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**EVALUATION OF POSTPARTUM HOME
VISIT PROGRAM**

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INTRODUCTION

In 1994, the government of Indonesia began an ambitious midwifery training program with the goal of a midwife based in every village to try to bring services closer to the population in need. This program arose in response to the high maternal mortality in Indonesia and in recognition that home is the preferred site for delivery in Indonesia. In a 1996 community-based survey in three districts in South Kalimantan (Hulu Sungai Selatan, Bartola, and Banjar), 87% of 1204 women who delivered their last infant in past three years (1993-95) reported delivery at their home or at a relative's home. At that time, the most frequent attendant for the home births reported by women was a traditional birth attendant (50%); only 8.3% of the women reported a village-based midwife or Bidan di desa at the birth. However, postpartum visits by Bidan di desa (Bdd) were more frequent; 36% of the 1204 women reported a visit by Bdd in the postpartum period. However, the timing and content of the postpartum visits are not documented, and data from this survey identified areas for improvement in postpartum care. Less than 23% of the women reported breast feeding their last infant within one hour of delivery, and 24% reported that they first breast feed more than 2 days after the birth. Only 3.2% of the women who reported one or more problems in the postpartum period sought help for the problem.

However, all women did not have access to a Bdd at the time of the births reported in the 1996 survey. From a survey conducted in 1997 among Bdd, 538 Bdd were working in the three districts of Hulu Sungai Selatan (HSS), Bartola, and Banjar either as government employees (39%) or on three year government contracts (61%). Of the 208 government employee Bdd, 73 % have been employed since before 1993. However, the majority of the contract BDD (59%) were in the first year of their contract (began their contracts in 1996), 16% were in their second year (began in 1995), and 26% were in their third and last year (began in 1994).

One concern for the success of the Bdd program was the young age of some of the Bdd who have been posted into villages. It was felt that women would not view young women as competent caregivers and would prefer the services of older TBAs. The younger age resulted in part from a decrease in educational requirement from completion of senior high school to completion of junior high school with the introduction of the Bdd training program. Among the Bdd in these three districts in 1997, 26% were less than 21 years, and 47% were between the ages of 21-25 years. Only 7% were over the age of 30. Fifty-eight percent of the BDD were married and 60% did not have children. Most (73%) of the Bdd had completed junior high school, three years of nursing and one year of midwifery education; 16% have junior high school and three years of midwifery.

In 1995, MotherCare, the Ministry of Health/Indonesia and IBI (National Midwifery Association), with technical assistance from American College of Nurse Midwives (ACNM), designed and provided competency-based training for a postpartum home visit (PPHV) program to be implemented by Bdd in these three districts in South Kalimantan, Indonesia. The goal of the PPHV program is twofold: first, to increase the number of women and neonates who receive

care in the period following home delivery and, second, to support the integration of Bdd into the community so that the proportion of home births attended or supervised by Bdd increases. The content of this training is included in the clinical training in maternal and newborn care, using *Healthy Mother and Healthy Newborn Care Manual*.

The PPHV program was designed so that Bdd visit mothers in postpartum period to:

- Identify mothers and babies with problems and properly manage or refer them early.
- Provide counseling to support and increase breast feeding and family planning.
- Provide counseling and iron supplementation for 40 days postpartum to increase compliance and to decrease the prevalence of anemia among women.
- Provide counseling for maternal vitamin A supplementation
- Increase the credibility of Bidan di desa as a competent provider of maternal and neonatal care in the eyes of the mother, the family, the TBA, and the community.

Specific assessment activities, interventions and counseling topics for the mother and the baby are defined for 4 postpartum visits; the first three visits take place at the woman's home within 6 hours of delivery, three days after delivery, and two weeks after delivery, and the fourth visit at 6 weeks may occur either at the health facility or at the woman's home.

The specific activities of the Bdd for each visit is described below:

Visit #1: within 6 hours of birth

- Recognize excessive bleeding, provide emergency care, and refer as necessary
- Identify lacerations that need repair and refer
- Educate woman and family about maternal and neonatal danger signs
- Promote early initiation of breast feeding
- Identify baby with complications provide emergency care, and refer as necessary
- Prevent hypothermia (no bathing for first 12 hours and keep warm)
- Provide eye prophylaxis and cord care
- Weigh the baby

Visit #2: at three days after birth

- Recognize excessive bleeding and signs of infection, provide emergency care, and refer as necessary
- Recognize and manage breast feeding problems (sore or cracked nipples, engorged breast, not enough milk)
- Provide iron folate tables and instructions postpartum
- Advise mother to get vitamin A capsule postpartum
- Recognize neonates that are not eating well, have conjunctivitis, cord infection, jaundice, or other signs of complications, provide emergency care, and refer as necessary
- Re-enforce education on maternal and newborn danger signs
- Promote immunizations (BCG, POLIO, and Hepatitis B)

Visit #3: two weeks after delivery

- Recognize maternal or neonatal problems, provide emergency care, and refer as necessary
- Recognize and manage breast feeding problems (sore or cracked nipples, mastitis, not

enough milk)

- Discuss family planning methods, including lactational amenorrhea method (LAM)

Visit #4: six weeks after delivery

- Confirm involution of mother
- Recognize and manage breast feeding problems (sore or cracked nipples, mastitis, not enough milk, poor weight gain in baby)
- to initiate FP method
- to promote under-five clinic attendance for baby

A postpartum record for mother and neonate was designed as part of the *Healthy Mother and Healthy Newborn Care Manual*. A Bdd register was developed with additional technical assistance from London School of Hygiene and Tropical Medicine. The purpose of these records and register were to document the services that Bdd provided and to serve as a source for community-based data.

In 1999, MotherCare, with technical assistance from the University of Indonesia, conducted an evaluation of this postpartum program. Our main interest was to determine if the program was designed realistically and with the appropriate content. We felt that this aspect of the program needed to be confirmed before we assessed the impact of the program on health outcomes. The evaluation combined quantitative and qualitative data to answer two key questions:

- **Can the Bidan di desa implement this program as it is defined?**
- **Is the content and timing of each visit appropriate to meet the needs of the women and baby?**

METHODS

To answer these questions, we sought information from Bidan di desa who were implementing the postpartum visit program and from mothers who received postpartum services from these Bidan di desa. We limited our analysis to data from Bidan di desa and postpartum women from HSS as this was the district with highest coverage of care provided by Bidan di desa who participated in the in-service training education and hence in the PPHV program.

Quantitative sources of data include data from 1997 and repeated 1999 Bidan di desa survey for Bidan di desa from HSS, entries by Bidan di desa for four quarters (April 1998 until March 1999) in the Bdd register, and data from women from HSS interviewed in the 1996 and in the 1999 community-based surveys. Qualitative data were obtained through focus group discussions implemented by consultants from the University of Indonesia, and guided by the questions listed in Focus Group Guides (Appendix A).

The Bdd registers data were used to identify 35 Bidan di desa from HSS with varying completeness in reporting the 4 postpartum visits. The Bidan di desa were split into 6 focus groups. Twenty-one postpartum mothers from HSS were selected from entries in the Bdd register and divided into three focus groups. The focus groups were conducted over three days (August 25-27, 1999).

RESULTS

1997 and 1999 Bidan di desa surveys

By 1999, the number of Bidan di desa in HSS had dropped by 8%, from 145 in 1997 to 134 in 1999 (Table 1). As expected the Bidan di desa had become older with only 4% less than 21 years of age in 1999 compared to 32% less than 21 in 1997. More Bidan di desa were married (71%) and fewer had no children (55%) compared to the situation 1997 (54% and 72% respectively). Most (93%) of the Bidan di desa had received MotherCare training by 1999. The ratio of government to contract employment status did not changed between the two surveys (1:3). Thirty-one percent of the contract Bidan di desa were in their second contract.

Table 1: Demographic characteristics of Bidan di desa in HSS district

	1997	1999
Number	% (N=145)	% (N=134)
Age: ≤ 20 yrs	32	4
21-25 yrs	47	70
26-30 yrs	19	22
≥31	2	5
Mean age	23	24.1
Married or widowed	54	71
No children	72	55
Education		
Jr hi + 3 yr nsg+ 1 yr mw	65	63
Jr hi + 3 yr mw	24	22
Other combinations	11	14
Received MotherCare LSS training	26	93
Employment status		
Government	30	24
Contract	70	76
Among contract employees:	N=101	N=102
with 1 st contract	100	69
with 2 ND contract		31

Among contract employees:		
Year current contract ends		
1997	16	NA
1998	18	NA
1999	67	55
2000	NA	22
2001	NA	21
2002-3	NA	2
Unknown		1

Bidan di desa register

Of the 125 Bidan di desa who received in-service training and were working in HSS in March 1999, 115 (92%) submitted 1,787 entries in the Bidan di desa register for the period April 1998 to March 1999. Almost all of the entries (1,751 or 98%) included information on postpartum visits made by the Bidan di desa.

Table 2 includes the number and timing of the postpartum visits for these entries. Over 68%% of the postpartum visits followed the timing and frequency defined by the PPHV program with 44% of the women receiving two visits within the first day (first visit within 6 hours and a second visit between 7 and 12 hours after delivery). Another 17% included a delayed first visit at 7-12 hours after delivery. Although most (79%) of the postpartum visits were to women who had a Bdd in attendance, 356 (20%) included women who delivered without a Bidan di desa reported as presence during the labor and delivery.

Table 2: Frequency and Timing of postpartum visits by bidan di desa, HSS April 1998-March 1999, Bidan di desa register (N=1751)

	Home (%)	Facility (%)	Missing (%)
TOTAL	92	6	2
First 6 Hour, 7-12 Hour, 3 Day, 2 Week, 6 Week	42	1	1
First 6 Hour, 3 Day, 2 Week, 6 Week	22	1	1
7-12 Hour, 3 Day, 2 Week, 6 Week	16	1	
3 Day, 2 Week, 6 Week	4	1	
2 Week, 6 Week,	1	1	
Other combinations	6	1	
No visits	1		

Table 3 includes information on iron folate consumption, determined by the number of iron folate tablets remaining of the 40 tablets given, and the reported choice of family planning

method at the sixth week postpartum visit.

Table 3: Postpartum iron consumption and family planning method choice at 6 weeks postpartum visit Bidan di desa Register HSS 4/98-3/99

Number with PP visits	1751	
Postpartum iron consumption	n	%
Unknown	34	1.9
None	51	2.9
1-29 tablets	123	7.0
30-39 tablets	358	20.4
40 tablets	1165	66.5
More than 40 tablets	20	1.1
Mean number (SD) among known consumption	36.1	± 10.7
Family planning methods		
Unknown	161	9.2
No method chosen	50	2.9
Oral contraceptives	1302	74.4
Injectable	8	0.5
Norplant	3	0.2
Vaginal tablets	221	12.6
Lactational amenorhea method	1	0.1
Other modern methods (including sterilization)	5	0.3

Community-based surveys

Women from HSS reported an increase in postpartum visits by Bidan di desa in the community-based surveys. In 1996, 36% of the women with a birth in the previous three years reported that a Bidan di desa had visited them postpartum. In 1999, 80% of the women with a birth in the last year reported a postpartum visit by the Bidan di desa; and 70% of the women reported a visit by the Bidan di desa within 24 hours of the birth. Although some of the increase in coverage of postpartum care is due to the increased availability of Bidan di desa in the villages between the two time periods covered in the surveys (1993-1996 and 1998-1999), the high coverage of visit within the first 24 hours after birth in 1999 most likely is attributable to the PPHV program.

Focus Group Discussions

Need for postpartum care and role of the Bidan di desa and traditional birth attendant

The Bidan di desa felt that women and newborns needed care in the postpartum period. In particular, they were concerned about detecting maternal or neonatal problems. They felt that a

Bidan di desa was the appropriate provider, although they included help from the family, to provide this care. They expressed concern about the harmful traditional practices that the TBA may promote in the postpartum period (applying substances to the cord stump, promoting food taboos and supporting supplementary foods for the newborn). The Bidan di desa felt responsible for the health of the mother and baby during the critical postpartum period. It appeared that the Maternal and Perinatal Audit, in which the Bidan di desa play an important role in providing information about maternal and perinatal deaths to the district level health officials, have strengthened the role and responsibility that the Bidan di desa feel in providing postpartum care.

The Bidan di desa felt that the postpartum visits improved their credibility within the community and their relationships with the all the women in the community. They reported that frequently women came to the home in which the Bidan di desa was conducting a postpartum visit to consult with her about concerns. They did not report any tension with the TBAs over the provision of postpartum care.

The postpartum mothers liked the postpartum visit by the Bidan di desa because they were monitored without paying any fees. The mothers reported paying from 10,00 to 70,00 rupiah for delivery by the Bidan di desa.

The mothers described a varying role for the TBA in providing postpartum care. Some mothers reported that the TBA did not provide any postpartum care; others reported that the TBA provided care if she as invited by the family. Still others reported postpartum visits by the TBA at three, seven and 10 days after delivery. The TBA is an important figure in a traditional ceremony at seven days after birth (Tepung Tawar) at which time the baby can be placed in the swinging cradle and can be held by other members of the family. All of the mothers appreciated the traditional massage offered by the TBA.

Definition of postpartum services

Both the Bidan di desa and the postpartum women were able to describe correctly the services provided by the Bidan di desa during the postpartum visits. They were equally able to describe the components of each visit (physical exam, health education, and counseling) for both mother and newborn. Care of the cord stump was specifically mentioned by Bidan di desa and mothers.

The Bidan di desa stated a preference for the PPHV program over that defined by the Ministry of Health because they felt that the MOH postpartum visit schedule (first visit at 1-7 days, second visit 8-28 days after delivery) was inadequate. There was some uncertainty among the Bidan di desa about a third visit after 30 days in the MOH postpartum program. The Bidan di desa felt that the number of visits and timing of the PPHV program was the bare minimum. Most felt that daily visits were necessary until the cord stump fell off (about day 7-10). Also, some of the Bidan di desa expressed a preference for the PPHV program because the activities at each visit were well defined; again there was disagreement and uncertainty about the activities of the visits in the MOH program. The Bidan di desa felt that they felt more confident with the step by step defined activities in the PPHV program, and felt that their own self confidence made

the family more confident in them. Cultural practices (women going to her mother's home) and facility births prevented the Bidan di desa from making some of the visits.

Identification of maternal and newborn problems

Some of the Bidan di desa had not encountered maternal or neonatal complications during the postpartum visits. The Bidan di desa reported managing neonatal asphyxia by suctioning, warming the baby, and giving mouth to mouth resuscitation. If the baby did not respond, they encouraged the families to go to the nearest health facility. However, sometimes reluctance was encountered on the part of the family due to transportation problems and cultural beliefs (newborn should not leave house for 40 days because of evil spirits). None of the Bidan di desa had encountered maternal sepsis in their postpartum visits.

Breast feeding content

Both the Bidan di desa and postpartum mothers discussed the breast-feeding counseling provided. The Bidan di desa encouraged giving colostrum to the newborn, exclusive breast feeding, demand feeding, and avoidance of supplemental foods for the first four months of life. The Bidan di desa recognized the importance of also providing this counseling to the woman's parents, parents in law, traditional birth attendants, and other neighbors. Although all of the mothers seemed to understand the importance of colostrum, some mothers still discarded it. Management of engorged breasts and sore nipples was reported as content of the postpartum visits by both Bidan di desa and postpartum mothers. The mothers reported that the breast-feeding counseling was easy to understand and appreciated the breastfeeding visuals used in counseling. The Bidan di desa felt that the number of women with breast feeding problems was fewer.

Iron folate supplementation

The opinion about the prevalence of anemia was divided among the Bidan di desa. Some felt that anemia was not a problem any more while others felt that it was still a problem, although possibly decreasing. However, they all felt that provision of iron folate during pregnancy was helping to decrease anemia. All reported giving their postpartum mothers 40 iron folate tablets at first (first day) or second (day three) postpartum visits. Compliance was good and confirmed using the MotherCare iron tablet reminder card. Some of the Bidan di desa reported either offering women free iron folate or selling it to them. They said they could not tell by the women economic status which option they would take.

Vitamin A

The Bidan di desa reported providing vitamin A tablets postpartum, although they admitted that they did not provide much counseling about vitamin A.

Family planning

Both mothers and Bidan di desa reported providing information to the mothers about family planning. They said that the husband was usually not around at the time of their visit to discuss family planning. The Bidan di desa provided information about the advantages of family planning, the methods available and any common side effects. They felt that the counseling they provided assisted with the decision about family planning methods. Lactational amenorrhea as a

family planning method was not popular among the Bidan di desa because they felt it was complicated to use and had a high failure rate. The Bidan di desa were more likely to recommend IUD or implant. The mothers did report that exclusive breast-feeding could help prevent pregnancy.

Postpartum records

The postpartum records were clear and easy for the Bidan di desa to use. The Bidan di desa reported that Bidan di desa who had not received training, copied the form to use. They did suggest that the form be made bigger so recording information would be easier.

APPENDIX A- FOCUS GROUP GUIDES

The purpose of the evaluation is to assess, using qualitative methods:

- **Can the Bidan di desa implement this program as it is defined?**
- **Is the content and timing of each visit appropriate to meet the needs of the women and babies?**

Bidan di desa

- Do you think women and newborns need postpartum care? What do they need?
- Who should provide the care for them? Why is this person best?
- How many visits do they need to provide care? When should these visits be? Where should they be?
- In what ways do the postpartum visits as defined by MOH/DEPKUS provide this care?
- In what ways do the postpartum visits as defined by MotherCare/LSS training provide this care?
- What factors support or motivate you to visit women and newborns after delivery?
- What do you do to remind yourself to make these visits?
- Has making the postpartum visits changed your relationship with:
 - Women
 - Dukan (TBA)
 - Community/desa (village)
- How has your relationship changed?
- What postpartum care do you, as Bidan di desa, give?
- What postpartum care does dukan give?

Timing and content of visits

- Do you think the visits are scheduled at the right time? Why or why not?
 - within 6 hours
 - 3 days
 - 2 weeks
 - 6 weeks
- What and how would you change the timing?
- Do you think the content of each visit is correct?
- What and how would you change the content?

Identification of women/babies with complications

- Have you identified women or babies with complications during the visits? If so, what ones? What did you do?
- Have you seen mothers with sepsis? If so, how many and what did you do?
-

Counseling to support breast feeding and family planning

- What do you think is the most important advice you give to a mother and her family about breast-feeding?
- Do you think that your visits have:
 - Helped mothers to give or to give more colostrum?
 - Helped a mother when she felt that she did not have enough breast milk to breast-feed?
 - Helped a mother when she had sore nipples?
- Are more women exclusively breast-feeding?
- What else do you think Bidan di desa need to do to support breast feeding?
- What do you think is the most important advice you give to a mother and her husband about family planning?
- Do you think that your visits have:
 - Helped couples decide what they will use for family planning by 6 weeks?
 - Helped couples to understand what they need to do to use LAM as family planning method successfully?

Iron folate supplementation

- Do you think anemia is a problem among the postpartum women you visit?
- Do you recommend that they take iron tablets? How many per day and for how long? What other advice do you give?
- Do you think women take the iron tablets that you recommend? Why or why not?
- Is compliance better than during pregnancy? Why or why not?
- Do women get the message that taking iron is important? Why or why not?
- Are Bidan di desa distributing iron tablets?
- Do you think that women will buy iron tablets to take postpartum?
- What do you think is the most important advice you give to a mother and her husband about taking iron tablets?
- What problems have you seen that women have in taking iron pills postpartum that you could not answer or give advice about?

Vitamin A distribution

- Do you advise women to get vitamin A? From where?
- Are mothers who are counseled by you more likely to get postpartum vitamin A? Take it? Why or why not?

Postpartum records

- What do you think about the postpartum records?
- Are you using them? Why or why not?

Mothers

- Did the dukun (TBA) come visit you postpartum? How many times? When?
- Was the dukun at your delivery?
- What did the dukun do on the postpartum visits?
- What did you think of the visits?
- Did the Bidan di desa come to visit you postpartum?
- What did the Bidan di desa do on the postpartum visits?
- What did you think of the visits?
- Were the visits by the Bidan di desa too long or too short?
- Did the Bidan di desa do things that you did not like?
- What else would you have liked the Bidan di desa to do?
- Did you pay the Bidan di desa for these visits? How much? Did the Bidan di desa ask you to pay or did you pay voluntarily?
- Did you get any iron pills from the Bidan di desa? How many? Did you take them?
- Did you pay for the iron pills? How much?
- What did the Bidan di desa tell you about taking iron pills?
- Did you take vitamin A?
- Did the Bidan di desa talk about family planning? What did she say? Did you understand everything?
- Did the Bidan di desa talk about breast feeding? What did she say? Did you understand everything?
- Did you give your baby colostrum?
- Have you had any breast feeding problems? What did you do about them?
- What foods do you give your baby in addition to breast milk?
- Can breast feeding stop you from becoming pregnant? How? What do you need to do?