do you give it to?	1. Primiparas 2. Multiparas 3. Both 4. Others (Specify)	
120	Who stitches episiotomy/tear?	1. Self =>Q121 2. Call others (Specify) =>Table B 3. Refer to others (Specify) =>Table B	
121	Do you feel comfortable in stitching episiotomy/tear?	1. Yes 2. No	
122	Have you had any complications associated with your episiotomy/tear stitches?	1. Yes => Q123 2. No => Table B	
123	What are these complications?	1. Perineal Infection 2. Gaping of the wound 3. Other (Specify)	
124	How many times?	# of complications	

<b>TABLE B:</b>	<b>Col. I</b>	<b>Col. II</b>	<b>Col. III</b>
	Do you deliver the following?  1. Yes 2. No	What problems do you have in these deliveries?  1. Prolonged labor 2. Obstructed labor 3. Postpartum hemorrhage 4. Retained placenta 5. Ruptured uterus 6. Fetal trauma 7. Delay in delivery of the after coming head 8. Others (Specify) 999. NA  (list all possible responses)	What do you do when you have problem?  1. Call another/Nurse /Midwife /Doctor 2. Refer to hospital 3. Refer to maternity home / clinic 4. Others ( Specify ) 999.NA
1. Twins	<u>125</u>	<u>128</u>	<u>131</u>
2. Breech	<u>126</u>	<u>129</u>	<u>132</u>
3. Transverse lie	<u>127</u>	<u>130</u>	<u>133</u>

If Col. I = 2, then Cols. II & III = 999.NA  
 If Col. II = 999 na, then Col. III =999.NA  
 If Col. II = 0, then Col. III = 999.NA

#	Questions and Filters	Coding categories	Answers
134	After the delivery of the baby, what do you do for the placenta?	<ol style="list-style-type: none"> <li>1. Wait =&gt; Q135</li> <li>2. Controlled traction on cord =&gt;Q136</li> <li>3. Traction on cord =&gt;Q136</li> <li>4. Pressure on abdomen =&gt;Q136</li> <li>5. Others (Specify) =&gt;Q136</li> </ol>	
135	How long do you wait for the placenta to deliver by itself?	# of minutes	
136	If placenta does not come, what do you do?	<ol style="list-style-type: none"> <li>1. Remove manually</li> <li>2. Others (Specify)</li> </ol>	
137	Immediately after delivery, if the mother of the baby bleeds heavily, then what will you do?	<ol style="list-style-type: none"> <li>1. Give injection (Specify)</li> <li>2. Remove placenta manually</li> <li>3. Others (Specify)</li> </ol>	
138	Do you usually give any injection after the delivery of the placenta?	<ol style="list-style-type: none"> <li>1. Yes =&gt; Q139</li> <li>2. No =&gt; Q141</li> </ol>	
139	How do you give this injection?	<ol style="list-style-type: none"> <li>1. I/M</li> <li>2. I/V</li> </ol>	
140	<p>What are these injections called?</p> <p>(list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. Methergin</li> <li>2. Syntocinon</li> <li>3. Anaroxyl/Transamine</li> <li>4. Don't know</li> <li>5. Others (Specify)</li> </ol>	
141	<p>After the delivery of the placenta, if the mother bleeds heavily, what will you do?</p> <p>(list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. Give injections (Specify)</li> <li>2. Call another LHV</li> <li>3. Call doctor</li> <li>4. Refer to hospital</li> <li>5. Massage uterus</li> <li>6. Put in vaginal pack</li> <li>7. Others (Specify)</li> <li>88. Don't know</li> </ol>	

**Vignette # 5**

**You have just delivered a woman of her 5<sup>th</sup> baby. The placenta has been expelled and the baby is well and crying. While you are bathing the baby, the woman complains of "ghabraahat" and feeling weak. Upon lifting the "razai" that you have covered the woman with, you see that the bed sheets are soaked with blood.**

142	<p>What would you do?</p> <p>(List all possible responses)</p>	<ol style="list-style-type: none"> <li>1. Massage the uterus gently =&gt; Q144</li> <li>2. Do a vaginal exam to see where the blood is coming from =&gt;Q144</li> <li>3. Remove blood clots (if seen) =&gt;Q144</li> <li>4. Raise the foot of the bed =&gt;Q144</li> <li>5. Keep the mother warm =&gt;Q144</li> <li>6. Give a hot drink of tea with sugar =&gt;Q144</li> <li>7. Give injection (Specify) =&gt;Q143</li> <li>8. Introduce medicine in the vagina =&gt; Q144</li> <li>9. Pack the vagina =&gt;Q144</li> <li>10. Draw blood samples for cross matching =&gt; Q146</li> <li>11. Arrange for blood transfusion =&gt;Q147</li> <li>12. Put up I/V line =&gt; Q147</li> <li>13. Others (Specify) =&gt;Q144</li> </ol>	
Describe method of management			
143	What kind of injection ?	<ol style="list-style-type: none"> <li>1. Methergin / Syntocinon</li> <li>2. Others (Specify)</li> </ol>	
144	Would you call another doctor/ LHV/ Nurse?	<ol style="list-style-type: none"> <li>1. Yes =&gt; Q145</li> <li>2. No =&gt; Q147</li> </ol>	
145	When would you call another doctor/ LHV/ Nurse?	<ol style="list-style-type: none"> <li>1. Immediately</li> <li>2. After your treatment</li> </ol>	
146	Who would arrange for blood transfusion?	<ol style="list-style-type: none"> <li>1. You</li> <li>2. Medical assistant</li> <li>3. Family member</li> <li>4. Others (Specify)</li> </ol>	
147	Do you have arrangement for blood transfusion at your facility ?	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> </ol>	

#	Questions and Filters	Coding categories	Answers
148	Would you refer the patient to the hospital ?	1. Yes => Q149 2. No => Q150	
149	When would you refer the patient to the hospital ?	1. Immediately 2. After your treatment	
150	What do you think is the reason for this bleeding?  (list all possible responses)	1. Vaginal tear/ Cervical tear 2. Uterine rupture 3. Bleeding disorder 4. Part of placenta retained 5. Baby girl 6. Others (Specify) 88. Don't know	

**SECTION D: POSTNATAL CARE**

S#	Questions and Filters	Coding categories	Answers
151	Do you ask the patient to come for postnatal visit?	1. Yes => Q153 2. No => Q152	
152	Do you visit the patients postnatally for check up?	1. Yes => Q153 2. No => Q162	
153	For how long after the delivery do you follow up the patient ?	# of days	
154	When do you generally conduct first postpartum check up?	1. A week after delivery 2. weeks after delivery 3. weeks after delivery 4. Others (Specify)	
155	What do you do in postpartum check up?  (list all possible responses)	1. Abdominal massage 2. Abdominal examination 3. Breast examination 4. Counseling 5. Others (Specify)	
156	When do you counsel the patient?	1. Immediately after delivery 2. weeks postnatally 3. Others (Specify)	
157	What do you counsel about?  (list according to priority)	1. Breast feeding / management of engorgement of breasts => Q160 2. Diet => Q160 3. Interval between pregnancies => Q158 4. Neonatal Immunizations => Q160 5. Others (Specify) => Q160	
158	Do you refer the patient for family planning ?	1 Yes =>Q159 2 No =>Q160	
159	Where do you refer the patient ?	Name of the place	
160	What complications do you see in the postpartum period?  (list all possible responses)	1 Fever => Q161 2. Postpartum hemorrhage => Q162 3. Fistula => Q162 4. Depression => Q162 5. Jaundiced baby => Q162 6. Feeding problem => Q162 7. Cord infection => Q162 8 Irritability => Q162 9. Baby not immunized => Q162 10. Others (Specify) => Q162 88. Don't know => Q162	

#	Questions and Filters	Coding categories	Answers
161	What do you do when patient has high grade fever?  (list all possible responses)	1. Give aspirin/analgesics 2. Give antibiotics 3. Refer to clinic / maternity home 4. Refer to hospital 5. Others (Specify)	
162	Have you had any maternal deaths in the past one year?  (Bari Eid to Bari Eid)	1. Yes => Q163 2. No => Q165	
163	How many?	# of deaths	
164	What were the causes of maternal death?	1. Antepartum hemorrhage 2. Postpartum hemorrhage 3. Infection/ sepsis 4. Eclampsia (seizures, high blood pressure) 5. Others (Specify)	
165	Have you had any stillbirths in the past one year?  (Bari Eid to Bari Eid)	1. Yes => Q166 2. No => Q168	
166	How many were fresh still births?	# of fresh still births	
167	How many were macerated still births?	# of macerated still births	
168	How many early neonatal deaths occurred in the last one year?  (Bari Eid to Bari Eid)	# of early neonatal deaths	
169	How many babies are born each month?	# of babies born / month	
169a	Have you noticed any change in attitude of J.P.M.C. staff on referring obs cases? to be asked from those who mention J.P.M.C. as a referral site)	1. Yes (Specify) 2. No (Specify)	

**Vignette # 6**

**Zarina delivered a baby boy at home, a few days ago. Her sister-in-law came to call you today as Zarina is not well & is suffering from high fever, shivers, headaches. She also vomited thrice since the last evening. Her abdomen is distended and she complains of foul smelling vaginal discharge.**

170	<p>Why do you think she <u>may</u> have this problem?</p> <p>(list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. Unsterilized instruments used during delivery</li> <li>2. No hand washing prior to delivery</li> <li>3. Place of delivery not clean</li> <li>4. Use of dirty sanitary cloths/pad after delivery</li> <li>5. Malaria</li> <li>6. Others (Specify)</li> </ol>	
171	<p>How would you proceed?</p>	<ol style="list-style-type: none"> <li>1. Go immediately =&gt; Q173</li> <li>2. Go later =&gt; Q173</li> <li>3. Give medications to the sister-in-law for now &amp; then see her later in the evening =&gt; Q172</li> <li>4. Reassure sister-in-law to go back home =&gt; Q189</li> <li>5. Call her to your health facility =&gt; Q173</li> <li>6. Others (Specify) =&gt; Q173</li> </ol>	
172	<p>What medications would you give to the sister-in-law?</p> <p>(list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. Antipyretic (Aspirin)</li> <li>2. Antibiotic (Specify)</li> <li>3. Antibiotic and Aspirin/Antipyretic</li> <li>4. Others (Specify)</li> </ol>	
173	<p>What would you examine her for ?</p> <p>(list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. Temperature</li> <li>2. Pulse rate</li> <li>3. Hydration status dry mouth, skin/adequate urine output</li> <li>4. Vaginal exam</li> <li>5. Abdominal exam</li> <li>6. Others (Specify)</li> </ol>	
<p>Describe method of management</p>			

<b>TABLE C:</b>	<b>Col. I</b>	<b>Col. II</b>	<b>Col. III</b>
	Which treatment would you give her? 1. Yes 2. No	Dosage (mg) 999.NA	Days (#) 999.NA
1. Antibiotics:			
a. Oral (Specify)	<u>174a</u>	<u>179a</u>	<u>184a</u>
b. I/M (Specify)	<u>174b</u>	<u>179b</u>	<u>184b</u>
c. I/V (Specify)	<u>174c</u>	<u>179c</u>	<u>184c</u>
2. Analgesics:			
a. Oral (Specify)	<u>175a</u>	<u>180a</u>	<u>185a</u>
b. I/M (Specify)	<u>175b</u>	<u>180b</u>	<u>185b</u>
c. I/V (Specify)	<u>175c</u>	<u>180c</u>	<u>185c</u>
3. I/V Fluids (Specify)	<u>176</u>	<u>181</u>	<u>186</u>
4. Vitamins			
a. Oral (Specify)	<u>177a</u>	<u>182a</u>	<u>187a</u>
b. I/M (Specify)	<u>177b</u>	<u>182</u>	<u>187b</u>
c. I/V (Specify)	<u>177c</u>	<u>182c</u>	<u>187c</u>
5. Others (Specify )	<u>178</u>	<u>183</u>	<u>188</u>

If Col. I = 2 then Cols. II and III = 999.NA  
If dosage or days are S O S. or Stat. then write 88

#	Questions and Filters	Coding categories	Answers
189	What was the response of respondent?	1. Very Cooperative 2. Cooperative 3. Indifferent	
	Interviewer's Comments?		

Thank you very much

IDCODE:

**KAP QUESTIONNAIRE OF PROVIDERS**

**TBA / DAI**

Visit #	Date	Status
1	___ / ___ / ___	1. Complete 2. Incomplete 3. Refusal
2	___ / ___ / ___	1. Complete 2. Incomplete 3. Refusal
3	___ / ___ / ___	1. Complete 2. Incomplete 3. Refusal

**PERSONAL DATA**

<b>Name of Respondent:</b>		
<b>Age of Respondent (years)</b>		
<b>Marital Status</b>	1. Single 2. Married 3. Widow 4. Divorcee	
<b>Field Site</b>	<b>Korangi Sector # 8</b> 1. BIL A 2. BIL B 3. GUL C 4. GUL D 5. GUL E 6. GUL F 7. BAN 8. MAG 9. Others (Specify)	
<b>Site of Interview:</b>	1. Health Facility 2. Patient's home 3. Dai's home 4. Other (specify)	
<b>Home Address Phone</b>		
<b>Work Address Phone</b>		
<b>Name of Interviewer</b>	1. NM 2. SZ 3. NQ	

**SECTION A. BACKGROUND INFORMATION**

S#	Questions and Filters	Coding categories	Answers
1	What is the main language that you speak at home?	<ol style="list-style-type: none"> <li>1. Urdu</li> <li>2. Pushto</li> <li>3. Baluchi</li> <li>4. Sindhi</li> <li>5. Punjabi</li> <li>6. Hindko</li> <li>7. Brohi</li> <li>8. Saraiki</li> <li>9. Gujrati</li> <li>10. Kathiawari</li> <li>11. Memoni</li> <li>12. Persian</li> <li>13. Others (Specify)</li> </ol>	
2	What is your level of education?	<ol style="list-style-type: none"> <li>1. Illiterate (including Madrasa) =&gt;Q4</li> <li>2. Can just read a newspaper =&gt;Q3</li> <li>3. Can just read newspaper &amp; write letter =&gt;Q3</li> <li>4. Class I to IV =&gt;Q3</li> <li>5. Class V to X =&gt;Q3</li> <li>6. Class XI to XII =&gt;Q3</li> <li>7. Technical diploma =&gt;Q3</li> </ol>	
3	What language did you receive your education in?	<ol style="list-style-type: none"> <li>1. Urdu</li> <li>2. English</li> <li>3. Urdu and English</li> <li>4. The main language (Q#1)</li> <li>5. Others (Specify)</li> </ol>	
4	Have you received any training?	<ol style="list-style-type: none"> <li>1. Yes =&gt; Q5</li> <li>2. No =&gt; Q11</li> </ol>	
5	What type of training was this?	<ol style="list-style-type: none"> <li>3. Formal =&gt;Q6</li> <li>4. Informal =&gt;Q7</li> <li>5. Both formal and informal =&gt;Q6</li> </ol>	
6	Were you trained by the Sindh Dai Training Program?	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> </ol>	

S#	Questions and Filters	Coding categories	Answers
7	By whom were you trained?  (list all possible responses)	1. Doctor 2. LHV 3. Nurse 4. Dai 5. Family member	
	<i>For what period of time were you trained?</i>		
8a	In days if < 1 week	# of days	
8b	In weeks if > 1 week	# of weeks	
8c	Months if > 4 weeks	# of months	
9	Where were you trained?  (list all possible responses)	1. Hospital 2. Local Clinic 3. MCHC 4. Home 5. Others (Specify)	
10	How long ago were you trained?	1. Less than 1 year ago 2. 1-5 years ago 3. 6-10 years ago 4. More than 10 years ago	
11	How long have you been practicing?	1. Less than one year 2. 1-5 years 3. 6-10 years 4. More than 10 years	
12	Have you attended any refresher course after your initial training?	1. Yes =>Q13 2. No =>Q16	
13	How many?	= of courses	
14	How many hours on average?	= of hours	
15	When did you last attend one?	1. Within past 6 months =>Q19 2. Past 1 year =>Q19 3. More than 1 year ago =>Q19	
16	What are your reason(s) for not attending any refresher course?  (list all possible responses)	1. Lack of time 2. No opportunity 3. Financial reasons 4. Not interested 5. Others (Specify)	
17	Would you attend any refresher courses if made available?	1. Yes =>Q19 2. No =>Q18	

S#	Questions and Filters	Coding categories	Answers
18	The reason(s) for not attending refresher course even if made available	<ol style="list-style-type: none"> <li>1. Lack of time</li> <li>2. Financial reasons</li> <li>3. Not interested</li> <li>4. Others (Specify)</li> </ol>	
19	What is the <b>main</b> reason you wanted to become a dai?	<ol style="list-style-type: none"> <li>1. Economic/Poverty</li> <li>2. Interest in Profession</li> <li>3. Serve community</li> <li>4. Family profession</li> <li>5. Others (Specify)</li> </ol>	
20	Where do you practice generally?  (list all possible responses)	<ol style="list-style-type: none"> <li>1. Own home</li> <li>2. Patient's home</li> <li>3. Clinic</li> <li>4. Maternity home</li> <li>5. Others (Specify)</li> </ol>	

TABLE A :	CURRENT JOB STATUS				PREVIOUS JOB STATUS			
	Col. I a	Col. II a	Col. III a	Col. IV a	Col. I b	Col. II b	Col. III b	Col. IV b
	Where do you currently work?  1. Yes 2. No	How long have you been working in each facility?  1. < 1 year 2. 1-5 years 3. > 5 years 999.NA	How do you work?  1. Independently 2. Under supervision	How long have you been working independently?  1. <1 year 2. 1-5 years 3. >5 years 999.NA	What is your previous work experience?  1. Yes 2. No	How long did you work in each facility?  1. < 1 year 2. 1-5 years 3. > 5 years 999.NA	How did you work?  1. Independently 2. Under super-vision	How long did you work independently?  1. <1 year 2. 1-5 years 3. > 5 years 999.NA
1. Hospital	<u>21a</u>	<u>27a</u>	<u>33a</u>	<u>39a</u>	<u>21b</u>	<u>27b</u>	<u>33b</u>	<u>39b</u>
2. Clinic	<u>22a</u>	<u>28a</u>	<u>34a</u>	<u>40a</u>	<u>22b</u>	<u>28b</u>	<u>34b</u>	<u>40b</u>
3. Maternity home	<u>23 a</u>	<u>29a</u>	<u>35a</u>	<u>41a</u>	<u>23b</u>	<u>29b</u>	<u>35b</u>	<u>41b</u>
4. Patient's home	<u>24 a</u>	<u>30a</u>	<u>36a</u>	<u>42a</u>	<u>24b</u>	<u>30b</u>	<u>36b</u>	<u>42b</u>
5. Own home	<u>25 a</u>	<u>31a</u>	<u>37a</u>	<u>43a</u>	<u>25b</u>	<u>31b</u>	<u>37b</u>	<u>43b</u>
6. Others (specify)	<u>26 a</u>	<u>32a</u>	<u>38a</u>	<u>44a</u>	<u>26b</u>	<u>32b</u>	<u>38b</u>	<u>44b</u>

If Col. Ia=2, then Cols. IIa, IIIa & IVa=999 [NA]

If Col. IIIa=2, then Col. IVa=999 [NA]

If Col. Ib=2, then Cols. IIb, IIIb & IVb=999 [NA]

If Col. IIIb=2, then Col. IVb=999 [NA]

**SECTION B: ANTENATAL CARE**

45	Do you see women in the antenatal period during normal pregnancy?	<ol style="list-style-type: none"> <li>1. Yes =&gt;Q46</li> <li>2. No =&gt;Q48</li> </ol>	
46	Generally at what month of pregnancy do the patients come for/call you for their first antenatal exam?	# of month	
46a	<p>What ante natal care do you provide in the first visit in normal pregnancy?</p> <p>(list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. Abdominal examination.</li> <li>2. Anemia.</li> <li>3. Swelling (Specify )</li> <li>4. Blood pressure(ask if they check themselves or have it checked).</li> <li>5. Weight (ask if they check themselves or have it checked)</li> <li>6. Others (Specify)</li> </ol>	
47	How many times do you usually visit/call a woman during normal pregnancy?	<ol style="list-style-type: none"> <li>1. 1-3 times</li> <li>2. 3-6 times</li> <li>3. More than 6 times</li> <li>4. None</li> </ol>	
48	Do pregnant women only call / come you to you when they experience a problem?	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> </ol>	
49	<p>What are the most common medical problems that you are consulted for?</p> <p>(list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. Bleeding</li> <li>2. Swelling (Specify)</li> <li>3. Decreased fetal movement</li> <li>4. Jaundice</li> <li>5. Anemia</li> <li>6. Malpresentation</li> <li>7. High blood pressure</li> <li>8. Abdominal pain</li> <li>9. Increased pressure feeling in the abdomen</li> <li>10. Vaginal discharge</li> <li>11. Diabetes</li> <li>12. APH</li> <li>13. Eclampsia</li> <li>14. Some medical problem in mother</li> <li>15. Twins</li> <li>16. Weakness in mother</li> <li>17. Depression/tension</li> <li>18. Others (Specify)</li> </ol>	

S#	Questions and Filters	Coding categories	Answers
50	What do you think is important in an abdominal examination in antenatal period?  (list all possible responses)	1. Height of fundus 2. Presentation/Position 3. Fetal heart sounds 4. Others (Specify) 88. Don't know	
51	Do you think that there are some specific reasons that women can have difficulty with their pregnancy?  (list all possible responses)	1. No reasons 2. Aged under 18 3. First pregnancy 4. Height under 5 feet (short stature) 5. More than 35 years age at the time of first birth 6. Five or more previous deliveries 7. History of delivery by operation 8. History of premature birth 9. History of at least two miscarriages 10. History of LBW baby excluding prematurity 11. Previous child under 1 year of age 12. Breech 13. Malpresentation 14. Other (Specify) 88. Don't know	
52	What do you counsel about?  (list all possible responses)	1. Diet => Q64 2. Breast feeding =>Q53 3. Immunization =>Q56 4. Interval between pregnancies =>Q63 5. Bed rest => Q64 6. Others (specify) => Q64 7. If no response =>Q64	
53	Do you advise ALL mothers about breast feeding?	1. Yes => Q54 2. No => Q55	
54	When do you advise about breast feeding?	1. Antenatally =>Q64 2. Postnatally =>Q64 3. Both =>Q64	
55	What are the reasons for not advising all mothers?	1. Mother is too weak 2. Maternal illness (Specify) 3. Others (Specify)	
Skip to Q64 after this if Q56a is not to be asked			
56a	Do you think ALL women need any immunization during their pregnancies	1. Yes => Q56b 2. No => Q62	

S#	Questions and Filters	Coding categories	Answers
56b	If yes then specify the type of immunization?	<ol style="list-style-type: none"> <li>1. Iron injections</li> <li>2. Tetanus Toxoid injections</li> <li>3. Others (Specify)</li> </ol>	
57	What is the reason that this injection should be given?	<ol style="list-style-type: none"> <li>1. Health of mother (“taqat kay injection”)</li> <li>2. Health of baby</li> <li>3. Health of mother and baby</li> <li>4. Protection against tetanus</li> <li>5. Others (Specify)</li> <li>88. Don’t know</li> </ol>	
58	Who gives tetanus toxoid injections to your patients?	<ol style="list-style-type: none"> <li>1. Give it yourself =&gt;Q59</li> <li>2. Refer (specify where) =&gt;Q61</li> <li>3. Don’t give =&gt;Q62</li> </ol>	
59	How many tetanus toxoid injections do you generally give to a patient in her first pregnancy?	# of injections	
<i>During which months of pregnancy do you usually give tetanus toxoid injections?</i>			
60a	1 <sup>st</sup> injection	# of month of pregnancy	
60b	2 <sup>nd</sup> injection	# of month of pregnancy	
61	How many women have you referred for tetanus toxoid immunization during the past year?	# of women	
62	What are the reasons for not giving tetanus toxoid immunization to your patients?  (list all possible responses)	<ol style="list-style-type: none"> <li>1. Unavailability of tetanus toxoid injections</li> <li>2. Unavailability of the staff to inject the vaccine</li> <li>3. Patient has fever</li> <li>4. Patient is already fully immunized</li> <li>5. You don’t give it yourself</li> <li>6. Patient refuses</li> <li>7. Others (Specify)</li> </ol>	
Skip to Q64 after asking this question if Q63 is not to be asked			
63	When do you give advice for family planning?	<ol style="list-style-type: none"> <li>1. Antenatally</li> <li>2. Postnatally</li> <li>3. Both 1 and 2</li> <li>4. Only when asked for it</li> <li>5. Others (Specify)</li> </ol>	

S#	Questions and Filters	Coding categories	Answers
64	During pregnancy, should medication be routinely given to pregnant women?	1. Yes =>Q65 2. No =>Q67	
65	What type of medication should routinely be given?  (list all possible responses)	1. Iron 2. Folic Acid 3. Multivitamins 4. Others (Specify) 88. Don't know	
66	Do you give routine medication?	1. Yes 2. No	
67	Do you think women should change their diet during pregnancy?	1. Yes => Q68a - 68f 2. No => Q69	
<i>Do you think that for:</i>			
68a	Milk, diet should_	1. Increase 2. Decrease 3. Remain the same	
68b	Green, leafy vegetables, diet should_	1. Increase 2. Decrease 3. Remain the same	
68c	Bread/Cereals, diet should_	1. Increase 2. Decrease 3. Remain the same	
68d	Meat, diet should_	1. Increase 2. Decrease 3. Remain the same	
68e	Eggs, diet should_	1. Increase 2. Decrease 3. Remain the same	
68f	Others (Specify) , diet should_	1. Increase 2. Decrease 3. Remain the same	
69	How many antenatal patients do you see in a year?	# of antenatal patients / year	

<b>TABLE B:</b>	<b>Col. I.</b>	<b>Col. II.</b>	<b>Col. III.</b>	<b>Col. IV</b>
	In a pregnant women what do you think are the complications which indicate danger to mother / baby  1. Yes 2. No	How many pregnant women with such complications or danger signals have you seen in the last 1 year?  # of women 999.NA	For how many of them did you seek help?  # of patients 999. NA	Whom did you seek help from?  1. LHV/Nurse 2. Doctor 3. Another TBA 4. LHW 5. Others (Specify) 999.NA  (list all possible responses)
1. Mother is very pale and weak	<u>70</u>	<u>77</u>	<u>84</u>	<u>91</u>
2. Giddiness	<u>71</u>	<u>78</u>	<u>85</u>	<u>92</u>
3. Bleeding (spotting)	<u>72</u>	<u>79</u>	<u>86</u>	<u>93</u>
4. Headache that does not go away with medicines	<u>73</u>	<u>80</u>	<u>87</u>	<u>94</u>
5. Persistent vomiting/ more than normal vomiting of pregnancy	<u>74</u>	<u>81</u>	<u>88</u>	<u>95</u>
6. High fever during pregnancy	<u>75</u>	<u>82</u>	<u>89</u>	<u>96</u>
7. Others (Specify)	<u>76</u>	<u>83</u>	<u>90</u>	<u>97</u>

If Col. I =2 then Cols. II, III and IV=999.NA

If Col. II=0. then Cols. III AND IV=999.NA

If Col. III = 0 then Col. IV = 999. NA



S#	Questions and Filters	Coding categories	Answers
107	Would you accompany the patient?	1. Yes =>Q108 2. No =>Q109	
108	Why would you accompany the patient?	1. For the patient and her family's satisfaction 2. For your own satisfaction 3. To help get immediate attention at the referral site 4. Others (Specify)	
109	What possible problems do you foresee in future for Sakina?  (list all possible responses)	1. Small baby 2. Still birth 3. Bleeding (APH) 4. Fits / seizures (maternal) 5. Premature delivery 6. Maternal death 7. Prolonged labor 8. Others (Specify) 88. Don't know	
110	Have you ever seen a pregnant woman with such a complication ?	1. Yes => Q111 2. No => Q113	
111	When did you last see one?	1. Past 6 months 2. 6 months-1year 3. >1 year	
112	What did you do in that case? (Please Specify)	1. Referral to doctors/LHVs/JPMC 2. Desi medicine/ not to worry 3. Did nothing 4. Others (Specify) 999.NA	

**Vignette # 2**

**Hajra is full term pregnant and has started to have labor pains. Her mother-in-law, neighbor and sister, Aisha have come to assist her. This is Hajra's fifth pregnancy. All of a sudden Hajra had fits /seizures & this is when you were called in. In the meantime you inform Aisha that the patient has to be taken to the hospital immediately. Aisha reports back to you that Hajra's husband is not at home and the mother-in-law thinks it is unnecessary to take Hajra to hospital, after all this is her 5th pregnancy & she has been fine previously, she surely would be fine once the "gin/aaseb" goes away.**

113	<p>How would you deal with the situation ?</p> <p>(list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. Wait till the husband comes along =&gt; Q114</li> <li>2. Discuss with the mother-in-law =&gt; Q117</li> <li>3. Let the family deal with it &amp; inform you once they have decided about it =&gt; Q117</li> <li>4. Call the husband immediately =&gt; Q116</li> <li>5. Take the patient inspite of mother-in-law's opposition =&gt;Q117</li> <li>6. Others (Specify) =&gt;Q117</li> </ol>	
<p>Describe method of dealing with the situation :</p>			
114	<p>Why would you wait for the husband to come ?</p> <p>(list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. For financial reasons =&gt;Q117</li> <li>2. Because the family wants it =&gt;Q117</li> <li>3. His permission is necessary&gt;Q117</li> <li>4. Husband might not want to take her to the hospital =&gt;Q115</li> <li>5. You want him to accompany the patient =&gt;Q117</li> <li>6. Others (Specify) =&gt; Q117</li> </ol>	
115	<p>Why would he not want to take the wife to the hospital?</p> <p>(list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. Poor care at the hospital</li> <li>2. Financial reasons</li> <li>3. Others (Specify)</li> </ol>	

S#	Questions and Filters	Coding categories	Answers
116	Why would you call for the husband immediately?  (list all possible responses)	<ol style="list-style-type: none"> <li>1. For financial reasons</li> <li>2. Because of the seriousness of situation</li> <li>3. His permission is necessary</li> <li>4. Husband might not want to take her to the hospital</li> <li>5. You want him to accompany the patient</li> <li>6. Others (Specify)</li> </ol>	
117	Have you come across any such situation in the past 6 months ?	<ol style="list-style-type: none"> <li>1. Yes =&gt; Q118</li> <li>2. No =&gt; Q119</li> </ol>	
118	How many times?	# of cases	
	Describe the method of management:		

**Vignette # 3**

**Supposing you were successful in convincing Hajra's mother-in-law & you have taken Hajra to a hospital. You take her to the emergency obstetric care. There you see an aya, a nurse and another lady who appears to be a doctor. All three of them are busy with patients.**

119	Who would you approach first among the health care providers?	<ol style="list-style-type: none"> <li>1. Aaya</li> <li>2. Nurse</li> <li>3. Doctor</li> <li>4. None</li> <li>5. Others (Specify)</li> </ol>	
120	Would you identify yourself as the "dai" caring for Hajra	<ol style="list-style-type: none"> <li>1. Yes =&gt; Q121</li> <li>2. No =&gt; Q122</li> </ol>	
121	Why would you identify yourself as a dai ?  (list all possible responses)	<ol style="list-style-type: none"> <li>1. To tell the health care provider about the interventions you did while bringing the patient to the hospital =&gt; Q123</li> <li>2. To assist if needed =&gt;Q123</li> <li>3. Others (Specify) =&gt;Q123</li> </ol>	
122	Why would you not identify yourself as a dai ?  (list all possible responses)	<ol style="list-style-type: none"> <li>1. You would be scared</li> <li>2. "They" may blame you for the complication</li> <li>3. Others (Specify)</li> </ol>	
123	Would you stay with the patient ?	<ol style="list-style-type: none"> <li>1. Yes =&gt;Q124</li> <li>2. No =&gt;Q125</li> </ol>	
124	Till when would you stay ?	<ol style="list-style-type: none"> <li>1. As long as the family wants</li> <li>2. Till the doctor arrives</li> <li>3. Till the patient's condition improves</li> <li>4. Others (Specify)</li> </ol>	
125	Would you inquire about the patient the next day ?	<ol style="list-style-type: none"> <li>1. Yes =&gt; Q126</li> <li>2. No =&gt; Q127</li> </ol>	
126	How would you inquire about her?	<ol style="list-style-type: none"> <li>1. Just ask the family members in the community if you encounter them</li> <li>2. Make a house call to ask about the well-being of the patient from a family member</li> <li>3. Visit the patient at the hospital</li> <li>4. Others (Specify)</li> </ol>	

**Vignette #4**

**Musarrat who is 20 years old is pregnant for the first time. She does not have elders (mother-in-law) at home & so lives alone with her husband. She is now three months pregnant and has had spotting for the past one week.**

127	Do you think it is a serious condition?	1. Yes => Q128 2. No => Q129	
128	Why do you think this situation is serious ?  (list all possible responses)	1. It may complicate the pregnancy in future (Specify) 2. Musarrat may become anemic 3. Musarrat may bleed (antenatally) in future 4. Musarrat may abort 5. Others (Specify) 6. Don't know	
129	How would you manage her?  (list all possible responses)	1. Give advise about rest 2. Tell her not to worry about it 3. Follow her up in a week's time 4. Others (Specify) a- Treatment b-Advice c-Examination d-Any thing else (Specify)	

**SECTION C: DELIVERY CARE**

#	Questions and Filters	Coding Categories	Answers
130	Where do you conduct deliveries?  (list all possible responses)	1. Patient's home 2. Your own home 3. Local Clinic 4. Others (Specify)	
131	How many deliveries have you conducted in the last 6 months?	# of deliveries (Approximation is acceptable)	

TABLE C:	Col. I	Col. II	Col. III	Col. IV
	During labor/delivery, what do you think are the complications which indicate danger to mother and/or baby  1. Yes 2. No	How many women with such complications or danger signals have you seen in the last 1 year?  (#) 999. NA	For how many of these did you seek help?  (#) 999. NA	Whom did you seek help from?  1. Doctor 2. LHV 3. Nurse 4. Another dai 5. Others (Specify) 999.NA (list all possible responses)
1. Cervix is not dilating	<u>132</u>	<u>142</u>	<u>152</u>	<u>162</u>
2. Presenting part is not descending	<u>133</u>	<u>143</u>	<u>153</u>	<u>163</u>
3. Decrease in frequency and/or intensity of labor contractions	<u>134</u>	<u>144</u>	<u>154</u>	<u>164</u>
4. Membranes not ruptured	<u>135</u>	<u>145</u>	<u>155</u>	<u>165</u>
5. Decreased fetal movement	<u>136</u>	<u>146</u>	<u>156</u>	<u>166</u>
6. Bleeding	<u>137</u>	<u>147</u>	<u>157</u>	<u>167</u>
7. Meconium stained liquor	<u>138</u>	<u>148</u>	<u>158</u>	<u>168</u>
8. Liquor for more than two days	<u>139</u>	<u>149</u>	<u>159</u>	<u>169</u>
9. Purulent or foul smelling liquor	<u>140</u>	<u>150</u>	<u>160</u>	<u>170</u>
10. Others (Specify)	<u>141</u>	<u>151</u>	<u>161</u>	<u>171</u>

If Col. I=2, then Cols. II, III and IV=999. NA

If Col. II=0, then Cols. III and IV=999 NA

If Col. III=0, then Col. IV=999.NA

S#	Questions and Filters	Coding categories	Answers
172	After the delivery of the baby, what do you do for the placenta?	<ol style="list-style-type: none"> <li>1. Wait =&gt; Q173</li> <li>2. Controlled traction on cord =&gt;Q174</li> <li>3. Traction on cord =&gt;Q174</li> <li>4. Pressure on abdomen =&gt;Q174</li> <li>5. Others (Specify) =&gt;Q174</li> </ol>	
173	How long do you wait for the placenta to deliver ?	# of minutes	
174	If placenta does not come, what do you do?	<ol style="list-style-type: none"> <li>1. Remove manually</li> <li>2. Others (Specify)</li> </ol>	
175	Immediately after delivery. of the baby, if mother bleeds heavily, then what will you do?	<ol style="list-style-type: none"> <li>1. Give injection (Specify)</li> <li>2. Remove placenta manually</li> <li>3. Others (Specify)</li> </ol>	
176	Do you usually give any injection after the delivery of the placenta?	<ol style="list-style-type: none"> <li>1. Yes =&gt;Q177</li> <li>2. No =&gt; Q179</li> </ol>	
177	How do you give this injection?	<ol style="list-style-type: none"> <li>1. I/M</li> <li>2. I/V</li> </ol>	
178	<p>What are these injections called?</p> <p>(list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. Methergin</li> <li>2. Syntocinon</li> <li>3. Anaroxil/transamine</li> <li>4. Others (Specify)</li> <li>88. Don't know</li> </ol>	
179	After the delivery of the placenta, if the mother bleeds heavily, what will you do?	<ol style="list-style-type: none"> <li>1. Give injections (Specify)</li> <li>2. Call LHV</li> <li>3. Call doctor</li> <li>4. Refer to hospital</li> <li>5. Massage uterus</li> <li>6. Put in vaginal pack</li> <li>7. Others (Specify)</li> </ol>	

**Vignette # 5**

**Wasima, a primi and full term pregnant has been in labor for 24 hours and not yet delivered. You were called in when labor started and are now worried. What would you do?**

180	What might be the reason for the delay in delivery?  (list all possible responses)	<ol style="list-style-type: none"> <li>1. Breech</li> <li>2. Transverse</li> <li>3. Twins</li> <li>4. Large baby</li> <li>5. Small pelvic size</li> <li>6. Uterine dysfunction</li> <li>7. Not in labor</li> <li>8. Others (Specify)</li> <li>88. Don't know</li> </ol>	
	Describe the method of management:		
180a	What injection would you give?  (to be asked if injection is mentioned in method of management)	<ol style="list-style-type: none"> <li>1. Synto/methergin I/V</li> <li>2. Synto/methergin I/M</li> <li>3. Others (Specify)</li> </ol>	
181	Do you think this is a worrisome condition?	<ol style="list-style-type: none"> <li>1. Yes =&gt;Q182</li> <li>2. No =&gt;Q183</li> </ol>	
182	For whom is it worrisome?	<ol style="list-style-type: none"> <li>1. Mother only</li> <li>2. Baby only</li> <li>3. Both</li> <li>4. None</li> <li>5. Others (Specify)</li> </ol>	
182a	Would you hold somebody responsible for not calling you earlier?	<ol style="list-style-type: none"> <li>1. Yes =&gt; 182b</li> <li>2. No =&gt; 183</li> </ol>	
182b	Who would you hold responsible?	<ol style="list-style-type: none"> <li>1. Husband</li> <li>2. Other family members [ Specify]</li> <li>3. Both of the above</li> <li>4. Others (Specify)</li> </ol>	
183	What action will you take?	<ol style="list-style-type: none"> <li>1. Give injection (Specify)</li> <li>2. Consult doctor</li> <li>3. Consult LHV</li> <li>4. Refer to hospital</li> <li>5. Others (Specify)</li> </ol>	

**SECTION D: POSTNATAL CARE**

#	Questions and Filters	Coding Categories	Answers
184	What do you usually use to cut the baby's cord?	<ol style="list-style-type: none"> <li>1. Knife</li> <li>2. Scissors</li> <li>3. Blade</li> <li>4. Others (Specify)</li> </ol>	
185	How is the instrument for cutting the cord usually prepared before using it?  (list all possible responses)	<ol style="list-style-type: none"> <li>1. Passed through flame</li> <li>2. Soaked in disinfectant</li> <li>3. Boiled</li> <li>4. Alcoholized</li> <li>5. Soaped and rinsed</li> <li>6. Wiped with wet cloth</li> <li>7. Wiped with dry cloth</li> <li>8. Delivery kit pack</li> <li>9. New blade for every patient</li> <li>10. Not specially prepared</li> <li>11. Others (Specify)</li> </ol>	
186	Do you apply anything to the cord?	<ol style="list-style-type: none"> <li>1. Yes =&gt; Q187</li> <li>2. No =&gt; Q188</li> </ol>	
187	What do you usually apply to the cord in order to hasten its drying-healing and falling off?  (list all possible responses)	<ol style="list-style-type: none"> <li>1. Alcohol</li> <li>2. Antiseptic</li> <li>3. Cicatrin powder /medicine</li> <li>4. Talcum powder</li> <li>5. Herbs in oil</li> <li>6. Oil</li> <li>7. Animal dung</li> <li>8. Ashes</li> <li>9. Nothing</li> <li>10. Others (Specify)</li> </ol>	
188	What should be the first feed of the baby?  (Only one response)	<ol style="list-style-type: none"> <li>1. Breast milk</li> <li>2. Honey</li> <li>3. Water</li> <li>4. Ghutti</li> <li>5. Others (Specify)</li> </ol>	
189	How long after the birth is the first feed given generally?	# of minutes	

S#	Questions and Filters	Coding categories	Answers
190	How long after the birth do you advise the child to be first breast-fed?	# of minutes	
190a	Have you had any maternal deaths in the past one year? ( Bari Eid to Bari Eid)	1. Yes => Q190b 2. No => Q190d	
190b	How many?	# of deaths	
190c	What were the causes of maternal death?	1. APH 2. PPH 3. Infection/sepsis 4. Eclampsia ( seizures, high blood pressure) 5. Others (Specify)	
190d	Have you had any still births in the past one year? ( Bari Eid to Bari Eid)	1. Yes =>190e 2. No => 190g	
190e	How many were fresh still births?	# of still births	
190f	How many were macerated still births?	# of macerated still births	
190g	How many early neonatal deaths in last one year? ( Bari Eid to Bari Eid)	# of early neonatal deaths	
190h	How many babies are born each month?	# of babies born/ month	
190i	Have you noticed any change in attitude of J.P.M.C. staff on referring Obs cases? ( to be asked from those who mention J.P.M.C. as a referral site)	1. Yes ( Specify) 2. No ( Specify)	

<b>TABLE D:</b>	<b>Col. I.</b>	<b>Col. II.</b>	<b>Col. III.</b>	<b>Col. IV.</b>
	<b>What signs at birth indicate to you that the baby is not normal?</b>  1. Yes 2. No	<b>How many babies with such complications or symptoms have you seen in the last 1 year?</b>  (#) 999.NA	<b>For how many of these did you seek help?</b>  (#) 999. NA	<b>What kind of help did you seek?</b>  1. Another dai 2. LHV 3. Nurse/Midwife 4. General physician 5. Obs/Gynea consultant 999.NA  (list all possible responses)
1 Baby not crying	<u>191</u>	<u>196</u>	<u>201</u>	<u>206</u>
2 Blue baby	<u>192</u>	<u>197</u>	<u>202</u>	<u>207</u>
3 Meconium stained	<u>193</u>	<u>198</u>	<u>203</u>	<u>208</u>
4 Very pale baby	<u>194</u>	<u>199</u>	<u>204</u>	<u>209</u>
5 Others (Specify)	<u>195</u>	<u>200</u>	<u>205</u>	<u>210</u>

If Col. I=2 then Cols. II, III and IV=999. NA

If Col. II=0 then Cols. III and IV= 999. NA

If Col. III = 0 then Col. IV = 999.NA

S#	Questions and Filters	Coding categories	Answers
211	If the baby is blue, what action would you take?	<ol style="list-style-type: none"> <li>1. Refer to local clinic =&gt;Q213</li> <li>2. Refer to government hospital =&gt;Q213</li> <li>3. Provide treatment =&gt;Q212</li> <li>4. Others (Specify) =&gt;Q213</li> </ol>	
212	What treatment would you provide?  (list all possible responses )	<ol style="list-style-type: none"> <li>1. Mouth to mouth resuscitation</li> <li>2. Suction (Mucus sucker)</li> <li>3. Holding the baby upside down</li> <li>4. Slapping/ stimulating the baby</li> <li>5. Others (Specify)</li> </ol>	
213	If the baby is born very small, what action would you take?	<ol style="list-style-type: none"> <li>1. Refer to local clinic =&gt;Q215</li> <li>2. Refer to government hospital Q215</li> <li>3. Provide care (Specify) =&gt; Q214</li> <li>4. Others (Specify) =&gt;Q215</li> </ol>	
214	What care would you provide?  (list all possible responses)	<ol style="list-style-type: none"> <li>1. Keep warm</li> <li>2. Assisted feeding</li> <li>3. Others (Specify)</li> </ol>	
215	For how long after a delivery do you usually take care of the mother?	# of days	
216	How many days after the delivery do you first visit the mother?	# of days after delivery	
217	How many times after the delivery do you usually visit the mother?	# of times after delivery	
218	What do you think are the danger signals/signs during the post-partum period?  (list all possible responses)	<ol style="list-style-type: none"> <li>1. High grade fever</li> <li>2. Severe abdominal pain</li> <li>3. Heavy bleeding after first 24 hours</li> <li>4. Purulent or foul smelling lochia/vaginal discharge</li> <li>5. Non-contracted/ non-descending uterus</li> <li>6. Dysuria</li> <li>7. Mastitis</li> <li>8. Others (Specify)</li> <li>88. Don't know</li> </ol>	

TABLE E:	Col. I	Col. II	Col. III	Col. IV	Col. V
	How many postnatal women with such complications or danger signals have you seen in the last 1 year?  # of women	For how many of them did you seek help?  # of pts. 999. NA	What kind of help did you seek?  1. Doctor 2. Nurse 3. LHV 4. Another dai 5. Midwife 6. Others (specify) 999.NA  (list all possible responses)	How many of them did you refer to a health facility?  # of pts. 999. NA	Where did you refer?  1. JPMC 2. Private clinic /maternity home 3. Govt. hospital 4. Govt. clinic 999. NA  (list all possible responses)
1 High grade fever	<u>219</u>	<u>227</u>	<u>235</u>	<u>243</u>	<u>251</u>
1 Severe abdominal pain	<u>220</u>	<u>228</u>	<u>236</u>	<u>244</u>	<u>252</u>
2 Heavy vaginal bleeding after the first 24 hours	<u>221</u>	<u>229</u>	<u>237</u>	<u>245</u>	<u>253</u>
3 Purulent or foul smelling lochia/vaginal discharge	<u>222</u>	<u>230</u>	<u>238</u>	<u>246</u>	<u>254</u>
4 Non-contracted/ non-descending uterus	<u>223</u>	<u>231</u>	<u>239</u>	<u>247</u>	<u>255</u>
5 Dysuria	<u>224</u>	<u>232</u>	<u>240</u>	<u>248</u>	<u>256</u>
6 Mastitis	<u>225</u>	<u>233</u>	<u>241</u>	<u>249</u>	<u>257</u>
7. Others (Specify )	<u>226</u>	<u>234</u>	<u>242</u>	<u>250</u>	<u>258</u>

If Col. I = 0 then Cols. II, III, IV and V = 999. NA

If Col. II = 0 then Cols. III, IV and V = 999. NA

If Col. IV = 0 then Col. V = 999. NA

**Vignette # 6**

**You have just delivered a woman, Rehana, of her 5th baby. The placenta has been expelled and the baby is well and crying. While you are bathing the baby, the woman complains of "ghabraahat" and feeling weak. Upon lifting the "razai" that you have covered the woman with, you see that the bed sheets are soaked with blood.**

259	<p>What would you do?</p> <p>(list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. Massage the uterus gently =&gt;Q261</li> <li>2. Do a vaginal exam to see where the blood is coming from =&gt;Q261</li> <li>3. Remove blood clots from vagina =&gt;Q261</li> <li>4. Raise the foot of the bed =&gt;Q261</li> <li>5. Keep the mother warm =&gt;Q261</li> <li>6. Give a hot drink of tea with sugar =&gt;Q261</li> <li>7. Give injection(specify) =&gt;Q260</li> <li>8. Introduce medicine in the vagina (Specify) =&gt;Q261</li> <li>9. Pack the vagina =&gt;Q261</li> <li>10. Others (Specify) =&gt; Q261</li> </ol>	
Describe method of management			
260	What kind of injection ?	<ol style="list-style-type: none"> <li>1. Methergin/Syntocinon</li> <li>2. Others (Specify)</li> </ol>	
261	Would you refer the patient to the hospital ?	<ol style="list-style-type: none"> <li>1. Yes =&gt; Q262</li> <li>2. No =&gt; Q263</li> </ol>	
262	When would you refer the patient to the hospital ?	<ol style="list-style-type: none"> <li>1. Immediately</li> <li>2. After your treatment</li> </ol>	
263	<p>What do you think is the reason for this bleeding?</p> <p>(list all possible responses)</p>	<ol style="list-style-type: none"> <li>1. Vaginal/Cervical tear</li> <li>2. Uterine rupture</li> <li>3. Bleeding disorder</li> <li>4. Part of placenta retained</li> <li>5. Baby girl</li> <li>6. Others ( Specify)</li> <li>88. Don't know</li> </ol>	

**Vignette # 7**

**Zarina delivered a baby boy at home, a few days ago. Her sister-in-law came to call you today as Zarina is not well and is suffering from high fever, shivers, headaches. She has vomited thrice since last evening. Her abdomen is distended and she complains of foul smelling vaginal discharge.**

264	Why do you think she may have this problem?  (list all possible responses)	<ol style="list-style-type: none"><li>1. Lack of proper asepsis during delivery</li><li>2. No hand washing prior to the delivery</li><li>3. Long labour</li><li>4. Instruments (e.g. blades etc.) not properly sterilized</li><li>5. The place where delivery took place was not clean</li><li>6. Use of dirty pads/clothes</li><li>7. Malaria</li><li>8. Others (Specify)</li></ol>	
265	How would you deal?  ( list all possible responses)	<ol style="list-style-type: none"><li>1. Go immediately =&gt; Q266</li><li>2. Go later in the evening =&gt; Q267</li><li>3. Tell the sister to call a doctor/ LHV</li><li>4. Reassure the sister-in-law not to worry and go back home and do nothing actively =&gt; Q267</li><li>5. Refer to hospital (Specify which)</li><li>6. Others ( Specify)</li></ol>	
266	What would you examine her for?  ( list all possible responses)	<ol style="list-style-type: none"><li>1. Temperature( Specify whether by thermometer or touching skin by hand)</li><li>2. Pulse rate</li><li>3. Hydration status: dry mouth, skin/ adequate urine output</li><li>4. Vaginal exam</li><li>5. Abdominal exam</li><li>6. Others (Specify)</li></ol>	
Describe method of management:			

S#	Questions and Filters	Coding categories	Answers
267	How cooperative was the respondent?	1. Very cooperative 2. Cooperative 3. Indifferent	
	Interviewer's Comments?		

Thank you very much.

## Field Work

Distribution of Health Care Provider cadre by completed Pre and Post KAPs.  
Korangi 8, Karachi, Pakistan

Health Care Provider Cadre	Pre - KAPs	Post-KAPs	Pre + Post KAPs
Doctors	23	18	18
Health Assistants	14	13	13
LHVs/midwives/nurses	9	9	9
TBAs	28	28	28

## Training Status

Distribution of Health Care Provider cadre by training status.  
Korangi 8, Karachi, Pakistan

Health Care Provider Cadre	Trained	Semi-trained	Untrained	Total
Doctors	8	4	6	18
Health Assistants	8	1	4	13
LHV/midwives/nurses	4	2	3	9
TBAs	23	4	1	28

## Categorization Of Major Indicators From Vignettes

Vignette # 1	<i>Pre-eclampsia</i> Doctors Health Assistants Lady Health Visitors/midwives/nurses Traditional Birth Attendants
Vignette # 2	<i>Eclampsia</i> Doctors Health Assistants Lady Health Visitors/Midwives/Nurses Traditional Birth Attendants
Vignette # 3	<i>Obstructed / Prolonged Labor</i> Doctors Health Assistants Lady Health Visitors/Midwives/Nurses
Vignette = 4	<i>Threatened Abortion</i> Doctors Health Assistants Lady Health Visitors/Midwives/Nurses Traditional Birth Attendants
Vignette = 5	<i>Postpartum Hemorrhage</i> Doctors Health Assistants Lady Health Visitors/Midwives/Nurses
Vignette = 6	<i>Puerperal Sepsis</i> Doctors Health Assistants Lady Health Visitors/Midwives/Nurses

### For Traditional Birth Attendants only:

Vignette = 5	<i>Obstructed/Prolonged Labor</i>
Vignette = 6	<i>Postpartum Hemorrhage</i>

## VIGNETTE # 1      Pre-Eclampsia

### I. Referral Patterns

Referral pattern	Definition
Immediate	Referral without any emergency treatment or after some initial treatment
Delayed	Referral taking place $\geq 2$ hours -7 days with management to assess referral needs [monitoring]
None	Out-patient treatment with or without calling for follow-up

Definition derived from management summaries

## II. Knowledge of Outcome

Knowledge	Definition	Coding Category
Good	Fits with or without any other response	4 with or without any other responses
Average*	<p>- Small baby &amp;/or still birth &amp;/or APH &amp;/or premature labor &amp;/or maternal death &amp;/or emergency C-section &amp;/or abortion [premature labor] &amp;/or hypertension &amp;/or diabetes &amp;/or increased B.P. &amp;/or stroke &amp;/or fetal distress &amp;/or renal failure &amp;/or cerebral hemorrhage &amp;/or PPH</p> <p>- Stillbirth &amp; maternal death prolonged labor or congenital anomaly in child or weakness in mother or jaundiced baby or anemia or mother faints or mother gets fever or don't know</p>	<p>-1 &amp;/or 2 &amp;/or 3 &amp;/or 5 &amp;/or 6 &amp;/or 8a &amp;/or 8b &amp;/or 8c &amp;/or 8d &amp;/or 8f &amp;/or 8g &amp;/or 8i</p> <p>-[2 &amp; 6] + [7 or 8h or 8 or 8j or 88]</p>
Poor	Prolonged labor &/or congenital anomaly in child &/or cardiac failure &/or others &/or don't know	7 &/or 8h &/or 8j &/or 88

\* Average Two different definitions as elaborated above

### Coding Category [Q69]:

1. Small baby
2. Still birth
3. APH
4. Fits/ seizures
5. Premature labor
6. Maternal death
7. Prolonged labor
8. Weakness in mother, jaundiced baby, anemia, mother faints, mother gets fever
9. Emergency C-section
10. Premature labor
11. Hypertension, diabetes, increased B.P.
12. Stroke/coma
13. Fetal distress
14. Renal failure
15. Cerebral hemorrhage
16. Congenital anomaly in child
17. Cardiac failure
18. Postpartum hemorrhage
88. Don't know

### III. Management

#### A. Doctors and Lady Health Visitors/Midwives/Nurses

Management	Definition	Coding Categories
Good	B.P. measurement & give sedatives & refer	3 & 5 & 8
Average	Give analgesics ("Aspirin") &/or give diuretics &/or give hypotensives	1 &/or 4 &/or 6
Poor	Put her to bed &/or admit in own setup &/or others	2 &/or 7 &/or 9 9a-9z, any, some or all

#### B. Health Assistants and Traditional Birth Attendants

Management	Definition	Coding Categories
Good*	Give sedatives & refer	5 & 8
Average	Give analgesics ("Aspirin") &/or give diuretics &/or give hypotensives	1&/or 4 &/or 6
Poor	Put her to bed &/or admit in own setup &/or others	2 &/or 7 &/or 9 9a-9z,any, some or all

\*Rationale for excluding code3[B.P. measurement] for health assistants and Traditional Birth Attendants in Good category is that these providers either don't have a B.P. apparatus or are not trained to check B.P.

Coding Category [Q59]:

1. Give analgesics ("Aspirin")
2. Put her to bed
3. Blood pressure measurement taken
4. Give diuretics
5. Give sedatives
6. Give hypotensives
7. Admit in own set-up
8. Refer
9. Others
  - a. Renal function tests
  - b. Decrease salt intake
  - c. Decrease fat intake
  - d. Avoid intercourse
  - e. Avoid taking potatoes
  - f. Avoid sleeping under fan
  - g. Give multi vitamins
  - h. Give folic acid tabs.
  - i. Give iron supplements
  - j. Get urine D/R done
  - k. Get blood urea done
  - l. Get ECG done
  - m. Get blood sugar done
  - n. Get Hemoglobin done
  - m. Physiotherapy for tension
  - o. Ultrasound
  - p. Weight checkup
  - q. Give "Septran" if she has fever
  - r. Avoid "garam" food
  - s. Check if edema is pitting or not
  - t. Get her previous history
  - u. Get "dam darood" done
  - v. Give my own desi medicine
  - x. Give abdominal massage
  - y. Call for follow up
  - z. Give "Dulcolax" or "Flagyl" for constipation

#### IV. Harmful Practices

1. Send her home
2. Advise to walk daily
3. Do abdominal massage
4. Only give own "*desi*" (traditional) medicine

## VIGNETTE # 2      Eclampsia

### I.      Emergency Management

Response	Definition*
Good	Valium & refer
Average	Valium or refer
Poor	Don't do anything

\*definition derived from management summaries

### II.      Harmful Practices

1. Give cortisone injection.

## VIGNETTE # 3      Prolonged/Obstructed Labor

### I.      Referral Patterns

Referral Pattern	Definition	Coding category
Immediate	Refer straight away with or without some initial, harmless management	4
Delayed	Referral taking place $\geq 2$ hours with management to assess referral needs	5 [if relevant]
None	Do not refer or refer with dangerous management [dangerous management: giving "Syntocinon" drip]	5 [if relevant]

Coding category [Q93]:

1. Listen to what the dai has to say to you
2. You would bypass her and examine the patient on your own
3. Ask all attendants to wait while you attend to the patient
4. Refer the patient right away
5. Others (Specify)
  - 5a. Ask my Lady Health Visitor to do per vaginal examination, have her blood sugar and HB% & then decide whether she can be managed here or should be referred
  - 5b. Ask my midwife to handle the case
  - 5c. Ultrasound scan
  - 5d. "Calcium gluconate" injection diluted with water
  - 5e. Wait for 30 minutes then refer
  - 5f. Check the position of the baby, if its all right then I'll set up "Syntocinon" drip with 1 unit "Syntocinon" to enhance labor pains
  - 5g. Advise the dai not to mishandle the case
  - 5h. See the patient and start drip of 5% D/W + "Calcium gluconate" + 1 ampoule "Syntocinon" at the rate of 50 drops/ minute for induction of labor. If no progress, will refer to hospital
  - 5i. Put up plain drip of D/W and advise bed rest and call an Lady Health Visitor for further management
  - 5j. Put up a drip, may be "Hemacel" with injection "Dexamethasone", "Hyoscine", "Avil" and "Dipyrol" and leave the case for the dai to handle
  - 5k. If cervical os is 2 fingers loose, I'll give 5 units "Syntocinon" IM stat, the baby should be delivered by this. Otherwise I'll refer the patient
  - 5l. Give M/V injection
  - 5m. Ask about previous history of C-section, if rim is present then I'll give her soft water enema. If its' obstructed labor, I'll refer her
  - 5n. I'll check for bleeding, do a P/V give her a Synto drip and have her delivered

## II. Knowledge of Outcome

Knowledge	Definition	Coding category
Good	Ruptured uterus + trauma to the child &/or fistula formation &/or fetal death &/or maternal death &/or emergency C-section	2 + 4 &/or 6 &/or 7a &/or 7i &/or 7l of Q101
Average	PPH &/or problem with next pregnancy &/or emotional trauma to mother &/or subsequent infertility &/or trauma to the child &/or fistula formation &/or fetal death &/or maternal death &/or emergency C-section	1&/or 3 &/or 4 &/or 6 &/or 7c &/or 7d &/or 7e &/or 7a &/or 7d of Q101
Poor	Congenital anomaly in child &/or septicemia &/or weakness &/or still birth &/or low B.P. &/or pain in legs &/or anorexia	5 &/or 7b &/or 7f &/or 7g &/or 7h &/or 7j &/or 7k &/or 7m &/or 7n of Q101

Coding category[Q101]:

1. Postpartum hemorrhage
2. Ruptured uterus
3. Problem with next pregnancy
4. Trauma to child
5. Congenital anomaly in child
6. Fistula formation
7. Any thing else (Specify)
  - a. Maternal death
  - b. Septicemia
  - c. Emotional trauma to mother
  - d. Fetal death
  - e. Subsequent infertility
  - f. Weakness
  - g. Stillbirth
  - h. Low B.P.
  - i. Emergency C-section
  - j. Pain in legs
  - k. Anorexia
  - l. Antepartum hemorrhage
  - m. Fits/shock
  - n. Cerebral hemorrhage

### III. Knowledge of Cause of Delay

Response	Definition	Coding category
Good	-Breech &/or transverse lie &/or twins &/or large baby &/or CPD &/or uterine dysfunction &/or hydrocephaly  - At least 2 of the above with not more than 2 of average or poor response	1 &/or 2 &/or 3 &/or 4 &/or 5 &/or 6 &/or 7 &/or 8a
Average	-Not in labor &/or first pregnancy &/or dai mishandled the case  - At least 2 good responses with more than 2 average responses	7 &/or 8b &/or 8c
Poor	-Fetal death &/or poor ANC &/or placenta praevia &/or non rupture of membranes &/or weakness &/or still birth &/or low B.P. &/or high B.P. &/or patient's family's negligence &/or multi parity &/or cord around neck &/or maternal death &/or mental tension &/or don't know  -Atleast 2 good responses with more than 2 poor responses - At least 1 average & 1 poor response	8d &/or 8e &/or 8f &/or 8g &/or 8h &/or 8i &/or 8j &/or 8k &/or 8l &/or 8m &/or 8n &/or 8o &/or 8p &/or 88

Coding category[Q98]:

1. Breech
2. Transverse lie
3. Twins
4. Large baby
5. Cephalo-pelvic disproportion
6. Uterine dysfunction
7. Not in labor
8. Others
  - a. Hydrocephaly
  - b. First pregnancy
  - c. Dai mishandled the case
  - d. Fetal death
  - e. Poor antenatal care
  - f. Placenta praevia
  - g. Non-rupture of membranes
  - h. Weakness
  - i. Stillbirth
  - j. Low B.P
  - k. High B.P.
  - l. Patient's family's negligence
  - m. Multiparity
  - n. Cord around neck
  - o. Maternal death
  - p. Mental tension
  - q. Previous C-section
  - r. Cervical dystocia
  - s. Prolonged labor
88. Don't know

#### IV. Management

Response	Definition
Good	Refer with or without plain drip
Average	Referral taking place 2 hours with harmless management to assess referral needs
Poor	No referral or referral which is delayed by more than 2 hours with or without dangerous management [Dangerous management: " <i>Syntocinon</i> " drip or injection]

Definitions derived from Management Summaries

#### V. Harmful Practices

1. Giving "*Syntocinon*" drip or injection
2. Giving "*Dexamethason*", "*Hyoscine*", "*Avil*" & "*Dipyrol*" injections in "*Hemacel*" drip and leave the case for the dai to handle

## VIGNETTE # 4      Threatened Abortion

### I. Ability To Assess Severity Of Problem

Response	Definition	Coding Categories
Good	- Increased risk of having a spontaneous abortion &/or vaginally bleeding [antenatally] in future &/or missed abortion  -At least one good response with no more than 1 average &/or one poor response	4 &/or 3 &/or 6a
Average	- Complicate the pregnancy in future &/or become anemic &/or baby may be small  -Two or more average responses with not more than one good or one poor response	1&/or 2 &/or 5 &/or 6g
Poor	- "Asaib" &/or death &/or fibroids with pregnancy &/or no response  - Two or more than two poor responses with either 1 good or one average response	6b &/or 6c &/or 6d &/or 6e &/or 6f &/or 6h

Coding category[Q105]:

1. It may complicate the pregnancy in future (Specify)
2. Mussarat may become anemic
3. Mussarat may bleed [antenatally] in future
- 4 She has an increased risk of having a spontaneous abortion
5. Baby may be small
- 6 Others
  - a. Missed abortion
  - b. "Asaib"
  - c. Death
  - d. Fibroids
  - e. Placenta praevia
  - f. Cervical cancer
  - g. Subsequent infertility due to improper D/C
  - h. No response

## II. Management

Management Response	Definition	Coding category
Good	-Give advice about rest &/or folic acid tablets &/or "Pheno barb" tablets &/or go to lady doctor/hospital &/or avoid intercourse  - 1 good response with up to 2 harmless responses	1 &/or 4a &/or 4b &/or 4s &/or 4u [both 4 & 5 are regarded as a single category]
Average/harmless	Tell her not to worry about it &/or Follow her up in a week's time &/or injection Anaroxil &/or Capsule "Transamine" &/or avoid "garam" food &/or "Prolutin-M" injection &/or ultra sound scan &/or "dam darood/taweez" &/or tell her to raise foot of bed &/or don't do any heavy work &/or drink "multani mitti" in water &/or take her to doctor for drip &/or multivitamin tablets/syrup &/or "Gravibione" injection &/or "Buscopan" injection &/or iron supplements &/or "CPM" tablets &/or calcium tablets &/or "Primolut-N" tablets &/or vitamin C tablets &/or vitamin K injections &/or take history/ do check up &/or check B.P. &/or do per vaginal examination	2 &/or 3 &/or 4c &/or 4d &/or 4e &/or 4f &/or 4h &/or 4I &/or 4j &/or 4k &/or 4l &/or 4m &/or 4r &/or 4o &/or 4r &/or 4t &/or 4v &/or 4w &/or 4x &/or 4y &/or 4z &/or 4z* &/or 4z**
Poor/harmful	-Give "Ergometrine" &/or do D/C &/or give "desi" medicine  - Even if good &/or average responses are mentioned with even one harmful, it is a poor response	4g &/or 4p &/or 4c

### Coding category [Q106]:

- 1 Give advice about rest
- 2 Tell her not to worry about it
- 3 Follow her up in a week's time
- 4 Others (Specify)
  - A- Treatment
    - 4a. "Folic acid" tablets
    - 4b. "Pheno barb" tablets
    - 4c. "Anaroxil/Transamine" injection
    - 4d. "Anaroxil /Transamine" capsule
    - 4e. Multivitamin tablets/syrup
    - 4f. "Gravibione" injection
    - 4g. Tablet "Methergin"
    - 4h. Iron supplements
    - 4i. "Prolutin -M" injection
    - 4j. "Buscopan" injection
    - 4k. "CPM" tablets
    - 4l. Calcium injections
      - 4m. "Primolut-N" tablets
      - 4n. Vitamin C tablets
      - 4o. Vitamin K injection
      - 4p. Give my own "desi" medicine only
      - 4q. Do D/C
      - 4x. Advise "dam darood/taweez"
      - 4y. Tell her to drink "multani mitti" in water
  - C-Examination
    - 4z. Take history/do checkup
    - 4z\*. Check B.P
  - D-Any thing else (Specify)



### III. Harmful Practices

1. Give "*Ergometrine*"
2. Do D/C
3. Give "*dest*" medicine only

## VIGNETTE # 5

## Postpartum Hemorrhage

### I. Referral Patterns

Response	Definition	Coding category
Immediate	Immediate referral to hospital	1 of Q133 and 1 of Q134
Delayed	Referral to hospital after own treatment	1 of Q133 and 2 of Q134
None	No referral	2 of Q133

Coding category [ Q133 ]

1. Yes
2. No

Coding category [ Q134 ]

1. Immediately
2. After your treatment

### II. Assessment of Severity of Problem

Response	Definition	Coding category
Good	Immediate referral to hospital after putting up I/V line	1 of Q133 and 12 of Q126
Average	Immediate referral to hospital without putting up I/V line	1 of Q133
Poor	No referral	2 of Q133

Coding category: [ Q133 ]

1. Yes
2. No

Coding category: [ Q126 ]

12. Put up I/V line

### III. Management

Management	Definition	Coding category
Good	Massage the uterus &/or give injection [" <i>Methergin &amp;/or Syntocinon</i> "] &/or draw blood samples for cross matching &/or arrange for blood transfusion &/or stitch any tear &/or refer to hospital &/or put up I/V drip[" <i>haemacel</i> ": Ringer's lactate; Normal saline; D/W; plasma]	1 &/or 7 &/or 10 &/or 11 &/or 12 &/or 13a &/or 13b &/or 13f of Q126 and 1 of Q127
Average	Do a vaginal exam to see from where the blood is coming &/or remove blood clots if seen &/or raise the foot end of the bed &/or keep the mother warm &/or give her a hot drink of tea with sugar to drink &/or ultrasound scan &/or give light sedation to decrease her anxiety &/or " <i>Calcium gluconate</i> " injection &/or injection " <i>Hyoscine</i> " &/or apply cold compresses to abdomen	2 &/or 3 &/or 4 &/or 5 &/or 6 &/or 13c &/or 13d &/or 13e of Q126
Poor	Introduce medicine in vagina &/or pack the vagina &/or injection other than " <i>Methergin or Syntocinon</i> "	8 &/or 9 &/or 7 [if injection is other than " <i>Methergin or Syntocinon</i> "] of Q126 and 2 of Q127

Coding category: [ Q126 ]

1. Massage the uterus
2. Do a vaginal exam
3. Remove blood clots
4. Raise foot end of bed
5. Keep the mother warm
6. Give a hot drink of tea
7. Give injection ["*Methergin/syntocinon*"]
8. Introduce medicine in vagina
9. Pack the vagina
10. Draw blood samples for cross matching
11. Arrange for blood transfusion
12. Put up I/V line
13. Others
- 13a. Stitch any tears
- 13b. Refer to hospital
- 13c. give light sedation to decrease anxiety;
- 13d. Others[ultra sound for RPOC; "*Calcium gluconate*" injection: iron therapy; injection "*Hyoscine*"; apply cold compresses to abdomen; Hb %]
- 13e. Check BP
- 13f. Refer with/arrange for blood donors

Coding category: [ Q127 ]

1. "*Methergin/ Syntocinon*"
2. Others (Specify)

1 )

#### **IV. Harmful Practices**

1. Put medicine in vagina
2. Manage the case on my own

## VIGNETTE # 6      Puerperal Sepsis

### I. Reasons for Puerperal Sepsis

Response	Definition	Coding category
Good	No hand washing prior to delivery &/or instruments not properly sterilized &/or the place where delivery took place was not clean &/or use of dirty pads/clothes with or without lack of proper asepsis during delivery &/or long labor &/or retained placenta/some thing retained inside/placental pieces still inside &/or took no antibiotics &/or Zarina took no antibiotics or "Methergin" &/or UTI, uterine swelling due to infection	2 &/or 4 &/or 5 &/or 6 [atleast 2 of these] with or without 1 &/or 3 &/or 8a &/or 8b &/or 8c &/or 8d &/or 8j
Average	Lack of proper asepsis &/or long labor &/or retained placenta &/or took no antibiotics &/or Zarina took no antibiotics or "Methergin", or may be did not take proper care of herself like improper diet and rest &/or UTI, uterine swelling due to infection &/or took no antibiotics &/or Zarina took no antibiotics or "Methergin"	1&/or 3 &/or 8a &/or 8b &/or 8c &/or 8d &/or 8e &/or 8f
Poor	Malaria &/or typhoid &/or improper diet, weakness &/or don't know &/or did not get proper rest.	7 &/or 8e &/or 8f &/or 8g &/or 8h &/or 8i &/or 8k

Coding category [ Q172 ]

1. Lack of proper asepsis during delivery
2. No hand washing prior to delivery
3. Long labor
4. Instruments not properly sterilized
5. The place where delivery took place was not clean
6. Use of dirty pads/clothes
7. Malaria
8. Others
  - 8a. Retained placenta/some thing retained inside/placental pieces still inside uterus
  - 8b. Took no antibiotics
  - 8c. Zarina took no antibiotics or "Methergin", or may be she did not take proper care of herself, like improper diet and rest
  - 8d. UTI. uterine swelling due to infection
  - 8e. Typhoid.
  - 8f. Improper diet, weakness
  - 8g. Don't know
  - 8h. Diarrhea, viral fever
  - 8i. Took improper diet. did not get proper rest. It might be typhoid
  - 8j. Dai used butter to lubricate her hands for delivery / dai used stone to cut cord
  - 8k. Peritonitis

\* the reason at least 2 of codes 2, 4, 5, 6 are required for the response to qualify as good is the need to know the specific and important causes of the problem. Therefore codes 1, 3, 8a, 8b, 8c, 8d alone or with one of the fore mentioned codes[ 2, 4, 5, 6] will still be considered an average response

**II: Attitude Towards Patient's Illness**

Response	Definition	Coding category
Good	Go immediately &/or tell the sister-in-law to take her directly to J.P.M.C &/or refer	1 &/or 6a &/or 6b
Average	Go later in the evening &/or give medication to the sister-in-law for now and then see her later in the evening &/or call her to your health facility &/or if her condition is serious , I 'll refer her	2 &/or 3 &/or 5 &/or 6c
Poor	Reassure the sister-in-law not to worry and go back home and do nothing	4

Coding category [Q173]:

1. Go immediately
2. Go later in the evening
3. Give medications to the sister-in-law for now & then see her later in the evening
4. Reassure sister-in-law not to worry and go back home & do nothing actively
5. Call her to your health facility
6. Others
  - a. Tell the sister-in-law to take her directly to Jinnah Postgraduate Medical Center
  - b. Refer
  - c. If her condition is serious. I'll refer her

### III: Management

Response	Definition	Coding category
Good	-Appropriate antibiotics i.e. only "Augmentin" or only "Tarivid" or "Flagyl" with one of the "Cephalosporin" or "Penicillin" group with appropriate route and dosage  - No treatment at all, straight referral	-175a & 180a & 185a &/or 175b & 180b & 185b &/or 175c & 180c & 185c [ appropriate antibiotics with proper route and dosage]  -999 for all the columns of table A
Average	Appropriate antibiotics i.e. only "Augmentin" or only "Tarivid" or "Flagyl" with one antibiotic from "Cephalosporin" or "Penicillin" group with inappropriate route and dosage	175a & 180a & 185a &/or 175b & 180b & 185b &/or 175c & 180c & 185c [ appropriate antibiotic but route and dosage may not be proper]
Poor	Only mention drips and multi-vitamins &/or inappropriate antibiotics i.e. "Chloromycetine"	177 &/or 178a & 183a & 188a &/or 178b & 183b & 188b &/or 178c & 183c & 188c &/or 175a & 180a & 185a &/or 175b & 180b & 185b &/or 175c & 180c & 185c

Definitions & coding categories derived from Table F, vignette # 6 for all three cadres of HCPs

### III: Harmful Practices

1. Give "Chloromycetine"

## VIGNETTE # 5: Prolonged/Obstructed Labor For Traditional Birth Attendants

### I: Referral Patterns

Referral	Definition	Coding category
Good	Refer to hospital with or without giving multivitamin or analgesic injection	4 with or without code 1 [if injection is only multivitamin or analgesic]
Average	Consult doctor &/or consult Lady Health Visitor with or without give injection [if injection is multivitamin or analgesics]	2 &/or 3 with or without 1 if injection given is analgesic or multivitamin
Poor	Give injection [if injection is "Methergin"/"Syntocinon"] even if any of the other codes are mentioned &/or Wait for labor pains to get strong &/or Will do per abdomen & per vaginal examination to check position of baby & if baby is alive or dead & to check position of cervical os & if all is O.K will give Wasima Castor Oil to drink as it increases the pains &/or Give hot milk with "ghee" & do abdominal massage as it increases pains &/or Will do per vaginal examination and if condition is all right get the doctor for injection to increase pains	1 &/or 5a &/or 5b &/or 5c &/or 5d

Coding category: [ Q185 ]

1. Give injection (Specify)
2. Consult doctor
3. Consult LHV
4. Refer to hospital
5. Others (Specify)
  - 5a. Wait for labor pains to get strong
  - \*5b. Will do per abdomen and per vaginal examination to check position of baby & if baby is alive or dead & to check position of Os & if all is okay will give Wasima Castor Oil drink as it increases the pains
  - 5c. Give hot milk with "ghee" & do abdominal massage as it increases pains
  - 5d. Will do per vaginal examination and if condition is all right get the doctor for injection to increase pains
  - 5e. Give enema to see if pains increase or not

\* 5b is considered a poor response as the TBA is not referring the patient to hospital, giving castor oil alone is not a harmful practice

## II. Cause of Delay

Response	Definition	Coding category
Good	-Breech &/or transverse lie &/or twins &/or large baby &/or Cephalo-pelvic disproportion &/or uterine dysfunction  - At least 2 of the above with not more than 2 of average or poor response	1 &/or 2 &/or 3 &/or 4 &/or 5 &/or 6
Average	-Not in labor [false labor] &/or cervix not opened  - At least 2 good responses with more than 2 average responses	7 &/or 8d
Poor	-Cord around neck &/or weakness &/or weakness due to previous abortion &/or cervix not opened &/or over due &/or anemia &/or loss of amniotic fluid by leaking &/or "jadoo ka asar" &/or baby weak &/or baby has died &/or don't know  -At least 2 good responses with more than 2 poor responses  - At least 1 average & 1 poor response	8a &/or 8b &/or 8c &/or 8d &/or 8e &/or 8f &/or 8g &/or 8h &/or 8i &/or 8j &/or &/or 8k &/or 8l &/or 8m &/or 88

Coding category: [ Q180 ]

1. Breech
2. Transverse lie
3. Twins
4. Large baby
5. Cephalo-pelvic disproportion
6. Uterine dysfunction
7. Not in labor
8. Others
  - 8a. Cord around neck
  - 8b. Weakness
  - 8c. Weakness due to previous abortion
  - 8d. Cervix not opened
  - 8e. Over due
  - 8f. Anemia
  - 8g. Loss of amniotic fluid by leaking
  - 8h. "Jadoo ka asar"/ "Bad dawa"
  - 8i. Baby weak
  - 8j. Baby has died/ still birth
  - 8k. First pregnancy
  - 8l. Eating too much greasy foods in pregnancy which causes baby to get stuck to uterus
  - 8m. Placenta praevia
88. Don't Know

### III. Harmful Practices

1. Giving "*Syntocinon*" drip or injection
2. Giving "*Dexamethasone*", "*Hyoscine*", "*Avil*" & "*Dipyrol*" injections in "*Hemacel*" drip & leave the case for the dai to handle

## VIGNETTE # 6: Postpartum hemorrhage For Traditional Birth Attendants

### I. Knowledge of Cause of the Problem

Response	Definition	Coding Category
Good	-Vaginal/Cervical tear &/or part of placenta retained &/or uterine atony  -At least 2 good responses with no more than 1 average or 1 poor response	1 &/or 4 &/or 6g
Average	-Uterine rupture &/or anemia  -At least 1 average with not more than 1 poor response	2 &/or 6e &/or 1 or 4 with 6a or 6f
Poor	-Bleeding disorder &/or baby girl &/or don't know &/or weakness &/or due to using IUCD/oral pill &/or some disease &/or bleeding can occur without any reason &/or increased B.P.  -2 or more than 2 poor responses even if 1 good or average response is given is considered poor	3 &/or 5 &/or 6a &/or 6b &/or 6c &/or 6d &/or 6f &/or 88

Coding category: [ Q263]

1. Vaginal /Cervical tear
2. Uterine rupture
3. Bleeding disorder
4. Part of placenta retained
5. Baby girl
6. Others (Specify)
  - 6a. Weakness
  - 6b. Due to using IUCD /oral pill
  - 6c. Some disease [name not known]
  - 6d. Bleeding can occur without any reason
  - 6e. Anemia
  - 6f. Increased B.P.
  - 6g. Uterine atony
88. Don't know

## II: Referral Patterns

Referral	Definition	Coding category
Immediate	Immediate referral to hospital	1 of Q263 and 1 of 264
Delayed	Referral to hospital after own treatment or referring to local doctor	1 of Q263 and 2 of Q262
None	No referral	2 of Q263

Coding category for Q263[Would you refer the patient to hospital]:

1. Yes
2. No

Coding category [Q264 ]

1. Immediately
2. After your treatment

### III: Management

Management	Definition	Coding category
Good	<p>Massage the uterus &amp;/or give injection ["<i>Methergin</i>" &amp;/or "<i>Syntocinon</i>"] &amp;/or refer immediately to hospital with or without any treatment &amp;/or call local doctor for help &amp;/or ask family to get blood donors</p> <p>- At least 2 good responses with no more than 1 average</p>	1 &/or 7 &/or 10a&/or10b&/or10c [Q261] & 1 [Q262]
Average	<p>-Do a vaginal exam to see from where the blood is coming &amp;/or remove blood clots if seen &amp;/or raise the foot end of the bed &amp;/or keep the mother warm &amp;/or give her a hot drink of tea with sugar to drink</p> <p>-Refer immediately to hospital with pack vagina &amp;/or tie a belt tightly around abdomen</p> <p>- At least 1 average with not more than 1 poor response or more than 2 average responses with or with out 1 good or poor response</p>	2 &/or 3 &/or 4 &/or 5 &/or 6 [Q261] &/or10a with 9 &/or 10e
Poor	<p>Introduce medicine in vagina &amp;/or pack the vagina &amp;/or injection other than "<i>Methergin</i>" or "<i>Syntocinon</i>" &amp;/or put up I/V line &amp;/or apply pressure on vulva with pillow/foot 20-30 minutes &amp;/or tie a belt tightly around her abdomen</p> <p>-2 or more than 2 poor responses even if 1 good or average response is given would still be considered poor</p>	8 &/or 9 &/or 7 [if injection is other than " <i>Methergin</i> " or " <i>Syntocinon</i> "] &/or 10d &/or 10e &/or 10f &/or 10g [Q261]

Coding category: [ Q261 ]

1. Massage the uterus
2. Do a vaginal exam
3. Remove blood clots
4. Raise foot end of bed
5. Keep the mother warm
6. Give a hot drink of tea
7. Give injection
8. Introduce medicine in vagina
9. Pack the vagina
10. Others (Specify)
  - 10a. Refer immediately to hospital
  - 10b. Ask family to get blood donors
  - 10c. Call local doctor for help
  - 10d. Apply pressure on vulva with pillow/foot
  - 10e. Tie a belt tightly around her abdomen
  - 10f. Call another dai
  - 10g. "*Desi*" medicine

Coding category for Q262:

- 1 = "*Methergin*"/ "*Syntocinon*"
- 2 = Others (Specify)

#### IV. Harmful Practices

1. Introduce medicine in vagina
2. Pack the vagina
3. Apply pressure on vulva with foot/pillow
4. Tie belt tightly around abdomen
5. "*Desi*" medicine

## Intensive Training Course - Tables

Table 1: Mean scores for pre-test and post-test for the four cadres of health care providers. Korangi 8. Karachi, Pakistan.

Health Care Provider	Case Study	Mean Scores		p-value
		Pre-test	Post-test	
<b>Doctors (n = 12)</b>				
	Overall <sup>1</sup>	37.50	49.17	0.02
	1: Antepartum hemorrhage	6.42	10.17	0.02
	2: Prolonged/obstructed labor	11.67	16.00	0.04
	3: Eclampsia	11.33	14.42	0.22
	4: Puerperal sepsis	8.08	8.58	0.68
<b>Health Assistants (n = 8)</b>				
	Overall <sup>1</sup>	33.25	45.50	0.02
	1: Antepartum hemorrhage	5.00	9.62	0.02
	2: Prolonged/obstructed labor	12.25	14.00	0.42
	3: Eclampsia	9.25	12.62	0.29
	4: Puerperal sepsis	6.75	10.50	0.09
<b>LHVs<sup>2</sup>/Midwives/Nurses (n = 6)</b>				
	Overall <sup>1</sup>	45.33	52.17	0.18
	1: Antepartum hemorrhage	8.67	10.33	0.11
	2: Prolonged/obstructed labor	13.50	17.17	0.11
	3: Eclampsia	12.33	12.67	0.93
	4: Puerperal sepsis	10.83	12.00	0.16
<b>TBAs<sup>3</sup> (n = 22)</b>				
	Overall <sup>1</sup>	32.41	38.23	0.02
	1: Antepartum hemorrhage	6.86	5.68	0.15
	2: Prolonged/obstructed labor	13.00	14.59	0.16
	3: Eclampsia	7.05	10.86	0.01
	4: Puerperal sepsis	5.50	7.27	0.04

1. Overall = Total mean scores for all four case studies.

2. LHVs = Lady Health Visitors

3. TBAs = Traditional Birth Attendants

Table 2: Percent change in immediate management for antepartum hemorrhage, prolonged/obstructed labor, eclampsia and puerperal sepsis among twelve doctors, Korangi 8, Karachi, Pakistan

	Pre-Test		Post-Test		Percent change
	n	%	n	%	
<b>Case Study One: Antepartum hemorrhage</b>					
Perform vaginal examination	1	8.3	2	16.7	100.0
Put up an IV drip	6	50.0	11	91.7	83.3
<b>Case Study Two: Prolonged / Obstructed labor</b>					
Check vital signs	9	75.0	12	100.0	33.3
Check for dehydration	6	50.0	10	83.3	66.7
Check station of head	5	41.7	9	75.0	80.0
Set up an IV drip	9	75.0	9	75.0	0.0
Give injection Ergometrine	2	14.7	1	8.3	-50.0
<b>Case Study Three: Eclampsia</b>					
Perform vaginal examination	1	8.3	2	16.7	100.0
Maintain airway	9	75.0	8	66.7	-11.1
Turn patient on her side	7	58.3	4	33.3	-42.9
<b>Case Study Four: Puerperal sepsis</b>					
Perform breast examination	1	8.3	6	50.0	500.0
Give Aspirin/Paracetamol	7	58.3	4	33.3	-42.9
Give anti-malarial tablets	2	16.7	4	33.3	100.0
Cold sponging	8	66.7	3	25.0	-62.5

Table 3: Percent change in immediate management for antepartum hemorrhage, prolonged/obstructed labor, eclampsia and puerperal sepsis among eight health assistants. Korangi 8, Karachi, Pakistan

	Pre-Test		Post-Test		Percent Change
	n	%	n	%	
<b>Case Study One: Antepartum hemorrhage</b>					
Conduct abdominal examination	4	50.0	8	100.0	100.0
Put up an IV drip	2	25.0	7	87.5	250.0
Give injection Vitamin K	2	25.0	4	50.0	100.0
<b>Case Study Two: Prolonged / Obstructed labor</b>					
Check vital signs	6	75.0	4	50.0	-33.3
Give Injection Ergometrine	2	25.0	0	0.0	-100.0
<b>Case Study Three: Eclampsia</b>					
Perform vaginal examination	1	12.5	2	25.0	100.0
Maintain airway	3	37.5	4	50.0	33.3
Turn patient on her side	4	50.0	3	37.5	-25.0
Give injection Diazepam	1	12.5	5	62.5	400.0
<b>Case Study Four: Puerperal Sepsis</b>					
Check temperature	5	62.5	7	87.5	40.0
Perform abdominal examination	4	50.0	8	100.0	100.0
Give Aspirin/Paracetamol	2	25.0	7	87.5	250.0
Give anti-malarial tablets	3	37.5	1	12.5	-66.7

Table 4: Percent change in immediate management for antepartum hemorrhage, prolonged/obstructed labor, eclampsia and puerperal sepsis among six LHV/midwives/nurses. Korangi 8, Karachi, Pakistan

	Pre-Test		Post-Test		Percent Change
	n	%	n	%	
<b>Case Study One: Antepartum hemorrhage</b>					
Perform vaginal examination	2	33.3	1	16.7	-50.0
Put up an IV drip	3	50.0	5	83.3	66.7
Get blood cross-matched	1	16.7	2	33.3	100.0
<b>Case Study Two: Prolonged / Obstructed labor</b>					
Check vital signs	5	83.3	6	100.0	20.0
Give injection Ergometrine	2	33.3	0	0.0	-100.0
<b>Case Study Three: Eclampsia</b>					
Turn patient on her side	3	50.0	1	16.7	-66.7
Give injection Diazepam	4	66.7	5	83.3	25.0
Give injection Ergometrine	2	33.3	0	0.0	-100.0
<b>Case Study Four: Puerperal Sepsis</b>					
Perform abdominal examination	3	50.0	4	66.7	33.3
Perform vaginal examination	6	100.0	2	33.3	-66.7
Give Aspirin/Paracetamol	1	16.7	3	50.0	200.0
Cold sponging	3	50.0	5	83.3	66.7

Table 5: Percent change in immediate management for antepartum hemorrhage, prolonged/obstructed labor, eclampsia and puerperal sepsis among twenty-two TBAs. Korangi 8, Karachi, Pakistan

	Pre-Test		Post-Test		Percent Change
	n	%	n	%	
<b>Case Study One: Antepartum hemorrhage</b>					
Perform vaginal examination	19	86.4	21	95.5	10.5
Put up an IV drip	9	40.9	12	54.6	33.3
Give injection Ergometrine	3	13.6	0	0.0	-100.0
Give injection Vitamin K	5	22.7	2	9.1	-60.0
<b>Case Study Two: Prolonged / Obstructed labor</b>					
Set up an IV drip	8	36.4	10	45.5	25.0
Give injection Ergometrine	4	18.2	1	4.5	-75.0
<b>Case Study Three: Eclampsia</b>					
Perform abdominal examination	20	90.9	13	59.1	-35.0
Perform vaginal examination	18	81.8	4	18.2	-77.8
Turn patient on her side	5	22.7	12	54.5	140.0
<b>Case Study Four: Puerperal Sepsis</b>					
Check temperature	20	90.9	19	86.4	-5.0
Perform breast examination	15	68.2	20	90.9	33.3
Perform vaginal examination	15	68.2	5	22.7	-66.7
Give Aspirin/Paracetamol	9	40.9	12	54.5	33.3
Give anti-malarial tablets	2	9.1	3	13.6	50.0

## Doctors

Table I.1 : Percentage distribution of background characteristics. Korangi 8, Karachi, Pakistan

Characteristics	Pre		Post		Percent Change
	#	%	#	%	
<b>Current Age [years]</b>					
< 30	5	27.8	2	11.1	N.A.
30 - 39	8	44.4	8	44.4	
40+	5	27.8	8	44.4	
<b>Sex</b>					
*Male	16	88.9	17	94.4	N.A.
Female	2	11.1	1	5.6	
<b>Marital Status</b>					
Single	5	27.8	4	22.2	N.A.
Married	13	72.2	14	77.8	
Divorced	0	0.0	0	0.0	
<b>Qualification</b>					
MBBS	18	100.0	18	100.0	0.0
<b>Attended refresher courses</b>					
Yes	5	27.8	14	77.8	180.0
No	13	72.2	4	22.2	-69.2
<b>Reasons for not attending</b>					
No time	9	50.0	4	22.2	-55.0
Opportunity not available	8	44.4	1	5.6	-87.5
Not interested	2	11.1	1	5.6	-50.0
Not useful	0	0.0	0	0.0	0.0
Expensive	0	0.0	0	0.0	0.0
<b>Attended Meetings / seminars</b>					
Yes	14	77.8	16	88.9	14.3
No	4	22.2	2	11.1	-50.0
<b>Reasons for not attending</b>					
No time	2	11.1	2	11.1	0.0
Opportunity not available	2	11.1	1	5.6	-50.0
Not interested	2	11.1	1	5.6	-50.0
Not useful	0	0.0	0	0.0	0.0
Expensive	0	0.0	0	0.0	0.0

Table II.1: Percent change in knowledge of common complications during antenatal period.  
Korangi 8, Karachi, Pakistan

Common Complications	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Doctors interviewed n = 18</b>					
Bleeding / APH	10	55.6	10	55.6	0.0
Edema	1	5.6	3	16.7	200.0
Decreased fetal movement	1	5.6	1	5.6	0.0
Anemia	14	77.8	12	66.7	-14.3
Malpresentation	1	5.6	1	5.6	0.0
Hypertension	4	22.2	7	38.9	75.0
Diabetes	1	5.6	1	5.6	0.0
Eclampsia	1	5.6	2	11.1	100.0
<b>Doctors in our training program n = 8</b>					
Bleeding / APH	3	37.5	6	75.0	100.0
Edema	1	12.5	2	25.0	100.0
Decreased fetal movement	1	12.5	1	12.5	0.0
Anemia	8	100.0	5	62.5	-37.5
Malpresentation	0	0.0	0	0.0	0.0
Hypertension	2	25.0	4	50.0	100.0
Diabetes	1	12.5	1	12.5	0.0
Eclampsia	0	0.0	1	12.5	NA <sup>1</sup>
<b>Doctors not in our training program n = 6</b>					
Bleeding / APH	4	66.7	3	50.0	-25.0
Edema	0	0.0	0	0.0	0.0
Decreased fetal movement	0	0.0	0	0.0	0.0
Anemia	3	50.0	4	66.7	33.3
Malpresentation	1	16.7	1	16.7	0.0
Hypertension	2	33.3	1	16.7	-50.0
Diabetes	0	0.0	0	0.0	0.0
Eclampsia	0	0.0	0	0.0	0.0

NA<sup>1</sup> undefined as denominator is zero

Table II.2: Percent change in knowledge of high risk pregnancies.  
Korangi 8, Karachi, Pakistan

High Risk Pregnancy	Pre		Post		Percent Change
	#	%	#	%	
<b>Total doctors interviewed n = 18</b>					
Short height [under five feet]	0	0.0	2	11.1	NA <sup>1</sup>
Grand multiparity	5	27.8	5	27.8	0.0
Previous C-section	2	11.1	5	27.8	150.0
Short birth interval	2	11.1	1	5.6	-50.0
<b>Doctors in our training program n = 8</b>					
Short height [under five feet]	0	0.0	1	12.5	NA <sup>1</sup>
Grand multiparity	3	37.5	3	37.5	0.0
Previous C-section	1	12.5	3	37.5	200.0
Short birth interval	2	25.0	1	12.5	-50.0
<b>Doctors not in our training program n = 6</b>					
Short height [under five feet]	0	0.0	1	16.7	NA <sup>1</sup>
Grand multiparity	0	0.0	1	16.7	NA <sup>1</sup>
Previous C-section	0	0.0	1	16.7	NA <sup>1</sup>
Short birth interval	0	0.0	0	0.0	0.0

NA<sup>1</sup> undefined as denominator is zero

Table II.3: Percent change in knowledge of obstetric complications necessitating referrals during pregnancy, delivery and postpartum period. Korangi 8, Karachi. Pakistan

Obstetric complications requiring referral	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Doctors interviewed n = 18</b>					
Eclampsia	0	0.0	10	55.6	NA <sup>1</sup>
Antepartum hemorrhage	4	22.2	7	38.9	75.0
Post-partum hemorrhage	3	16.7	5	27.8	66.7
Puerperal sepsis	0	0.0	0	0.0	0.0
<b>Doctors in our training program n= 8</b>					
Eclampsia	3	37.5	5	62.5	66.7
Antepartum hemorrhage	4	50.0	7	87.5	75.0
Post-partum hemorrhage	1	12.5	3	37.5	200.0
Puerperal sepsis	0	0.0	0	0.0	0.0
<b>Doctors not in our training program n = 6</b>					
Eclampsia	3	50.0	3	50.0	0.0
Antepartum hemorrhage	3	50.0	1	16.7	-66.7
Post-partum hemorrhage	1	16.7	2	33.3	100.0
Puerperal sepsis	0	0.0	0	0.0	0.0

NA<sup>1</sup> undefined as denominator is zero

Table III.1: Percent change in knowledge regarding management and referral pattern for pre-eclampsia based on vignette. Korangi 8, Karachi, Pakistan.

Indicators	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Doctors interviewed n = 18</b>					
<i>Referral pattern</i>					
Immediate	5	27.8	0	0.0	-100.0
Delayed	5	27.8	13	72.2	160.0
None	8	44.4	5	27.8	-37.5
<i>Knowledge of Outcome</i>					
Good	4	22.2	14	77.8	250.0
Average	8	44.4	3	16.7	-62.5
Poor	6	33.3	1	5.6	-83.3
<i>Type of Management</i>					
Good	3	16.7	8	44.4	166.6
Average	15	83.3	10	55.6	-33.3
Poor	0	0.0	0	0.0	0.0
<b>Doctors in our training program n = 8</b>					
<i>Referral pattern</i>					
Immediate	1	12.5	0	0.0	-100.0
Delayed	3	37.5	7	87.5	133.3
None	4	50.0	1	12.5	-75.0
<i>Knowledge of Outcome</i>					
Good	2	25.0	7	87.5	250.0
Average	5	62.5	1	12.5	-80.0
Poor	1	12.5	0	0.0	-100.0
<i>Type of Management</i>					
Good	3	37.5	6	75.0	100.0
Average	5	62.5	2	25.0	-60.0
Poor	0	0.0	0	0.0	0.0
<b>Doctors not in our training program n = 6</b>					
<i>Referral pattern</i>					
Immediate	2	33.3	0	0.0	-100.0
Delayed	1	16.7	2	33.3	100.0
None	3	50.0	4	66.7	33.3
<i>Knowledge of Outcome</i>					
Good	2	33.3	3	50.0	50.0
Average	0	0.0	2	33.3	NA <sup>1</sup>
Poor	4	66.7	1	16.7	-75.0
<i>Type of Management</i>					
Good	0	0.0	0	0.0	0.0
Average	6	100.0	6	100.0	0.0
Poor	0	0.0	0	0.0	0.0

NA<sup>1</sup> undefined as denominator is zero

Table III.2: Percent change in knowledge regarding immediate management for pre-eclampsia based on vignette. Korangi 8, Karachi, Pakistan

Immediate management	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Doctors interviewed n = 18</b>					
Aspirin / Analgesics	9	50.0	3	16.7	-66.7
Sedatives	7	38.9	9	50.0	28.6
Refer	11	61.1	14	77.8	27.3
<b>Doctors in our training program n = 8</b>					
Aspirin / Analgesics	3	37.5	2	25.0	-33.3
Sedatives	0	0.0	6	75.0	NA <sup>1</sup>
Refer	0	0.0	8	100.0	NA <sup>1</sup>
<b>Doctors not in our training program n = 6</b>					
Aspirin / Analgesics	3	50.0	1	16.7	-66.6
Sedatives	1	16.7	1	16.7	0.0
Refer	3	50.0	2	33.3	-33.3

NA<sup>1</sup> undefined as denominator is zero

Table III.3: Percent change in knowledge regarding adverse outcomes for pre-eclampsia based on vignette. Korangi 8, Karachi, Pakistan

Adverse Outcomes	Pre		Post		Percent Change
	#	%	#	%	
<b>Total doctors interviewed n = 18</b>					
Stillbirth	6	33.3	16	88.9	166.7
Fits / seizures	4	22.2	14	77.8	250
Maternal death	2	11.1	5	27.8	150.0
<b>Doctors in our training program n = 8</b>					
Stillbirth	3	37.5	8	100.0	166.7
Fits / seizures	2	25.0	7	87.5	250.0
Maternal death	1	12.5	5	62.5	400.0
<b>Doctors not in our training program n = 6</b>					
Stillbirth	2	33.3	4	66.7	100.0
Fits / seizures	2	33.3	3	50.0	50.0
Maternal death	1	16.7	0	0.0	-100.0

Table III.4: Percent change in knowledge regarding management for eclampsia based on vignette. Korangi 8, Karachi, Pakistan.

Indicators	Pre		Post		Percent Change
	#	%	#	%	
<b>Total doctors interviewed n = 18</b>					
<i>Type of Management</i>					
Good	13	72.2	15	83.3	15.4
Average	5	27.8	3	16.7	-40.0
Poor	0	0.0	0	0.0	0.0
<b>Doctors in our training program n = 8</b>					
<i>Type of Management</i>					
Good	6	75.0	8	100.0	33.3
Average	2	25.0	0	0.0	-100.0
Poor	0	0.0	0	0.0	0.0
<b>Doctors not in our training program n = 6</b>					
<i>Type of Management</i>					
Good	4	66.7	3	50.0	-25.0
Average	2	33.3	3	50.0	50.0
Poor	0	0.0	0	0.0	0.0

Table III.5: Percent change in knowledge regarding immediate management for eclampsia based on vignette. Korangi 8, Karachi, Pakistan

Immediate management	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Doctors interviewed n = 18</b>					
Vital signs	14	77.8	2	11.1	-85.7
Maintain airway	1	5.6	0	0.0	-100.0
IV Valium	15	83.3	18	100.0	20.0
Refer immediately	7	38.9	0	0.0	-100.0
<b>Doctors in our training program n = 8</b>					
Vital signs	8	100.0	1	12.5	-87.5
Maintain airway	3	37.5	0	0.0	-100.0
IV Valium	8	100.0	8	100.0	0.0
Refer immediately	1	12.5	0	0.0	-100.0
<b>Doctors not in our training program n = 6</b>					
Vital signs	4	66.7	0	0.0	-100.0
Maintain airway	3	50.0	1	16.7	-66.7
IV Valium	4	66.7	6	100.0	50.0
Refer immediately	2	33.3	1	16.7	-50.0

Table III.6: Percent change in knowledge regarding referral pattern, cause of delay and management for prolonged/obstructed labor based on vignette. Korangi 8, Karachi, Pakistan.

Indicators	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Doctors interviewed n = 18</b>					
<i>Referral pattern</i>					
Immediate	14	77.8	16	88.9	14.3
Delayed	3	16.7	1	5.6	-66.7
None	1	5.6	1	5.6	0.0
<i>Knowledge of Outcome</i>					
Good	5	27.8	5	27.8	0.0
Average	11	61.1	12	66.7	9.1
Poor	2	11.1	1	5.6	-50.0
<i>Knowledge of Cause of Delay</i>					
Good	9	50.0	14	77.8	55.6
Average	5	27.8	2	11.1	-60.0
Poor	4	22.2	2	11.1	-50.0
<i>Type of Management</i>					
Good	13	72.2	16	88.9	23.1
Average	3	16.7	0	0.0	-100.0
Poor	2	11.1	2	11.1	0.0
<b>Doctors in our training program n = 8</b>					
<i>Referral pattern</i>					
Immediate	5	62.5	8	100.0	60.0
Delayed	2	25.0	0	0.0	-100.0
None	1	12.5	0	0.0	-100.0
<i>Knowledge of Outcome</i>					
Good	3	37.5	5	62.5	66.7
Average	4	50.0	3	37.5	-25.0
Poor	1	12.5	0	0.0	-100.0
<i>Knowledge of Cause of Delay</i>					
Good	6	75.0	8	100.0	33.3
Average	2	25.0	0	0.0	-100.0
Poor	0	0.0	0	0.0	0.0
<i>Type of Management</i>					
Good	5	62.5	8	100.0	60.0
Average	2	25.0	0	0.0	-100.0
Poor	1	12.5	0	0.0	-100.0
<b>Doctors not in our training program n = 6</b>					
<i>Referral pattern</i>					
Immediate	5	83.3	4	66.7	-20.0
Delayed	1	16.7	1	16.7	0.0
None	0	0.0	1	16.7	NA <sup>1</sup>
<i>Knowledge of Outcome</i>					
Good	2	33.3	0	0.0	-100.0
Average	3	50.0	5	83.3	66.7
Poor	1	16.7	1	16.7	0.0
<i>Knowledge of Cause of Delay</i>					
Good	2	33.3	2	33.3	0.0
Average	1	16.7	2	33.3	100.0
Poor	3	50.0	2	33.3	-33.3
<i>Type of Management</i>					
Good	5	83.3	4	66.7	-20.0
Average	0	0.0	0	0.0	0.0
Poor	1	16.7	2	33.3	100.0

NA<sup>1</sup> undefined as denominator is zero

Table III.7: Percent change in knowledge regarding reasons for prolonged labor / obstructed labor based on vignette. Korangi 8, Karachi, Pakistan

Reasons	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Doctors interviewed n = 18</b>					
Breech	3	16.7	4	22.2	33.3
Transverse lie	7	38.9	16	88.9	128.6
Cephalo-pelvic dysproportion	5	27.8	11	61.1	120.0
Uterine dysfunction	4	22.2	0	0.0	-100.0
<b>Doctors in our training program n = 8</b>					
Breech	0	0.0	1	12.5	NA <sup>1</sup>
Transverse lie	3	37.5	8	100.0	166.7
Cephalo-pelvic dysproportion	3	37.5	8	100.0	166.7
Uterine dysfunction	2	25.0	0	0.0	-100.0
<b>Doctors not in our training program n = 6</b>					
Breech	1	16.7	1	16.7	0.0
Transverse lie	1	16.7	4	66.7	300.0
Cephalo-pelvic dysproportion	1	16.7	0	0.0	-100.0
Uterine dysfunction	1	16.7	0	0.0	-100.0

NA<sup>1</sup> undefined as denominator is zero

Table III.8: Percent change in knowledge regarding adverse outcomes for prolonged labor / obstructed labor based on vignette. Korangi 8, Karachi, Pakistan

Adverse Outcomes	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Doctors interviewed n = 18</b>					
Ruptured uterus	3	16.7	5	27.8	66.7
Trauma to child	14	77.8	16	88.9	14.3
<b>Doctors in our training program n = 8</b>					
Ruptured uterus	2	25.0	5	62.5	150.0
Trauma to child	6	75.0	8	100.0	33.3
<b>Doctors not in our training program n = 6</b>					
Ruptured uterus	1	16.7	0	0.0	-100.0
Trauma to child	5	83.3	4	66.7	-20.0

Table III.9: Percent change in knowledge regarding severity of problem and management for threatened abortion based on vignette. Korangi 8, Karachi, Pakistan.

Indicators	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Doctors interviewed n = 18</b>					
<i>Assessment of Severity of Problem</i>					
Good	13	72.2	16	88.9	23.1
Average	1	5.6	0	0.0	-100.0
Poor	4	22.2	2	11.1	-50.0
<i>Type of Management</i>					
Good	13	72.2	17	94.4	30.8
Average / harmless	4	22.2	1	5.6	-75.0
Poor / harmful	1	5.6	0	0.0	-100.0
<b>Doctors in our training program n = 8</b>					
<i>Assessment of Severity of Problem</i>					
Good	6	75.0	7	87.5	16.7
Average	0	0.0	0	0.0	0.0
Poor	2	25.0	1	12.5	-100.0
<i>Type of Management</i>					
Good	5	62.5	8	100.0	60.0
Average / harmless	3	37.5	0	0.0	-100.0
Poor / harmful	0	0.0	0	0.0	0.0
<b>Doctors not in our training program n = 6</b>					
<i>Assessment of Severity of Problem</i>					
Good	4	66.7	6	100.0	50.0
Average	1	16.7	0	0.0	-100.0
Poor	1	16.7	0	0.0	-100.0
<i>Type of Management</i>					
Good	4	66.7	6	100.0	50.0
Average / harmless	1	16.7	0	0.0	-100.0
Poor / harmful	1	16.7	0	0.0	-100.0

Table III.10: Percent change in knowledge regarding referral pattern, severity of problem and management for postpartum hemorrhage. Korangi 8, Karachi, Pakistan.

Indicators	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Doctors interviewed n = 18</b>					
<i>Referral pattern</i>					
Immediate	3	16.7	12	66.7	300.0
Delayed	14	77.8	5	27.8	-64.3
None	1	5.6	1	5.6	0.0
<i>Assessment of Severity of Problem</i>					
Good	9	50.0	17	94.4	88.9
Average	9	50.0	0	0.0	-100.0
Poor	0	0.0	1	5.6	NA <sup>1</sup>
<i>Type of Management</i>					
Good	16	88.9	10	55.6	-37.5
Average	2	11.1	8	44.4	300.0
Poor	0	0.0	0	0.0	0.0
<b>Doctors in our training program n = 8</b>					
<i>Referral pattern</i>					
Immediate	0	0.0	7	87.5	NA <sup>1</sup>
Delayed	8	100.0	1	12.5	-87.5
None	0	0.0	0	0.0	0.0
<i>Assessment of Severity of Problem</i>					
Good	6	75.0	8	100.0	33.3
Average	2	25.0	0	0.0	-100.0
Poor	0	0.0	0	0.0	0.0
<i>Type of Management</i>					
Good	8	100.0	8	100.0	0.0
Average	0	0.0	0	0.0	0.0
Poor	0	0.0	0	0.0	0.0
<b>Doctors not in our training program n = 6</b>					
<i>Referral pattern</i>					
Immediate	2	33.3	2	33.3	0.0
Delayed	3	50.0	3	50.0	0.0
None	1	16.7	1	16.7	0.0
<i>Assessment of Severity of Problem</i>					
Good	1	16.7	5	83.3	400.0
Average	5	83.3	0	0.0	-100.0
Poor	0	0.0	1	16.7	NA <sup>1</sup>
<i>Type of Management</i>					
Good	6	100.0	1	16.5	-83.3
Average	0	0.0	5	83.3	NA <sup>1</sup>
Poor	0	0.0	0	0.0	0.0

NA<sup>1</sup> undefined as denominator is zero

Table III.11: Percent change in knowledge regarding immediate management for post-partum hemorrhage based on vignette. Korangi 8, Karachi, Pakistan

Immediate Management	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Doctors interviewed n = 18</b>					
Massage uterus	1	5.6	1	5.6	0.0
Give oxytocics <sup>1</sup>	13	72.2	10	55.6	-23.1
<b>Doctors in our training program n = 8</b>					
Massage uterus	1	12.5	1	12.5	0.0
Give oxytocics <sup>1</sup>	6	75.0	8	100.0	33.3
<b>Doctors not in our training program n = 6</b>					
Massage uterus	0	0.0	0	0.0	0.0
Give oxytocics <sup>1</sup>	4	66.7	1	16.7	-75.0

1 = Methergin / Syntocinon / Ergometrine

Table III.12: Percent change in knowledge regarding reasons for postpartum hemorrhage based on vignette. Korangi 8, Karachi, Pakistan

Reasons	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Doctors interviewed n = 18</b>					
Vaginal / Cervical tear	7	38.9	12	66.7	71.4
Retained placenta	6	33.3	13	72.2	116.7
<b>Doctors in our training program n = 8</b>					
Vaginal / Cervical tear	3	37.5	7	87.5	133.3
Retained placenta	2	25.0	6	75.0	200.0
<b>Doctors not in our training program n = 6</b>					
Vaginal / Cervical tear	2	33.3	3	50.0	50.0
Retained placenta	2	33.3	4	66.7	100.0

Table III.13: Percent change in knowledge regarding cause of delay, attitude towards patient and management for puerperal sepsis based on vignette. Korangi 8, Karachi. Pakistan

Indicators	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Doctors interviewed n = 18</b>					
<i>Knowledge of Cause of Delay</i>					
Good	13	72.2	13	72.2	0.0
Average	4	22.2	5	27.8	25.0
Poor	1	5.6	0	0.0	-100.0
<i>Attitude towards patient's illness</i>					
Good	18	100.0	17	94.4	-5.6
Average	0	0.0	1	5.6	-100.0
Poor	0	0.0	0	0.0	0.0
<i>Type of Management</i>					
Good	7	38.9	10	55.6	42.9
Average	11	61.1	8	44.4	27.3
Poor	0	0.0	0	0.0	0.0
<b>Doctors in our training program n = 8</b>					
<i>Knowledge of Cause of Delay</i>					
Good	7	87.5	6	75.0	-14.3
Average	1	12.5	2	25.0	100.0
Poor	0	0.0	0	0.0	0.0
<i>Attitude towards patient's illness</i>					
Good	8	100.0	8	100.0	0.0
Average	0	0.0	0	0.0	0.0
Poor	0	0.0	0	0.0	0.0
<i>Type of Management</i>					
Good	4	50.0	6	75.0	50.0
Average	4	50.0	2	25.0	-50.0
Poor	0	0.0	0	0.0	0.0
<b>Doctors not in our training program n = 6</b>					
<i>Knowledge of Cause of Delay</i>					
Good	3	50.0	5	83.3	66.7
Average	3	50.0	1	16.7	-66.7
Poor	0	0.0	0	0.0	0.0
<i>Attitude towards patient's illness</i>					
Good	6	100.0	5	83.3	-16.7
Average	0	0.0	1	16.7	NA <sup>1</sup>
Poor	0	0.0	0	0.0	0.0
<i>Type of Management</i>					
Good	3	50.0	2	33.3	-33.3
Average	3	50.0	4	66.7	33.3
Poor	0	0.0	0	0.0	0.0

NA<sup>1</sup> undefined as denominator is zero

Table III.14: Percent change in knowledge regarding reasons for puerperal sepsis based on vignette. Korangi 8, Karachi, Pakistan

Reasons	Pre		Post		Percent Change
	#	%	#	%	
<b>Total doctors interviewed n = 18</b>					
No hand washing prior to delivery	10	55.6	16	88.9	60.0
Instruments not properly sterilized	11	61.1	16	88.9	45.5
Delivery place not clean	6	33.3	4	22.2	-33.3
Use of dirty pads / cloths	1	5.6	2	11.1	100.0
<b>Doctors in our training program n = 8</b>					
No hand washing prior to delivery	5	62.5	7	87.5	40.0
Instruments not properly sterilized	5	62.5	8	100.0	60.0
Delivery place not clean	4	50.0	2	25.0	-50.0
Use of dirty pads / cloths	1	12.5	1	12.5	0.0
<b>Doctors not in our training program n = 6</b>					
No hand washing prior to delivery	2	33.3	6	100.0	200.0
Instruments not properly sterilized	3	50.0	5	83.3	66.7
Delivery place not clean	2	33.3	1	16.7	-50.0
Use of dirty pads / cloths	0	0.0	0	0.0	0.0

Table III.15: Percent change in knowledge regarding immediate management for puerperal sepsis based on vignette. Korangi 8, Karachi, Pakistan

Immediate management	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Doctors interviewed n = 18</b>					
Temperature	17	94.4	16	88.9	-5.9
Pulse rate	15	83.3	10	55.6	-33.3
Hydration status	5	27.8	1	5.6	-80.0
Abdominal examination	12	66.7	13	72.2	8.3
<b>Doctors in our training program n = 8</b>					
Temperature	7	87.5	7	87.5	0.0
Pulse rate	7	87.5	5	62.5	-28.6
Hydration status	3	37.5	1	12.5	-66.7
Abdominal examination	6	75.0	7	87.5	16.7
<b>Doctors not in our training program n = 6</b>					
Temperature	6	100.0	5	83.3	-16.7
Pulse rate	6	100.0	2	33.3	-66.7
Hydration status	1	16.7	0	0.0	-100.0
Abdominal examination	5	83.3	4	66.7	-20.0

## Health Assistants

Table I.1 : Percentage distribution of background characteristics. Korangi 8, Karachi. Pakistan

Characteristics	Pre		Post		Percent Change
	#	%	#	%	
<b>Current Age [years]</b>					
< 30	4	30.8	4	30.8	N.A.
30 - 39	5	38.5	4	30.8	
40+	4	30.8	5	38.5	
<b>Sex</b>					
Male	13	100.0	13	100.0	N.A.
Female	0	0.0	0	0.0	
<b>Marital Status</b>					
Single	4	30.8	4	30.8	N.A.
Married	9	69.2	9	69.2	
<b>Qualification</b>					
MBBS <sup>1</sup>	3	23.1	2	15.4	-33.3
BA / BSc	1	7.7	1	7.7	0.0
Dispenser	1	7.7	1	7.7	0.0
Others <sup>2</sup>	8	61.5	9	69.2	12.5
<b>Attended refresher courses</b>					
Yes	1	7.7	7	53.8	600.0
No	12	92.3	6	46.2	-50.0
<b>Reasons for not attending</b>					
No time	9	69.2	5	38.5	-44.4
Opportunity not available	10	76.9	1	7.7	-90.0
Not interested	2	15.4	5	38.5	150.0
Not useful	0	0.0	2	15.4	200.0
Expensive	1	7.7	0	0.0	-100.0
<b>Attended Meetings / seminars</b>					
Yes	1	7.7	2	15.4	60.0
No	12	92.3	11	84.6	-50.0
<b>Reasons for not attending</b>					
No time	9	69.2	8	61.5	-11.1
Opportunity not available	10	76.9	6	46.2	-40.0
Not interested	2	15.4	6	46.2	200.0
Not useful	0	0.0	2	15.4	200.0
Expensive	1	7.7	3	23.1	200.0

1 = Reported by the health assistants but, in truth, none of them are M.B.B.S.

2 = Includes matriculate and homeopathy

Table II.1: Percent change in knowledge of common complications during antenatal period. Korangi 8, Karachi, Pakistan

Common Complications	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Health Assistants interviewed n = 13</b>					
Bleeding / APH	6	46.2	8	61.5	33.3
Edema	2	15.4	5	38.5	150.0
Decreased fetal movement	0	0.0	0	0.0	0.0
Anemia	6	46.2	6	46.2	0.0
Malpresentation	1	7.7	3	23.1	200.0
Hypertension	3	23.1	3	23.1	0.0
Diabetes	0	0.0	0	0.0	0.0
Eclampsia	0	0.0	0	0.0	0.0
<b>Health Assistants in our training program n = 8</b>					
Bleeding / APH	4	50.0	5	62.5	25.0
Edema	2	25.0	4	50.0	100.0
Decreased fetal movement	0	0.0	0	0.0	0.0
Anemia	4	50.0	4	50.0	0.0
Malpresentation	1	12.5	3	37.5	200.0
Hypertension	2	25.0	2	25.0	0.0
Diabetes	0	0.0	0	0.0	0.0
Eclampsia	0	0.0	0	0.0	0.0
<b>Health Assistants not in our training program n = 4</b>					
Bleeding / APH	1	25.0	2	50.0	100.0
Edema	0	0.0	1	25.0	NA <sup>1</sup>
Decreased fetal movement	0	0.0	0	0.0	0.0
Anemia	1	25.0	1	25.0	0.0
Malpresentation	0	0.0	0	0.0	0.0
Hypertension	1	25.0	1	25.0	0.0
Diabetes	0	0.0	0	0.0	0.0
Eclampsia	0	0.0	0	0.0	0.0

NA<sup>1</sup> undefined as denominator is zero

Table II.2: Percent change in knowledge of high risk pregnancies.  
Korangi 8, Karachi, Pakistan

High Risk Pregnancy	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Health Assistants interviewed n = 13</b>					
Short height [under five feet]	0	0.0	2	15.4	NA <sup>1</sup>
Grand multiparity	2	15.4	4	30.8	100.0
Previous C-section	0	0.0	2	15.4	NA <sup>1</sup>
Short birth interval	0	0.0	0	0.0	0.0
<b>Health Assistants in our training program n = 8</b>					
Short height [under five feet]	0	0.0	1	12.5	NA <sup>1</sup>
Grand multiparity	2	25.0	3	37.5	50.0
Previous C-section	0	0.0	2	25.0	NA <sup>1</sup>
Short birth interval	0	0.0	0	0.0	0.0
<b>Health Assistants not in our training program n = 4</b>					
Short height [under five feet]	0	0.0	1	25.0	NA <sup>1</sup>
Grand multiparity	0	0.0	1	25.0	NA <sup>1</sup>
Previous C-section	0	0.0	0	0.0	0.0
Short birth interval	0	0.0	0	0.0	0.0

NA<sup>1</sup> undefined as denominator is zero

Table II.3: Percent change in knowledge of obstetric complications necessitating referrals during pregnancy, delivery and postpartum period. Korangi 8, Karachi, Pakistan

Obstetric complications requiring referral	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Health Assistants interviewed n = 13</b>					
Eclampsia	4	30.8	4	30.8	0.0
Antepartum hemorrhage	4	30.8	7	53.8	75.0
Post-partum hemorrhage	2	15.4	5	38.5	150.0
Puerperal sepsis	1	7.7	0	0.0	-100.0
<b>Health Assistants in our training program = 8</b>					
Eclampsia	4	50.0	4	50.0	0.0
Antepartum hemorrhage	2	25.0	4	50.0	100.0
Post-partum hemorrhage	2	25.0	3	37.5	50.0
Puerperal sepsis	1	12.5	0	0.0	-100.0
<b>Health Assistants not in our training program =4</b>					
Eclampsia	0	0.0	0	0.0	0.0
Antepartum hemorrhage	1	25.0	3	75.0	200.0
Post-partum hemorrhage	0	0.0	2	50.0	NA <sup>1</sup>
Puerperal sepsis	0	0.0	0	0.0	0.0

NA<sup>1</sup> undefined as denominator is zero

Table III.1: Percent change in knowledge regarding management and referral pattern for pre-eclampsia based on vignette. Korangi 8, Karachi, Pakistan.

Indicators	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Health Assistants interviewed n = 13</b>					
<i>Referral pattern</i>					
Immediate	6	46.2	3	23.1	-50.0
Delayed	2	15.4	9	69.2	350.0
None	5	38.5	1	7.7	-80.0
<i>Knowledge of Outcome</i>					
Good	0	0.0	7	53.8	NA <sup>1</sup>
Average	6	46.2	3	23.1	-50.0
Poor	7	53.8	3	23.1	-57.1
<i>Type of Management</i>					
Good	3	23.1	5	38.5	66.7
Average	10	76.9	8	61.5	-20.0
Poor	0	0.0	0	0.0	0.0
<b>Health Assistants in our training program n = 8</b>					
<i>Referral pattern</i>					
Immediate	2	25.0	2	25.0	0.0
Delayed	2	25.0	6	75.0	200.0
None	4	50.0	0	0.0	-100.0
<i>Knowledge of Outcome</i>					
Good	0	0.0	7	87.5	NA <sup>1</sup>
Average	2	25.0	1	12.5	-50.0
Poor	6	75.0	0	0.0	-100.0
<i>Type of Management</i>					
Good	2	25.0	3	37.5	50.0
Average	6	75.0	5	62.5	-16.7
Poor	0	0.0	0	0.0	0.0
<b>Health Assistants not in our training program n = 4</b>					
<i>Referral pattern</i>					
Immediate	3	75.0	1	25.0	-66.7
Delayed	0	0.0	2	50.0	NA <sup>1</sup>
None	1	25.0	1	25.0	0.0
<i>Knowledge of Outcome</i>					
Good	0	0.0	0	0.0	0.0
Average	3	75.0	1	25.0	-66.7
Poor	1	25.0	3	75.0	200.0
<i>Type of Management</i>					
Good	1	25.0	1	25.0	0.0
Average	3	75.0	3	75.0	0.0
Poor	0	0.0	0	0.0	0.0

NA<sup>1</sup> undefined as denominator is zero

Table III.2: Percent change in knowledge regarding immediate management for pre-eclampsia based on vignette. Korangi 8, Karachi, Pakistan

Immediate management	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Health Assistants interviewed n = 13</b>					
Aspirin / Analgesics	2	15.4	2	15.4	0.0
Sedatives	6	46.2	6	46.2	0.0
Refer	12	92.3	12	92.3	0.0
<b>Health Assistants in our training program n = 8</b>					
Aspirin / Analgesics	1	12.5	1	12.5	0.0
Sedatives	3	37.5	3	37.5	0.0
Refer	8	100.0	8	100.0	0.0
<b>Health Assistants not in our training program n = 4</b>					
Aspirin / Analgesics	0	0.0	0	0.0	0.0
Sedatives	2	50.0	2	50.0	0.0
Refer	3	75.0	3	75.0	0.0

Table III.3: Percent change in knowledge regarding adverse outcomes for pre-eclampsia based on vignette. Korangi 8, Karachi, Pakistan

Adverse Outcomes	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Health Assistants interviewed n = 13</b>					
Stillbirth	7	53.8	7	53.8	0.0
Fits / seizures	7	53.8	7	53.8	0.0
Maternal death	2	15.4	2	15.4	0.0
<b>Health Assistants in our training program n = 8</b>					
Stillbirth	5	62.5	5	62.5	0.0
Fits / seizures	7	87.5	7	87.5	0.0
Maternal death	1	12.5	1	12.5	0.0
<b>Health Assistants not in our training program n = 4</b>					
Stillbirth	1	25.0	1	25.0	0.0
Fits / seizures	0	0.0	0	0.0	0.0
Maternal death	0	0.0	0	0.0	0.0

Table III.4: Percent change in knowledge regarding management for eclampsia based on vignette. Korangi 8, Karachi, Pakistan.

Indicators	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Health Assistants interviewed n = 13</b>					
<i>Type of Management</i>					
Good	4	30.8	8	61.5	100.0
Average	9	69.2	5	38.5	-44.4
Poor	0	0.0	0	0.0	0.0
<b>Health Assistants in our training program n = 8</b>					
<i>Type of Management</i>					
Good	2	25.0	6	75.0	200.0
Average	6	75.0	2	25.0	-66.7
Poor	0	0.0	0	0.0	0.0
<b>Health Assistants not in our training program n = 4</b>					
<i>Type of Management</i>					
Good	2	50.0	1	25.0	-50.0
Average	2	50.0	3	75.0	50.0
Poor	0	0.0	0	0.0	0.0

Table III.5: Percent change in knowledge regarding immediate management for eclampsia based on vignette. Korangi 8, Karachi, Pakistan

Immediate management	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Health Assistants interviewed n = 13</b>					
Vital signs	5	38.5	1	7.7	-80.0
Maintain airway	1	7.7	1	7.7	0.0
IV Valium	2	15.4	8	61.5	300.0
Refer immediately	10	76.9	2	15.4	-80.0
<b>Health Assistants in our training program n = 8</b>					
Vital signs	3	37.5	1	12.5	-66.6
Maintain airway	1	12.5	1	12.5	0.0
IV Valium	1	12.5	6	75.0	500.0
Refer immediately	5	62.5	2	25.0	-60.0
<b>Health Assistants not in our training program n = 4</b>					
Vital signs	1	25.0	0	0.0	0.0
Maintain airway	0	0.0	0	0.0	0.0
IV Valium	1	25.0	1	25.0	0.0
Refer immediately	4	100.0	0	0.0	-100.0

Table III.6: Percent change in knowledge regarding referral pattern, cause of delay and management for prolonged/obstructed labor based on vignette. Karachi.

Indicators	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Health Assistants interviewed n = 13</b>					
<i>Referral pattern</i>					
Immediate	6	46.2	10	76.9	66.7
Delayed	3	23.1	2	15.4	-33.3
None	4	30.8	1	7.7	-75.0
<i>Knowledge of Outcome</i>					
Good	1	7.7	6	46.2	500.0
Average	11	84.6	6	46.2	-45.5
Poor	1	7.7	1	7.7	0.0
<i>Knowledge of Cause of Delay</i>					
Good	1	7.7	9	69.2	800.0
Average	7	53.8	3	23.1	-57.1
Poor	1	7.7	1	7.7	0.0
<i>Type of Management</i>					
Good	6	46.2	11	84.6	83.3
Average	2	15.4	1	7.7	-50.0
Poor	5	38.5	1	7.7	-80.0
<b>Health Assistants in our training program n = 8</b>					
<i>Referral pattern</i>					
Immediate	2	25.0	7	87.5	250.0
Delayed	2	25.0	1	12.5	-50.0
None	4	50.0	0	0.0	-100.0
<i>Knowledge of Outcome</i>					
Good	1	12.5	5	62.5	400.0
Average	6	75.0	2	25.0	-66.7
Poor	1	12.5	1	12.5	0.0
<i>Knowledge of Cause of Delay</i>					
Good	3	37.5	7	87.5	133.3
Average	1	12.5	1	12.5	0.0
Poor	4	50.0	0	0.0	-100.0
<i>Type of Management</i>					
Good	2	25.0	8	100.0	300.0
Average	1	12.5	0	0.0	-100.0
Poor	5	62.5	0	0.0	-100.0
<b>Health Assistants not in our training program n = 4</b>					
<i>Referral pattern</i>					
Immediate	3	75.0	3	75.0	0.0
Delayed	1	25.0	1	25.0	0.0
None	0	0.0	0	0.0	0.0
<i>Knowledge of Outcome</i>					
Good	0	0.0	1	25.0	NA <sup>1</sup>
Average	4	100.0	3	75.0	-25.0
Poor	0	0.0	0	0.0	0.0
<i>Knowledge of Cause of Delay</i>					
Good	2	50.0	1	25.0	-50.0
Average	1	25.0	3	75.0	200.0
Poor	1	25.0	0	0.0	-100.0
<i>Type of Management</i>					
Good	3	75.0	3	75.0	0.0
Average	1	25.0	1	25.0	0.0
Poor	0	0.0	0	0.0	0.0

NA<sup>1</sup> undefined as denominator is zero

Table III.7: Percent change in knowledge regarding reasons for prolonged labor / obstructed labor based on vignette. Korangi 8, Karachi, Pakistan

Reasons	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Health Assistants interviewed n = 13</b>					
Breech	2	15.4	4	30.8	100.0
Transverse lie	2	15.4	8	61.5	300.0
Cephalo-pelvic dysproportion	0	0.0	4	30.8	NA <sup>1</sup>
Uterine dysfunction	2	15.4	1	7.7	-50.0
<b>Health Assistants in our training program n = 8</b>					
Breech	2	25.0	4	50.0	100.0
Transverse lie	2	25.0	5	62.5	150.0
Cephalo-pelvic dysproportion	0	0.0	3	37.5	NA <sup>1</sup>
Uterine dysfunction	2	25.0	1	12.5	-50.0
<b>Health Assistants not in our training program n = 4</b>					
Breech	0	0.0	0	0.0	0.0
Transverse lie	0	0.0	2	50.0	NA <sup>1</sup>
Cephalo-pelvic dysproportion	0	0.0	1	25.0	NA <sup>1</sup>
Uterine dysfunction	0	0.0	0	0.0	0.0

NA<sup>1</sup> undefined as denominator is zero

Table III.8: Percent change in knowledge regarding adverse outcomes for prolonged labor / obstructed labor based on vignette. Korangi 8, Karachi, Pakistan

Adverse Outcomes	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Health Assistants interviewed n = 13</b>					
Ruptured uterus	1	7.7	6	46.2	500.0
Trauma to child	9	69.2	11	84.6	22.2
<b>Health Assistants in our training program n = 8</b>					
Ruptured uterus	1	12.5	5	62.5	400.0
Trauma to child	5	62.5	7	87.5	40.0
<b>Health Assistants not in our training program n = 4</b>					
Ruptured uterus	0	0.0	1	25.0	NA <sup>1</sup>
Trauma to child	3	75.0	3	75.0	0.0

NA<sup>1</sup> undefined as denominator is zero

Table III.9: Percent change in knowledge regarding severity of problem and management for threatened abortion based on vignette. Korangi 8, Karachi, Pakistan.

Indicators	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Health Assistants interviewed n = 13</b>					
<i>Assessment of Severity of Problem</i>					
Good	12	92.3	12	92.3	0.0
Average	0	0.0	0	0.0	0.0
Poor	1	7.7	1	7.7	0.0
<i>Type of Management</i>					
Good	7	53.8	12	92.3	71.4
Average / harmless	5	38.5	1	7.7	-80.0
Poor / harmful	1	7.7	0	0.0	-100.0
<b>Health Assistants in our training program n = 8</b>					
<i>Assessment of Severity of Problem</i>					
Good	8	100.0	7	87.5	-12.5
Average	0	0.0	0	0.0	0.0
Poor	0	0.0	1	12.5	NA <sup>1</sup>
<i>Type of Management</i>					
Good	2	25.0	7	87.5	250.0
Average / harmless	5	62.5	1	12.5	-80.0
Poor / harmful	1	12.5	0	0.0	-100.0
<b>Health Assistants not in our training program n = 4</b>					
<i>Assessment of Severity of Problem</i>					
Good	3	75.0	4	100.0	33.3
Average	0	0.0	0	0.0	0.0
Poor	1	25.0	0	0.0	0.0
<i>Type of Management</i>					
Good	4	100.0	4	100.0	0.0
Average / harmless	0	0.0	0	0.0	0.0
Poor / harmful	0	0.0	0	0.0	0.0

NA<sup>1</sup> undefined as denominator is zero

Table III.10: Percent change in knowledge regarding referral pattern, severity of problem and management for postpartum hemorrhage. Korangi 8, Karachi, Pakistan.

Indicators	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Health Assistants interviewed n = 13</b>					
<i>Referral pattern</i>					
Immediate	8	61.5	9	69.2	12.5
Delayed	1	7.7	3	23.1	200.0
None	4	30.8	1	7.7	-75.0
<i>Assessment of Severity of Problem</i>					
Good	2	15.4	10	76.9	400.0
Average	5	38.5	2	15.4	-60.0
Poor	6	46.2	1	7.7	-83.3
<i>Type of Management</i>					
Good	6	46.2	7	53.8	16.7
Average	2	15.4	5	38.5	150.0
Poor	5	38.5	1	7.7	-80.0
<b>Health Assistants in our training program n = 8</b>					
<i>Referral pattern</i>					
Immediate	6	75.0	6	75.0	0.0
Delayed	1	12.5	2	25.0	100.0
None	1	12.5	0	0.0	NA <sup>1</sup>
<i>Assessment of Severity of Problem</i>					
Good	1	12.5	8	100.0	700.0
Average	3	37.5	0	0.0	-100.0
Poor	4	50.0	0	0.0	-100.0
<i>Type of Management</i>					
Good	3	37.5	6	75.0	100.0
Average	2	25.0	2	25.0	0.0
Poor	3	37.5	0	0.0	-100.0
<b>Health Assistants not in our training program n = 4</b>					
<i>Referral pattern</i>					
Immediate	1	25.0	3	75.0	200.0
Delayed	0	0.0	0	0.0	0.0
None	3	75.0	1	25.0	-66.7
<i>Assessment of Severity of Problem</i>					
Good	1	25.0	1	25.0	0.0
Average	1	25.0	2	50.0	100.0
Poor	2	50.0	1	25.0	-50.0
<i>Type of Management</i>					
Good	2	50.0	0	0.0	-100.0
Average	0	0.0	3	75.0	NA <sup>1</sup>
Poor	2	50.0	1	25.0	-50.0

NA<sup>1</sup> undefined as denominator is zero

Table III.11: Percent change in knowledge regarding immediate management for postpartum hemorrhage based on vignette. Korangi 8, Karachi, Pakistan

Immediate Management	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Health Assistants interviewed n = 13</b>					
Massage uterus	1	7.7	0	0.0	-100.0
Give oxytocics <sup>1</sup>	12	92.3	10	76.9	-16.7
<b>Health Assistants in our training program n = 8</b>					
Massage uterus	1	12.5	0	0.0	-100.0
Give oxytocics <sup>1</sup>	8	100.0	6	75.0	-25.0
<b>Health Assistants not in our training program n = 4</b>					
Massage uterus	0	0.0	0	0.0	0.0
Give oxytocics <sup>1</sup>	3	75.0	3	75.0	0.0

1 = Methergin / Syntocinon / Ergometrine

Table III.12: Percent change in knowledge regarding reasons for postpartum hemorrhage based on vignette. Korangi 8, Karachi, Pakistan

Reasons	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Health Assistants interviewed n = 13</b>					
Vaginal / Cervical tear	5	38.5	6	46.2	20.0
Retained placenta	2	15.4	7	53.8	250.0
<b>Health Assistants in our training program n = 8</b>					
Vaginal / Cervical tear	4	50.0	5	62.5	25.0
Retained placenta	2	25.0	6	75.0	200.0
<b>Health Assistants not in our training program n = 4</b>					
Vaginal / Cervical tear	0	0.0	0	0.0	0.0
Retained placenta	1	25.0	1	25.0	0.0

Table III.13: Percent change in knowledge regarding cause of delay, attitude towards patient and management for puerperal sepsis based on vignette. Korangi 8. Karachi. Pakistan

Indicators	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Health Assistants interviewed n = 13</b>					
<i>Knowledge of Cause of Delay</i>					
Good	0	0.0	5	38.5	NA <sup>1</sup>
Average	7	53.8	7	53.8	0.0
Poor	6	46.2	1	7.7	-83.3
<i>Attitude towards patient's illness</i>					
Good	11	84.6	5	38.5	-54.5
Average	2	15.4	8	61.5	300.0
Poor	0	0.0	0	0.0	0.0
<i>Type of Management</i>					
Good	2	15.4	8	61.5	300.0
Average	9	69.2	5	38.5	-44.4
Poor	2	15.4	0	0.0	-100.0
<b>Health Assistants in our training program n = 8</b>					
<i>Knowledge of Cause of Delay</i>					
Good	0	0.0	4	50.0	NA <sup>1</sup>
Average	3	37.5	3	37.5	0.0
Poor	5	62.5	1	12.5	-80.0
<i>Attitude towards patient's illness</i>					
Good	8	100.0	4	50.0	-50.0
Average	0	0.0	4	50.0	NA <sup>1</sup>
Poor	0	0.0	0	0.0	0.0
<i>Type of Management</i>					
Good	1	12.5	5	62.5	400.0
Average	5	62.5	3	37.5	-40.0
Poor	2	25.0	0	0.0	-100.0
<b>Health Assistants not in our training program n = 4</b>					
<i>Knowledge of Cause of Delay</i>					
Good	0	0.0	1	25.0	NA <sup>1</sup>
Average	3	75.0	3	75.0	0.0
Poor	1	25.0	0	0.0	-100.0
<i>Attitude towards patient's illness</i>					
Good	4	100.0	1	25.0	-75.0
Average	0	0.0	5	125.0	NA <sup>1</sup>
Poor	0	0.0	0	0.0	0.0
<i>Type of Management</i>					
Good	0	0.0	2	50.0	NA <sup>1</sup>
Average	4	100.0	2	50.0	-50.0
Poor	0	0.0	0	0.0	0.0

NA<sup>1</sup> undefined as denominator is zero

Table III.14: Percent change in knowledge regarding reasons for puerperal sepsis based on vignette. Korangi 8, Karachi, Pakistan

Reasons	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Health Assistants interviewed n = 13</b>					
No hand washing prior to delivery	4	30.8	8	61.5	100.0
Instruments not properly sterilized	1	7.7	5	38.5	400.0
Delivery place not clean	0	0.0	1	7.7	NA <sup>1</sup>
Use of dirty pads / cloths	0	0.0	0	0.0	0.0
<b>Health Assistants in our training program n = 8</b>					
No hand washing prior to delivery	3	37.5	5	62.5	66.7
Instruments not properly sterilized	0	0.0	5	62.5	NA <sup>1</sup>
Delivery place not clean	0	0.0	0	0.0	0.0
Use of dirty pads / cloths	0	0.0	0	0.0	0.0
<b>Health Assistants not in our training program n = 4</b>					
No hand washing prior to delivery	1	25.0	2	50.0	100.0
Instruments not properly sterilized	1	25.0	0	0.0	-100.0
Delivery place not clean	0	0.0	1	25.0	NA <sup>1</sup>
Use of dirty pads / cloths	0	0.0	0	0.0	0.0

NA<sup>1</sup> undefined as denominator is zero

Table III.15: Percent change in knowledge regarding immediate management for puerperal sepsis based on vignette. Korangi 8. Karachi, Pakistan

Immediate management	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Health Assistants interviewed n = 13</b>					
Temperature	13	100.0	12	92.3	-7.7
Pulse rate	9	69.2	8	61.5	-11.1
Hydration status	0	0.0	0	0.0	0.0
Abdominal examination	9	69.2	7	53.8	-22.2
<b>Health Assistants in our training program n = 8</b>					
Temperature	8	100.0	8	100.0	0.0
Pulse rate	5	62.5	5	62.5	0.0
Hydration status	0	0.0	0	0.0	0.0
Abdominal examination	5	62.5	5	62.5	0.0
<b>Health Assistants not in our training program n = 4</b>					
Temperature	4	100.0	3	75.0	-25.0
Pulse rate	3	75.0	3	75.0	0.0
Hydration status	0	0.0	0	0.0	0.0
Abdominal examination	4	100.0	1	25.0	-75.0

## Lady Health Visitors/Midwives/Nurses

Table I.1 : Percentage distribution of background characteristics. Korangi 8, Karachi, Pakistan

Characteristics	Pre		Post		Percent Change
	#	%	#	%	
<b>Current Age [years]</b>					
< 30	2	22.2	2	22.2	0.0
30 - 39	4	44.4	3	33.3	-25.0
40+	3	33.3	4	44.4	33.3
<b>Sex</b>					
Female	9	100.0	9	100.0	0.0
<b>Type of Provider</b>					
LHVs <sup>1</sup>	2	22.2	3	33.3	50.0
Nurse	3	33.3	1	11.1	-66.7
Midwife	2	22.2	2	22.2	0.0
Nurse + Midwife	2	22.2	3	33.3	50.0
<b>Marital Status</b>					
Single	2	22.2	1	11.1	-50.0
Married	5	55.6	3	33.3	-40.0
Divorced	2	22.2	5	55.6	150.0
<b>Qualification</b>					
LHV	2	22.2	3	33.3	50.0
Nursing diploma	3	33.3	1	11.1	-66.7
Midwifery diploma	2	22.2	2	22.2	0.0
Both Nursing and midwifery diploma	2	22.2	3	33.3	50.0
<b>Attended refresher courses</b>					
Yes	2	22.2	5	55.6	400.0
No	7	77.8	4	44.4	-50.0
<b>Reasons for not attending</b>					
No time	5	55.6	3	33.3	-40.0
Opportunity not available	2	22.2	3	33.3	-50.0
Financial problem	1	11.1	1	11.1	0.0

1. LHV = Lady Health Visitors

Table II.1: Percent change in health care offered during the antenatal period.  
Korangi 8, Karachi, Pakistan

Health Care	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Lady Health Visitors interviewed n = 9</b>					
See women for antenatal care	9	100.0	9	100.0	0.0
Advise about breast feeding	2	22.2	4	44.4	100.0
Advise about birth interval	5	55.6	4	44.4	-20.0
Give tetanus toxoid injections	5	55.6	7	77.8	40.0
<b>Lady Health Visitors in our training program n = 4</b>					
See women for antenatal care	4	100.0	4	100.0	0.0
Advise about breast feeding	2	50.0	3	75.0	50.0
Advise about birth interval	2	50.0	2	50.0	0.0
Give tetanus toxoid injections	3	75.0	4	100.0	33.3
<b>Lady Health Visitors not in our training program n = 3</b>					
See women for antenatal care	3	100.0	3	100.0	0.0
Advise about breast feeding	2	66.7	1	33.3	-50.0
Advise about birth interval	3	100.0	2	66.7	-33.3
Give tetanus toxoid injections	1	33.3	2	66.7	100.0

Table II.2: Percent change in knowledge of common complications during antenatal period. Korangi 8, Karachi, Pakistan

Common Complications	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Lady Health Visitors interviewed n = 9</b>					
Bleeding / APH	7	77.8	4	44.4	-42.9
Edema	2	22.2	2	22.2	0.0
Decreased fetal movement	2	22.2	0	0.0	-100.0
Anemia	4	44.4	5	55.6	25.0
Malpresentation	1	11.1	3	33.3	200.0
Hypertension	2	22.2	6	66.7	200.0
Diabetes	0	00.0	0	0.0	NA <sup>2</sup>
Eclampsia	1	11.1	0	0.0	-100.0
<b>Lady Health Visitors in our training program n = 4</b>					
Bleeding / APH	3	75.0	2	50.0	-33.3
Edema	1	25.0	0	0.0	-100.0
Decreased fetal movement	1	25.0	0	0.0	-100.0
Anemia	1	25.0	1	25.0	0.0
Malpresentation	0	00.0	0	0.0	0.0
Hypertension	1	25.0	3	75.0	200.0
Diabetes	0	0.0	0	0.0	0.0
Eclampsia	0	0.0	0	0.0	0.0
<b>Lady Health Visitors not in our training program n = 3</b>					
Bleeding / APH	4	133.3	2	66.7	-50.0
Edema	1	33.3	1	33.3	0.0
Decreased fetal movement	1	33.3	0	0.0	-100.0
Anemia	1	33.3	2	66.7	100.0
Malpresentation	0	0.0	2	66.7	NA <sup>1</sup>
Hypertension	1	33.3	2	66.7	100.0
Diabetes	0	0.0	0	0.0	0.0
Eclampsia	0	0.0	0	0.0	0.0

1. NA = undefined as denominator is zero

Table II.3: Percent change in knowledge of high risk pregnancies.  
Korangi 8, Karachi, Pakistan

High Risk Pregnancy	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Lady Health Visitors interviewed n = 9</b>					
Short height [under five feet]	3	33.3	5	55.6	66.7
Grand multiparity	2	22.2	5	55.6	150.0
Previous C-section	5	55.6	2	22.2	-60.0
Short birth interval	0	0.0	1	11.1	NA <sup>1</sup>
<b>Lady Health Visitors in our training program n = 4</b>					
Short height [under five feet]	2	50.0	2	50.0	0.0
Grand multiparity	0	0.0	3	75.0	NA <sup>1</sup>
Previous C-section	2	50.0	1	25.0	-50.0
Short birth interval	0	0.0	0	0.0	0.0
<b>Lady Health Visitors not in our training program n = 3</b>					
Short height [under five feet]	1	33.3	1	33.3	0.0
Grand multiparity	1	33.3	1	33.3	0.0
Previous C-section	2	66.7	1	33.3	-50.0
Short birth interval	0	0.0	1	33.3	NA <sup>1</sup>

1. NA = undefined as denominator is zero

Table II.4: Percent change in knowledge of obstetric complications necessitating referrals during pregnancy, delivery and postpartum period. Korangi 8, Karachi, Pakistan

Obstetric complications requiring referral	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Lady Health Visitors interviewed n = 9</b>					
High blood pressure	9	100.0	7	77.8	-22.2
Antepartum hemorrhage	6	66.7	5	55.6	-16.7
<b>Lady Health Visitors in our training program n= 4</b>					
High blood pressure	4	100.0	3	75.0	-25.0
Antepartum hemorrhage	2	50.0	2	50.0	0.0
<b>Lady Health Visitors not in our training program n= 3</b>					
High blood pressure	3	100.0	3	100.0	0.0
Antepartum hemorrhage	2	66.7	2	66.7	0.0

Table III.1: Percent change in knowledge regarding management and referral pattern for pre-eclampsia based on vignette. Korangi 8, Karachi, Pakistan.

Indicators	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Lady Health Visitors interviewed n = 9</b>					
<i>Referral pattern</i>					
Immediate	4	44.4	4	44.4	0.0
Delayed	1	11.1	5	55.6	400.0
None	4	44.4	0	0.0	-100.0
<i>Knowledge of Outcome</i>					
Good	6	66.7	7	77.8	-16.7
Average	3	33.3	1	11.1	-66.7
Poor	0	0.0	1	11.1	NA <sup>1</sup>
<i>Type of Management</i>					
Good	1	11.1	5	55.6	400.0
Average	8	88.9	4	44.4	-50.0
Poor	0	0.0	0	0.0	0.0
<b>Lady Health Visitors in our training program n = 4</b>					
<i>Referral pattern</i>					
Immediate	2	50.0	3	75.0	50.0
Delayed	1	25.0	1	25.0	0.0
None	1	25.0	0	0.0	-100.0
<i>Knowledge of Outcome</i>					
Good	3	75.0	3	75.0	0.0
Average	1	25.0	1	25.0	0.0
Poor	0	0.0	0	0.0	0.0
<i>Type of Management</i>					
Good	1	25.0	4	100.0	300.0
Average	3	75.0	0	0.0	-100.0
Poor	0	0.0	0	0.0	0.0
<b>Lady Health Visitors not in our training program n = 3</b>					
<i>Referral pattern</i>					
Immediate	1	33.3	1	33.3	0.0
Delayed	1	33.3	2	66.7	100.0
None	1	33.3	0	0.0	-100.0
<i>Knowledge of Outcome</i>					
Good	2	66.7	2	66.7	0.0
Average	1	33.3	1	33.3	0.0
Poor	0	0.0	0	0.0	0.0
<i>Type of Management</i>					
Good	0	0.0	1	25.0	NA <sup>1</sup>
Average	3	100.0	2	66.7	-33.3
Poor	0	0.0	0	0.0	0.0

1. NA = undefined as denominator is zero

Table III.2: Percent change in knowledge regarding immediate management for pre-eclampsia based on vignette. Korangi 8, Karachi, Pakistan

Immediate management	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Lady Health Visitors interviewed n = 9</b>					
Aspirin / Analgesics	2	22.2	3	33.3	50.0
Sedatives	2	22.2	5	55.6	150.0
Refer	5	55.6	8	88.9	60.0
<b>Lady Health Visitors in our training program n = 4</b>					
Aspirin / Analgesics	2	50.0	1	25.0	-50.0
Sedatives	2	50.0	4	100.0	100.0
Refer	2	50.0	4	100.0	100.0
<b>Lady Health Visitors not in our training program n = 3</b>					
Aspirin / Analgesics	0	0.0	1	33.3	NA <sup>1</sup>
Sedatives	0	0.0	1	33.3	NA <sup>1</sup>
Refer	2	66.7	2	66.7	0.0

1. NA = undefined as denominator is zero

Table III.3: Percent change in knowledge regarding adverse outcomes for pre-eclampsia based on vignette. Korangi 8, Karachi, Pakistan

Adverse Outcomes	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Lady Health Visitors interviewed n = 9</b>					
Stillbirth	5	55.6	7	77.8	40.0
Fits / seizures	6	66.7	7	77.8	16.7
Maternal death	2	22.2	3	33.3	50.0
<b>Lady Health Visitors in our training program n = 4</b>					
Stillbirth	2	50.0	3	75.0	50.0
Fits / seizures	3	75.0	3	75.0	0.0
Maternal death	1	25.0	1	25.0	0.0
<b>Lady Health Visitors not in our training program n = 3</b>					
Stillbirth	1	33.3	3	100.0	200.0
Fits / seizures	2	66.7	2	66.7	0.0
Maternal death	1	33.3	1	33.3	0.0

Table III.4: Percent change in knowledge regarding referral pattern, cause of delay and management for prolonged/obstructed labor based on vignette. Karachi.

Indicators	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Lady Health Visitors interviewed n = 9</b>					
<i>Referral pattern</i>					
Immediate	3	33.3	8	88.9	166.7
Delayed	5	55.6	1	11.1	-80.0
None	1	11.1	0	0.0	-100.0
<i>Knowledge of Outcome</i>					
Good	1	11.1	6	66.7	500.0
Average	8	88.9	3	33.3	-62.5
Poor	0	0.0	0	0.0	0.0
<i>Knowledge of Cause of Delay</i>					
Good	7	77.8	9	100.0	28.6
Average	0	0.0	0	0.0	0.0
Poor	2	22.2	0	0.0	-100.0
<i>Type of Management</i>					
Good	2	22.2	7	77.8	250.0
Average	4	44.4	0	0.0	-100.0
Poor	3	33.3	2	22.2	-33.3
<b>Lady Health Visitors in our training program n = 4</b>					
<i>Referral pattern</i>					
Immediate	1	25.0	4	100.0	300.0
Delayed	2	50.0	0	0.0	-100.0
None	1	25.0	0	0.0	-100.0
<i>Knowledge of Outcome</i>					
Good	0	0.0	3	75.0	NA <sup>1</sup>
Average	4	100.0	1	25.0	-75.0
Poor	0	0.0	0	0.0	0.0
<i>Knowledge of Cause of Delay</i>					
Good	4	100.0	4	100.0	0.0
Average	0	0.0	0	0.0	0.0
Poor	0	0.0	0	0.0	0.0
<i>Type of Management</i>					
Good	1	25.0	3	75.0	200.0
Average	2	50.0	0	0.0	-100.0
Poor	1	25.0	1	25.0	0.0
<b>Lady Health Visitors not in our training program n = 3</b>					
<i>Referral pattern</i>					
Immediate	1	33.3	3	100.0	200.0
Delayed	2	66.7	0	0.0	-100.0
None	0	0.0	0	0.0	0.0
<i>Knowledge of Outcome</i>					
Good	1	33.3	1	33.3	0.0
Average	2	66.7	2	66.7	0.0
Poor	0	0.0	0	0.0	0.0
<i>Knowledge of Cause of Delay</i>					
Good	1	33.3	3	100.0	200.0
Average	0	0.0	0	0.0	0.0
Poor	2	66.7	0	0.0	-100.0
<i>Type of Management</i>					
Good	0	0.0	3	100.0	NA <sup>1</sup>
Average	2	66.7	0	0.0	-100.0
Poor	1	33.3	0	0.0	-100.0

1. NA = undefined as denominator is zero

Table III.5: Percent change in knowledge regarding reasons for prolonged labor / obstructed labor based on vignette. Korangi 8, Karachi, Pakistan

Reasons	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Lady Health Visitors interviewed n = 9</b>					
Breech	5	55.6	5	55.6	0.0
Transverse lie	7	77.8	9	100.0	28.6
Cephalo-pelvic dysproportion	2	22.2	8	88.9	300.0
Uterine dysfunction	1	11.1	0	0.0	-100.0
<b>Lady Health Visitors in our training program n = 4</b>					
Breech	3	75.0	2	50.0	-33.3
Transverse lie	3	75.0	4	100.0	33.3
Cephalo-pelvic dysproportion	1	25.0	4	100.0	300.0
Uterine dysfunction	1	25.0	0	0.0	-100.0
<b>Lady Health Visitors not in our training program n = 3</b>					
Breech	0	0.0	2	66.7	NA <sup>1</sup>
Transverse lie	2	66.7	3	100.0	50.0
Cephalo-pelvic dysproportion	1	33.3	2	66.7	100.0
Uterine dysfunction	0	0.0	0	0.0	0.0

1. NA = undefined as denominator is zero

Table III.6: Percent change in knowledge regarding adverse outcomes for prolonged labor / obstructed labor based on vignette. Korangi 8, Karachi, Pakistan

Adverse Outcomes	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Lady Health Visitors interviewed n = 9</b>					
Ruptured uterus	1	11.1	6	66.7	500.0
Trauma to child	8	88.9	8	88.9	0.0
<b>Lady Health Visitors in our training program n = 4</b>					
Ruptured uterus	0	0.0	3	75.0	NA <sup>1</sup>
Trauma to child	4	100.0	4	100.0	0.0
<b>Lady Health Visitors not in our training program n = 3</b>					
Ruptured uterus	1	33.3	1	33.3	0.0
Trauma to child	2	66.7	3	100.0	50.0

1. NA = undefined as denominator is zero

Table III.7: Percent change in knowledge regarding severity of problem and management for threatened abortion based on vignette. Korangi 8, Karachi, Pakistan.

Indicators	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Lady Health Visitors interviewed n = 9</b>					
<i>Assessment of Severity of Problem</i>					
Good	8	88.9	9	100.0	12.5
Average	0	0.0	0	0.0	0.0
Poor	1	11.1	0	0.0	-100.0
<i>Type of Management</i>					
Good	2	22.2	9	100.0	350.0
Average / harmless	7	77.8	0	0.0	-100.0
Poor / harmful	0	0.0	0	0.0	0.0
<b>Lady Health Visitors in our training program n = 4</b>					
<i>Assessment of Severity of Problem</i>					
Good	4	100.0	4	100.0	0.0
Average	0	0.0	0	0.0	0.0
Poor	0	0.0	0	0.0	0.0
<i>Type of Management</i>					
Good	0	0.0	4	100.0	NA <sup>1</sup>
Average / harmless	4	100.0	0	0.0	-100.0
Poor / harmful	0	0.0	0	0.0	0.0
<b>Lady Health Visitors not in our training program n = 3</b>					
<i>Assessment of Severity of Problem</i>					
Good	2	66.7	3	100.0	50.0
Average	0	0.0	0	0.0	0.0
Poor	1	33.3	0	0.0	-100.0
<i>Type of Management</i>					
Good	2	66.7	3	100.0	50.0
Average / harmless	1	33.3	0	0.0	-100.0
Poor / harmful	0	0.0	0	0.0	0.0

1. NA = undefined as denominator is zero

Table III.8: Percent change in knowledge regarding referral pattern, severity of problem and management for postpartum hemorrhage. Korangi 8, Karachi, Pakistan.

Indicators	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Lady Health Visitors interviewed n = 9</b>					
<i>Referral pattern</i>					
Immediate	2	22.2	2	22.2	0.0
Delayed	7	77.8	7	77.8	0.0
None	0	0.0	0	0.0	0.0
<i>Assessment of Severity of Problem</i>					
Good	2	22.2	7	77.8	250.0
Average	7	77.8	1	11.1	-85.7
Poor	0	0.0	1	11.1	NA <sup>1</sup>
<i>Type of Management</i>					
Good	7	77.8	9	100.0	28.6
Average	2	22.2	0	0.0	-100.0
Poor	0	0.0	0	0.0	0.0
<b>Lady Health Visitors in our training program n = 4</b>					
<i>Referral pattern</i>					
Immediate	2	50.0	2	50.0	0.0
Delayed	2	50.0	2	50.0	0.0
None	0	0.0	0	0.0	0.0
<i>Assessment of Severity of Problem</i>					
Good	1	25.0	4	100.0	300.0
Average	3	75.0	0	0.0	-100.0
Poor	0	0.0	0	0.0	0.0
<i>Type of Management</i>					
Good	2	50.0	4	100.0	100.0
Average	2	50.0	0	0.0	-100.0
Poor	0	0.0	0	0.0	0.0
<b>Lady Health Visitors not in our training program n = 3</b>					
<i>Referral pattern</i>					
Immediate	0	0.0	0	0.0	0.0
Delayed	3	100.0	3	100.0	0.0
None	0	0.0	0	0.0	0.0
<i>Assessment of Severity of Problem</i>					
Good	1	33.3	1	33.3	0.0
Average	2	66.7	1	33.3	-50.0
Poor	0	0.0	1	33.3	NA <sup>1</sup>
<i>Type of Management</i>					
Good	3	100.0	3	100.0	0.0
Average	0	0.0	0	0.0	0.0
Poor	0	0.0	0	0.0	0.0

1. NA = undefined as denominator is zero

Table III.9: Percent change in knowledge regarding immediate management for postpartum hemorrhage based on vignette. Korangi 8, Karachi, Pakistan

Immediate Management	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Lady Health Visitors interviewed n = 9</b>					
Massage uterus	2	22.2	6	66.7	200.0
Give oxytocics <sup>1</sup>	8	88.9	8	88.9	0.0
<b>Lady Health Visitors in our training program n = 4</b>					
Massage uterus	1	25.0	2	50.0	100.0
Give oxytocics <sup>1</sup>	3	75.0	4	100.0	33.3
<b>Lady Health Visitors not in our training program n = 3</b>					
Massage uterus	1	33.3	2	66.7	100.0
Give oxytocics <sup>1</sup>	3	100.0	3	100.0	0.0

1 = Methergin / Syntocinon / Ergometrine

Table III.10: Percent change in knowledge regarding reasons for postpartum hemorrhage based on vignette. Korangi 8, Karachi. Pakistan

Reasons	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Lady Health Visitors interviewed n = 9</b>					
Vaginal / Cervical tear	8	88.9	7	77.8	-12.5
Retained placenta	5	55.6	8	88.9	60.0
<b>Lady Health Visitors in our training program n = 4</b>					
Vaginal / Cervical tear	3	50.0	4	100.0	33.3
Retained placenta	2	100.0	4	100.0	100.0
<b>Lady Health Visitors not in our training program n = 3</b>					
Vaginal / Cervical tear	3	66.7	2	66.7	-33.3
Retained placenta	2	100.0	3	100.0	0.0

1. NA = undefined as denominator is zero

Table III.11: Percent change in knowledge regarding cause of delay, attitude towards patient and management for puerperal sepsis based on vignette. Korangi 8, Karachi, Pakistan

Indicators	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Lady Health Visitors interviewed n = 9</b>					
<i>Knowledge of Cause of Delay</i>					
Good	6	66.7	6	66.7	0.0
Average	3	33.3	3	33.3	0.0
Poor	0	0.0	0	0.0	0.0
<i>Attitude towards patient's illness</i>					
Good	7	77.8	9	100.0	28.6
Average	2	22.2	0	0.0	-100.0
Poor	0	0.0	0	0.0	0.0
<i>Type of Management</i>					
Good	2	22.2	7	77.8	250.0
Average	7	77.8	2	22.2	-71.4
Poor	0	0.0	0	0.0	0.0
<b>Lady Health Visitors in our training program n = 4</b>					
<i>Knowledge of Cause of Delay</i>					
Good	2	50.0	2	50.0	0.0
Average	2	50.0	2	50.0	0.0
Poor	0	0.0	0	0.0	0.0
<i>Attitude towards patient's illness</i>					
Good	4	100.0	4	100.0	0.0
Average	0	0.0	0	0.0	0.0
Poor	0	0.0	0	0.0	0.0
<i>Type of Management</i>					
Good	1	25.0	3	75.0	200.0
Average	3	75.0	1	25.0	-66.7
Poor	0	0.0	0	0.0	0.0
<b>Lady Health Visitors not in our training program n = 3</b>					
<i>Knowledge of Cause of Delay</i>					
Good	2	66.7	2	66.7	0.0
Average	1	33.3	1	33.3	0.0
Poor	0	0.0	0	0.0	0.0
<i>Attitude towards patient's illness</i>					
Good	1	33.3	3	100.0	200.0
Average	2	66.7	0	0.0	-100.0
Poor	0	0.0	0	0.0	0.0
<i>Type of Management</i>					
Good	1	33.3	3	100.0	200.0
Average	2	66.7	0	0.0	-100.0
Poor	0	0.0	0	0.0	0.0

Table III.12: Percent change in knowledge regarding reasons for puerperal sepsis based on vignette. Korangi 8, Karachi, Pakistan

Reasons	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Lady Health Visitors interviewed n = 9</b>					
No hand washing prior to delivery	7	77.8	8	88.9	14.3
Instruments not properly sterilized	6	66.7	8	88.9	33.3
Delivery place not clean	6	66.7	4	44.4	-33.3
Use of dirty pads / cloths	4	44.4	1	11.1	-75.0
<b>Lady Health Visitors in our training program n = 4</b>					
No hand washing prior to delivery	3	75.0	3	75.0	0.0
Instruments not properly sterilized	4	100.0	3	75.0	-25.0
Delivery place not clean	3	75.0	1	25.0	-66.7
Use of dirty pads / cloths	1	25.0	1	25.0	0.0
<b>Lady Health Visitors not in our training program n = 3</b>					
No hand washing prior to delivery	2	66.7	3	100.0	50.0
Instruments not properly sterilized	2	66.7	3	100.0	50.0
Delivery place not clean	2	66.7	2	66.7	0.0
Use of dirty pads / cloths	2	66.7	0	0.0	-100.0

Table III.13: Percent change in knowledge regarding immediate management for puerperal sepsis based on vignette. Korangi 8, Karachi, Pakistan

Immediate management	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Lady Health Visitors interviewed n = 9</b>					
Temperature	8	88.9	8	88.9	0.0
Pulse rate	3	33.3	2	22.2	-33.3
Hydration status	1	11.1	0	0.0	-100.0
Abdominal examination	3	33.3	5	55.6	66.7
<b>Lady Health Visitors in our training program n = 4</b>					
Temperature	3	75.0	4	100.0	33.3
Pulse rate	1	25.0	0	0.0	-100.0
Hydration status	0	0.0	0	0.0	0.0
Abdominal examination	2	50.0	4	100.0	100.0
<b>Lady Health Visitors not in our training program n = 3</b>					
Temperature	3	100.0	2	66.7	-33.3
Pulse rate	1	33.3	0	0.0	-100.0
Hydration status	0	0.0	0	0.0	0.0
Abdominal examination	2	66.7	1	33.3	-50.0

## Traditional Birth Attendants

Table I.1 : Percentage distribution of background characteristics. Korangi 8, Karachi, Pakistan

Characteristics	Pre		Post		Percent Change
	#	%	#	%	
<b>Current Age [years]</b>					
< 30	2	7.1	3	10.7	N.A.
30 - 39	8	28.6	5	17.9	
40 - 49	7	25.0	8	28.6	
50 - 59	7	25.0	6	21.4	
60+	3	10.7	6	21.4	
<b>Sex</b>					N.A.
Female	28	100.0	28	100.0	
<b>Marital Status</b>					
Single	1	3.6	2	7.1	N.A.
Married	20	71.4	18	64.3	
Widow	7	25.0	8	28.6	
<b>Attended refresher courses</b>					
Yes	0	0.0	27	96.4	NA <sup>1</sup>
No	28	100.0	1	3.6	-96.4
<b>Reasons for not attending</b>					
No time	14	50.0	0	0.0	-100.0
Opportunity not available	19	67.9	0	0.0	-100.0
Not interested	8	28.6	0	0.0	-100.0
Not useful	0	0.0	1	3.6	NA <sup>1</sup>
Expensive	6	21.4	1	3.6	-83.3

1. NA = undefined as denominator is zero

Table II.1: Percent change in health care offered during the antenatal period.  
Korangi 8, Karachi, Pakistan

Health Care	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Traditional Birth Attendants interviewed n = 28</b>					
See women for antenatal care	28	100.0	28	100.0	0.0
Advise about breast feeding	5	17.9	6	21.4	20.0
Advise about birth interval	6	21.4	6	21.4	0.0
Give tetanus toxoid injections	1	3.6	5	17.9	400.0
<b>Traditional Birth Attendants in our training program n = 23</b>					
See women for antenatal care	23	100.0	23	100.0	0.0
Advise about breast feeding	3	13.0	5	21.7	66.6
Advise about birth interval	5	21.7	5	21.7	0.0
Give tetanus toxoid injections	1	4.3	5	21.7	400.0
<b>Traditional Birth Attendants not in our training program n = 1</b>					
See women for antenatal care	1	100.0	1	100.0	
Advise about breast feeding	1	100.0	0	0.0	NA
Advise about birth interval	0	0.0	0	0.0	
Give tetanus toxoid injections	0	0.0	0	0.0	

Table II.2: Percent change in knowledge of common complications during antenatal period. Korangi 8, Karachi, Pakistan

Common Complications	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Traditional Birth Attendants interviewed n = 28</b>					
Bleeding / APH	8	28.6	13	46.4	62.5
Edema	2	7.1	7	25.0	250.0
Decreased fetal movement	4	14.3	1	3.6	-75.0
Anemia	3	10.7	9	32.1	200.0
Malpresentation	7	25.0	5	17.9	-28.6
Hypertension	0	0.0	6	21.4	NA <sup>1</sup>
Diabetes	0	0.0	1	3.6	NA <sup>1</sup>
Eclampsia	0	0.0	1	3.6	NA <sup>1</sup>
<b>Traditional Birth Attendants in our training program n = 23</b>					
Bleeding / APH	6	26.1	13	56.5	116.6
Edema	1	4.3	7	30.4	600.0
Decreased fetal movement	4	17.4	1	4.3	-75.0
Anemia	2	8.7	9	39.1	350.0
Malpresentation	6	26.1	3	13.0	-50.0
Hypertension	0	0.0	5	21.7	NA <sup>1</sup>
Diabetes	0	0.0	1	4.3	NA <sup>1</sup>
Eclampsia	0	0.0	1	4.3	NA <sup>1</sup>
<b>Traditional Birth Attendants not in our training program n = 1</b>					
Bleeding / APH	0	0.0	0	0.0	NA
Edema	0	0.0	0	0.0	
Decreased fetal movement	0	0.0	0	0.0	
Anemia	0	0.0	0	0.0	
Malpresentation	0	0.0	0	0.0	
Hypertension	0	0.0	0	0.0	
Diabetes	0	0.0	0	0.0	
Eclampsia	0	0.0	0	0.0	

1. NA = undefined as denominator is zero

Table II.3: Percent change in knowledge of high risk pregnancies.  
Korangi 8, Karachi, Pakistan

High Risk Pregnancy	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Traditional Birth Attendants interviewed n = 28</b>					
Short height [under five feet]	2	7.1	6	21.4	200.0
Grand multiparity	1	3.6	5	17.9	400.0
Previous C-section	1	3.6	3	10.7	200.0
Short birth interval	0	0.0	1	3.6	NA <sup>i</sup>
<b>Traditional Birth Attendants in our training program n = 23</b>					
Short height [under five feet]	1	4.3	3	13.0	200.0
Grand multiparity	1	4.3	4	17.4	300.0
Previous C-section	1	4.3	3	13.0	200.0
Short birth interval	0	0.0	1	4.3	NA <sup>i</sup>
<b>Traditional Birth Attendants not in our training program n = 1</b>					
Short height [under five feet]	0	0.0	0	0.0	NA
Grand multiparity	0	0.0	0	0.0	
Previous C-section	0	0.0	0	0.0	
Short birth interval	0	0.0	0	0.0	

1. NA = undefined as denominator is zero

Table II.4: Percent change in knowledge regarding danger signs during antenatal period.  
Korangi 8, Karachi, Pakistan

Danger signs	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Traditional Birth Attendants interviewed n = 28</b>					
Spotting	17	60.7	22	78.6	29.4
Headache not responding to drugs	1	3.6	1	3.6	0.0
High fever	1	3.6	2	7.1	100.0
Mother very pale and weak	16	57.1	25	89.3	56.2
<b>Traditional Birth Attendants in our training program n = 23</b>					
Spotting	13	56.5	19	82.6	46.2
Headache not responding to drugs	1	4.3	1	4.3	0.0
High fever	1	4.3	2	8.7	100.0
Mother very pale and weak	13	56.5	21	91.3	61.5
<b>Traditional Birth Attendants not in our training program n = 1</b>					
Spotting	1	100.0	0	0.0	NA
Headache not responding to drugs	0	0.0	0	0.0	
High fever	0	0.0	0	0.0	
Mother very pale and weak	0	0.0	1	100.0	

Table II.5: Percent change in knowledge regarding danger signs during the puerperium.  
Korangi 8, Karachi, Pakistan

Danger Signs	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Traditional Birth Attendants interviewed n = 28</b>					
Cervix not dilating	10	35.7	19	67.9	90.0
Presenting part not descending	12	42.9	13	46.4	8.3
Decrease in frequency &/or intensity of pains	4	14.3	16	57.1	300
Decreased fetal movement	5	17.9	12	42.9	140.0
Bleeding	10	35.7	23	82.1	130.0
Liquor for more than two days	1	3.6	4	14.3	300.0
<b>Traditional Birth Attendants in our training program n = 23</b>					
Cervix not dilating	8	34.8	14	60.9	75.0
Presenting part not descending	9	39.1	12	52.2	33.3
Decrease in frequency &/or intensity of pains	3	13.0	13	56.5	333.3
Decreased fetal movement	3	13.0	10	43.5	-23.1
Bleeding	8	34.8	19	82.6	137.5
Liquor for more than two days	0	0.0	2	7.1	NA
<b>Traditional Birth Attendants not in our training program n = 1</b>					
Cervix not dilating	0	0.0	1	100.0	NA
Presenting part not descending	1	100.0	0	0.0	
Decrease in frequency &/or intensity of pains	0	0.0	1	100.0	
Decreased fetal movement	0	0.0	1	100.0	
Bleeding	0	0.0	0	0.0	
Liquor for more than two days	0	0.0	0	0.0	

1. NA = undefined as denominator is zero

Table II.6: Percent change in knowledge regarding danger signs during postpartum period.  
Korangi 8, Karachi, Pakistan

Danger Signs	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Traditional Birth Attendants interviewed n = 28</b>					
High grade fever	10	35.7	28	100.0	180.0
Heavy bleeding after 24 hours	10	35.7	17	60.7	70.0
Severe abdominal pain	6	21.4	75	267.9	1,150.0
Purulent vaginal discharge	6	21.4	14	50.0	133.3
<b>Traditional Birth Attendants in our training program n = 23</b>					
High grade fever	9	39.1	23	100.0	155.5
Heavy bleeding after 24 hours	8	34.8	13	56.5	62.5
Severe abdominal pain	8	34.8	62	269.6	675.0
Purulent vaginal discharge	5	21.7	13	56.5	160.0
<b>Traditional Birth Attendants not in our training program n= 1</b>					
High grade fever	0	0.0	1	100.0	NA
Heavy bleeding after 24 hours	0	0.0	1	100.0	
Severe abdominal pain	0	0.0	2	200.0	
Purulent vaginal discharge	0	0.0	1	100.0	

Table II.7: Percent change in knowledge regarding signs depicting that baby is not healthy. Korangi 8, Karachi, Pakistan

Signs depicting abnormal baby	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Traditional Birth Attendants interviewed n = 28</b>					
Baby not crying	16	57.1	28	100.0	75.0
Blue baby	12	42.9	28	100.0	133.3
Meconium stained	1	3.6	28	100.0	2700.0
<b>Traditional Birth Attendants in our training program n = 23</b>					
Baby not crying	12	52.2	23	100.0	91.7
Blue baby	11	47.8	23	100.0	109.1
Meconium stained	0	0.0	23	100.0	NA <sup>1</sup>
<b>Traditional Birth Attendants not in our training program n = 1</b>					
Baby not crying	1	100.0	1	100.0	NA
Blue baby	0	0.0	1	100.0	
Meconium stained	0	0.0	1	100.0	

1. NA = undefined as denominator is zero

Table III.1: Percent change in knowledge regarding management and referral pattern for pre-eclampsia based on vignette. Korangi 8, Karachi, Pakistan.

Indicators	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Traditional Birth Attendants interviewed n = 28</b>					
<i>Referral pattern</i>					
Immediate	22	78.6	25	89.3	13.6
Delayed	4	14.3	3	10.7	-25.0
None	2	7.1	0	0.0	-100.0
<i>Knowledge of Outcome</i>					
Good	6	21.4	13	46.4	116.7
Average	16	57.1	14	50.0	-12.5
Poor	6	21.4	1	4.3	-83.3
<i>Type of Management</i>					
Good	1	3.6	0	0.0	-100.0
Average	27	96.4	28	100.0	37.0
Poor	0	0.0	0	0.0	0.0
<b>Traditional Birth Attendants in our training program n = 23</b>					
<i>Referral pattern</i>					
Immediate	19	82.6	22	95.7	15.8
Delayed	3	13.0	1	4.3	-66.7
None	1	4.3	0	0.0	-100.0
<i>Knowledge of Outcome</i>					
Good	5	21.7	12	52.2	140.0
Average	12	52.2	10	43.5	-16.7
Poor	6	26.1	1	4.3	-83.3
<i>Type of Management</i>					
Good	1	4.3	0	0.0	-100.0
Average	22	95.7	23	100.0	4.5
Poor	0	0.0	0	0.0	0.0
<b>Traditional Birth Attendants not in our training program n = 1</b>					
<i>Referral pattern</i>					
Immediate	1	100.0	1	100.0	NA
Delayed	0	0.0	0	0.0	
None	0	0.0	0	0.0	
<i>Knowledge of Outcome</i>					
Good	0	0.0	0	0.0	NA
Average	1	100.0	1	100.0	
Poor	0	0.0	0	0.0	
<i>Type of Management</i>					
Good	0	0.0	0	0.0	NA
Average	1	100.0	1	100.0	
Poor	0	0.0	0	0.0	

Table III.2: Percent change in knowledge regarding immediate management for pre-eclampsia based on vignette. Korangi 8, Karachi, Pakistan

Immediate management	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Traditional Birth Attendants interviewed n = 28</b>					
Aspirin / Analgesics	7	25.0	3	10.7	-57.1
Sedatives	2	7.1	0	0.0	-200.0
Refer	27	96.4	28	100.0	3.7
<b>Traditional Birth Attendants in our training program n = 23</b>					
Aspirin / Analgesics	6	26.1	2	8.7	-66.7
Sedatives	2	8.7	0	0.0	-200.0
Refer	23	100.0	23	100.0	0.0
<b>Traditional Birth Attendants not in our training program n = 1</b>					
Aspirin / Analgesics	0	0.0	1	100.0	NA
Sedatives	0	0.0	0	0.0	
Refer	1	100.0	1	100.0	

Table III.3: Percent change in knowledge regarding adverse outcomes for pre-eclampsia based on vignette. Korangi 8, Karachi, Pakistan

Adverse Outcomes	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Traditional Birth Attendants interviewed n = 28</b>					
Stillbirth	15	53.6	27	96.4	80.0
Fits / seizures	6	21.4	13	46.4	116.7
Maternal death	11	39.3	21	75.0	90.9
<b>Traditional Birth Attendants in our training program n = 23</b>					
Stillbirth	13	56.5	22	95.6	69.2
Fits / seizures	5	21.7	12	52.2	140.0
Maternal death	7	30.4	17	73.9	142.8
<b>Traditional Birth Attendants not in our training program n = 1</b>					
Stillbirth	0	0.0	1	100.0	NA
Fits / seizures	0	0.0	0	0.0	
Maternal death	1	100.0	0	0.0	

Table III.4: Percent change in knowledge regarding referral pattern and cause of delay for prolonged/obstructed labor based on vignette. Korangi 8, Karachi, Pakistan.

Indicators	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Traditional Birth Attendants interviewed n = 28</b>					
<i>Referral pattern</i>					
Immediate	13	46.4	22	78.6	69.2
Delayed	4	30.8	3	10.7	-25.0
None	11	39.3	3	10.7	-72.7
<i>Knowledge of cause of delay</i>					
Good	14	50.0	23	82.1	64.3
Average	5	14.3	2	7.1	-60.0
Poor	9	32.1	3	10.7	-66.7
<b>Traditional Birth Attendants in our training program n = 23</b>					
<i>Referral pattern</i>					
Immediate	9	39.1	18	78.3	100.0
Delayed	4	17.4	2	8.7	-50.0
None	10	43.5	3	13.0	-70.0
<i>Knowledge of cause of delay</i>					
Good	12	52.2	20	86.9	66.7
Average	4	17.4	1	4.3	-75.0
Poor	7	30.4	2	8.7	-71.4
<b>Traditional Birth Attendants not in our training program n = 1</b>					
<i>Referral pattern</i>					
Immediate	1	100.0	0	0.0	NA
Delayed	0	0.0	1	100.0	
None	0	0.0	0	0.0	
<i>Knowledge of cause of delay</i>					
Good	0	0.0	0	0.0	NA
Average	1	100.0	1	100.0	
Poor	0	0.0	0	0.0	

Table III.5: Percent change in knowledge regarding reasons for prolonged labor / obstructed labor based on vignette. Korangi 8, Karachi, Pakistan

Reasons for prolonged labor	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Traditional Birth Attendants interviewed n = 28</b>					
Breech	11	39.3	5	17.9	-54.5
Transverse lie	12	42.9	24	85.7	100.0
Small pelvic size	6	21.4	20	71.4	233.3
Uterine dysfunction	3	10.7	1	3.6	-66.6
<b>Traditional Birth Attendants in our training program n = 23</b>					
Breech	10	43.5	4	17.4	-60.0
Transverse lie	9	39.1	19	82.6	111.1
Small pelvic size	5	21.7	17	73.9	240.0
Uterine dysfunction	3	13.0	1	4.3	-66.6
<b>Traditional Birth Attendants not in our training program n = 1</b>					
Breech	0	0.0	0	0.0	NA
Transverse lie	0	0.0	1	100.0	
Small pelvic size	0	0.0	0	0.0	
Uterine dysfunction	0	0.0	0	0.0	

Table III.6: Percent change in knowledge regarding severity of problem and management for threatened abortion based on vignette. Korangi 8, Karachi, Pakistan.

Indicators	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Traditional Birth Attendants interviewed n = 28</b>					
<i>Assessment of Severity of Problem</i>					
Good	26	92.9	26	92.9	0.0
Average	1	3.6	1	3.6	0.0
Poor	1	3.6	1	3.6	0.0
<i>Type of Management</i>					
Good	24	85.7	24	85.7	0.0
Average / harmless	2	7.1	2	7.1	0.0
Poor / harmful	2	7.1	2	7.1	0.0
<b>Traditional Birth Attendants in our training program n = 23</b>					
<i>Assessment of Severity of Problem</i>					
Good	21	91.3	22	95.7	4.8
Average	1	4.3	1	4.3	0.0
Poor	1	4.3	0	0.0	-100.0
<i>Type of Management</i>					
Good	20	86.9	22	95.7	10.0
Average / harmless	2	8.8	0	0.0	-200.0
Poor / harmful	1	4.3	1	4.3	0.0
<b>Traditional Birth Attendants not in our training program n = 1</b>					
<i>Assessment of Severity of Problem</i>					
Good	1	100.0	1	100.0	NA
Average	0	0.0	0	0.0	
Poor	0	0.0	0	0.0	
<i>Type of Management</i>					
Good	1	100.0	1	100.0	NA
Average / harmless	0	0.0	0	0.0	
Poor / harmful	0	0.0	0	0.0	

Table III.7: Percent change in knowledge regarding referral pattern, reason for problem and management for postpartum hemorrhage. Korangi 8, Karachi, Pakistan.

Indicators	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Traditional Birth Attendants interviewed n = 28</b>					
<i>Referral pattern</i>					
Immediate	16	57.1	11	39.3	-31.2
Delayed	12	42.8	16	57.1	33.3
None	0	0.0	1	3.6	NA <sup>1</sup>
<i>Knowledge of reason</i>					
Good	15	53.6	16	57.1	6.6
Average	2	7.1	3	10.7	50.0
Poor	11	39.3	9	32.1	-18.2
<i>Type of Management</i>					
Good	15	53.6	14	50.0	-6.7
Average	8	28.6	13	62.5	46.4
Poor	5	17.9	1	3.6	-80.0
<b>Traditional Birth Attendants in our training program n = 23</b>					
<i>Referral pattern</i>					
Immediate	15	65.2	10	43.5	-33.3
Delayed	8	34.8	12	52.2	50.0
None	0	0.0	1	4.3	NA <sup>1</sup>
<i>Knowledge of reason</i>					
Good	13	56.5	13	56.5	0.0
Average	2	8.7	3	13.0	50.0
Poor	8	34.8	7	30.4	-12.5
<i>Type of Management</i>					
Good	12	52.2	12	52.2	0.0
Average	8	34.8	10	43.5	25.0
Poor	3	13.0	1	4.3	-80.0
<b>Traditional Birth Attendants not in our training program n = 1</b>					
<i>Referral pattern</i>					
Immediate	1	100.0	0	0.0	NA
Delayed	0	0.0	1	100.0	
None	0	0.0	0	0.0	
<i>Knowledge of reason</i>					
Good	0	0.0	1	100.0	NA
Average	0	0.0	0	0.0	
Poor	1	100.0	0	0.0	
<i>Type of Management</i>					
Good	1	100.0	0	0.0	NA
Average	0	0.0	1	100.0	
Poor	0	0.0	0	0.0	

1. NA = undefined as denominator is zero

Table III.8: Percent change in knowledge regarding immediate management for postpartum hemorrhage based on vignette. Korangi 8, Karachi, Pakistan

Immediate Management	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Traditional Birth Attendants interviewed n = 28</b>					
Massage uterus	6	21.4	18	64.3	200.0
Give oxytocics <sup>1</sup>	0	0.0	7	25.0	NA <sup>2</sup>
<b>Traditional Birth Attendants in our training program n = 23</b>					
Massage uterus	4	17.4	15	65.2	275.0
Give oxytocics <sup>1</sup>	0	0.0	6	26.1	NA <sup>2</sup>
<b>Traditional Birth Attendants not in our training program n = 1</b>					
Massage uterus	0	0.0	1	100.0	NA
Give oxytocics <sup>1</sup>	0	0.0	0	0.0	

1 = Methergin / Syntocinon / Ergometrine

2. NA = undefined as denominator is zero

Table III.9: Percent change in knowledge regarding reasons for postpartum hemorrhage based on vignette. Korangi 8, Karachi, Pakistan

Reasons	Pre		Post		Percent Change
	#	%	#	%	
<b>Total Traditional Birth Attendants interviewed n = 28</b>					
Vaginal / Cervical tear	12	42.9	14	50.0	16.7
Retained placenta	18	64.3	22	78.6	22.2
<b>Traditional Birth Attendants in our training program n = 23</b>					
Vaginal / Cervical tear	10	43.5	12	52.2	20.0
Retained placenta	16	69.6	17	73.9	6.3
<b>Traditional Birth Attendants not in our training program n = 1</b>					
Vaginal / Cervical tear	0	0.0	0	0.0	NA
Retained placenta	0	0.0	1	100.0	

## Case study

### *Prolonged Labor*

Mrs X was a young twenty year old Punjabi woman, a primigravida who had received no antenatal care. She was brought to Jinnah Postgraduate Medical Center in “emergency” in May 1998 having been referred by a “*dai*” who had looked after her in labor at home for fourteen hours.

The relatives informed the doctors at Jinnah Postgraduate Medical Center that the “*dai*” was under training in the Safe Motherhood Project and had asked them to take Mrs X to Jinnah Postgraduate Medical Center as she could not deliver the baby. The patient had three broken ampoules of 5 Units of Syntocinon each clenched in her hand and disclosed that the “*dai*” had administered these intramuscularly to her and had also instructed her to show them to Dr Shereen or Dr Razia (trainers) at Jinnah Postgraduate Medical Center. Despite repeated efforts by the doctors at Jinnah Postgraduate Medical Center, the patient or her relatives did not divulge the “*dai*’s” name. She delivered a live baby by outlet forceps and was allowed home a couple of days later. Condition of both mother and baby were satisfactory at discharge.

This is an example of a “*dai*” taking a wrong action (giving Syntocinon) but then correcting it by sending the patient to the appropriate hospital in time for effective management.