This chapter begins with an overview of general maternal health care service delivery issues including attention to particular questions outlined in the TOR. Early in this mission, the assessment team discovered that USAID had recently completed a detailed Maternal and Neonatal Health Review with recommendations made to both USAID and the Ministry of Health of Indonesia (August 1999). These two documents address many of the general questions in the TOR for the MH component of this mission. They are submitted along with this report for CIDA's reference. Key points pertaining to GOI maternal health policy, service delivery structure and function, decentralization and privatization will be touched on here but we will not deal with these issues in as much depth as was initially anticipated in light of the existence of this review.

After the general issues section of this chapter, we describe the theoretical framework of the evaluation of this component and discuss issues that are common to all three provinces. An overview of activities specific to each province is then presented and the adequacy and appropriateness of these activities is discussed. Recommendations for improving certain aspects of the overall project and of each province's specific initiatives are highlighted in the pertinent sections.

5.1 Maternal Health Care in Indonesia – General Issues

5.1.1 Maternal Health Care Statistics

Indonesia’s official national MMR in 1994 was 390 per 100,000 live births. The most reliable maternal health statistics for the country at the outset of this project, however, estimated that the national Maternal Mortality Ratio (MMR) could have been as high as 450 per 100,000 live births (ranging from 248 in Central Java to as high as 1,025 in Irian Jaya). The five most common direct causes of maternal death were hemorrhage 45.2%, hypertension 12.9%, abortion complications 11.1%, infection 9.6%, and obstructed labor 6.5%.

The Demographic and Health Survey of 1997 estimated that in the five years prior to the survey, four out of five births took place at home (the mother’s or the midwife’s home). The percentages of women who gave birth at home in the three project provinces were: 64.8% in South Sulawesi, 71.3% in East Java, and 77% in Central Java. The same survey found that in over 50% of cases, the TBA was still the first caregiver called to the birth while 43% of births were attended by a doctor or midwife. The 1997 DHS did not count deliveries attended by the BDD/Dukun team as being assisted by a trained provider unless the BDD was called first. The percentages of births attended by a trained professional in the three provinces were: South Sulawesi 43.3%, East Java 46.4%, and Central Java 38%.

23 Based on PMDF calculation using 1995 Household Health Survey Data (SKRT).
24 1995 SKRT
It was also estimated in 1997-98 that approximately 80% of District Hospitals had Obstetrician/Gynecologists on staff (and therefore, presumably could provide essential obstetric services including C-section and blood transfusion). Another DHS and the countrywide health survey SUSENAS will both be completed within the next year at which time the most up to date country data will become available.

5.1.2 GOI Maternal Health Policy

Until 1990, the Government of Indonesia’s main strategy to improve maternal health was to train traditional birth attendants (TBA/Dukun) in the ‘3Cs’ – clean hands, clean surface and clean scissors. This strategy, adopted by many countries in the past, has been proven to be unsuccessful. Thus far, no country has been able to achieve a substantial reduction in maternal mortality by relying on TBAs as the primary maternal health worker at the community level.

The GOI’s response to the Safe Motherhood Initiative’s challenge to decrease maternal mortality, therefore, was to adopt the strategy of placing a health professional in every village. The trained village midwife or Bidan di Desa was the focus of this World Bank-funded “Pop V” programme that began in 1990. This strategy was selected because midwives are considered to be the most strategic front line worker in the health services system, providing health services for mothers and babies including family planning services. It is recognized that a key ingredient of Safe Motherhood is ensuring that a qualified health professional is present during labor and delivery - the highest risk period for maternal mortality. In villages where facility based birthing is not feasible, the best approach is to ensure that a qualified midwife is present at all deliveries. At the same time, the GOI recommended developing the partnership between the Dukun and the Bidan di Desa (BDD) and planned to strengthen the skills of the Dukun. The goal of the second long-term development plan was to decrease the MMR to 225 by the year 2000 and to 80 by the year 2025.

The Integrated Reproductive Health (IRH) framework promoted at the 1994 Cairo conference was adapted for Indonesian use by the mid-1990s. Concerns were voiced by some MOH personnel and donors that including Safe Motherhood within the IRH would decrease the attention given to the importance of reduction of MMR. By 1997, the goal of deploying 54,000 Bidan di Desa was achieved. However, evaluations concluded that the quality of services being offered by the BDD were sub-standard. The 1997 Safe Motherhood strategy document identified three broad programme areas that needed strengthening: management, technical development, and IEC. It recommended strengthening the capability of district MCH programme managers, improving the technical development of BDD, and called for IEC activities to generate demand for maternal health services, emphasizing the need to measure the behaviour change brought about by IEC campaigns.

In late 1996, at approximately the same time as the Safe Motherhood review was taking place, President Soeharto launched the Nationwide Mother Friendly Movement (Gerakan Sayang Ibu, literally mother care movement). The GSI is defined as a ‘movement implemented by the community in collaboration with the government for the advancement and betterment of women’s quality of life, especially in accelerating maternal mortality reduction, for the sake of human resources development’. The leadership of this movement was given to the State Ministry for the Role of Women (now called the Ministry for the...
Empowerment of Women) under the mandate to collaborate with the Ministry of Health, the National Family Planning Board (BKKBN), and the Ministry of Home Affairs.

The Mother-Friendly Movement aims to reduce the MMR by promoting six complementary foundations: harmonious gender relationships; empowerment of women, pregnant women, families and communities; a quality family planning programme; accessible basic maternity care; community-based pregnancy enumeration and referral system; and available and accessible essential obstetric care. The intervention strategy was based on five basic principles: cross-sectoral and multi-disciplinary approach; integration and synergism in interventions; male participation and responsibility; continuous monitoring system; and effective coordination by local and regional government. The programme emphasized the role of the District and Provincial governments, specifically the Bupati as head of the district.

In 1997, with CIDA funding, UNICEF contributed to the development of guidelines and a national plan for the GSI and advocated at the national level for the launch of the program. UNICEF assisted the GOI in province-based mobilization for the movement. In Central Java, one UNICEF Safe Motherhood project district (Karanganyar) has also been a GSI pilot district since 1996. It is no surprise then that the CIDA-funded UNICEF Safe Motherhood programme and the GSI have many similarities. While the GSI boasts a number of innovative initiatives undertaken in the eight project pilot districts, the movement is far from becoming truly nationwide. Success in the pilot districts appears to have hinged on the support of the Ibu Bupati (the wife of the district head) and her ability to motivate PKK volunteers. Due to the economic crises, the GOI's priority shifted to the Social Safety Net scheme in 1998/99.

In 1998, the economic and political crises led the GOI to withdraw the foundations for Repelita VI and Basic Guidelines of State Policy (GBHN). In March 1999, under then-President Habibie, a new GOI vision and mission statement that emphasized health promotion and disease prevention programmes was developed called “Healthy Indonesia 2010”. By October 1999 a new administration and cabinet was inaugurated under President Abdurrahman Wahid and a new GBHN was approved. This document highlights two specific missions: to accelerate autonomy of the regions and support community empowerment. In the interim, however, without a Repelita-type plan in place and much uncertainty in the political arena, a number of donors confirm that BAPPENAS, the central planning office, is demoralized and lacks direction. GOI funding for health and education remain strikingly low, particularly in comparison with neighbouring countries with similar economic constraints. On a more positive note however, the President made a public commitment to increase spending on health and education during the visit of Carol Bellamy, Director of UNICEF. This being said, Indonesia continues to experience a difficult period of transition and uncertainty with initiatives to improve maternal health remaining at significant risk.

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26 The MOH’s portion of the National Routine Budget was 1.7% in FY 97/98 and of the National Development Budget was 4.7% in the same fiscal year, in comparison with an average of 8% of central government expenditure of neighbouring ASEAN countries.
27 As reported in Kompas newspaper during the week of February 7, 2000.
The other GOI policy that continues to have a huge impact on maternal health is the law making abortion illegal except when the mother's life is at risk\textsuperscript{28}. It is estimated that as much as 15 to 20\% of the MMR is attributable to abortion complications (WHO global estimates \textasciitilde 17\%). Reliable data on the total number of abortions performed in Indonesia is impossible to obtain because elective abortion is illegal. Data from clinics managing post-abortion complications suggest that there has been a significant increase in the number of patients seeking these services since 1997\textsuperscript{29}. The cause for this increase, whether due to increased need for post-abortion care services, better awareness of the availability of care, or better reporting is not clear.

5.1.2.1 Governmental Sectors Related to Safe Motherhood Initiatives

The concept that decreasing maternal morbidity and mortality requires a multi-sectoral approach aimed at influencing the proximate and distant determinants of maternal health has been incorporated into the Safe Motherhood Programme (SMP) of the GOI and its development partners. While this multi-faceted approach is reflected in the many Ministries, Departments, Directorates and Sub-Directorates with responsibilities related to this programme (see Figure 5-1), it also results in fragmentation of activities and poor coordination among the many players.

UNICEF made the significant effort in 1998 to bring all of its Safe Motherhood activities together into one "silo" (PA1) however, the GOI Safe Motherhood Programme within which UNICEF is committed to work, remains fragmented. One clear example of lack of coordination between Ministries to serve communities facing the three delays related to maternal mortality comes from the village of Bua in Sinjai. We visited this impoverished community situated on a river delta and interviewed its dedicated and intelligent village head woman. A road with direct link to the District Hospital (~ 20 minutes by road) lies less than 200 metres across the river. The locals had repeatedly requested that a bridge be built since road access from the Bua side of the river was a difficult journey of nearly 2 hours. They also had experienced repeated gaps in village midwifery service although there were midwives on the other side of the river who were supposed to "cover". This coverage was extremely sketchy and there had been no response from the MOH to repeated pleas for help.

The CIDA-UNICEF evaluation team agrees wholeheartedly with the opinion expressed by the USAID review team that "one of the greatest challenges for the Safe Motherhood programme (in) launching a focussed and directed approach to reducing mortality is that responsibilities and authority for different aspects of the programme are divided across various bodies within the MOH"\textsuperscript{30}. This opinion was echoed during our interviews with representatives of WHO, AusAID, the Family Health Directorate and the Community Participation Directorate. One of the recurring front page items in the Indonesian newspapers during the course of this mission was the urgent call for reform of the Civil Service.

\textsuperscript{28} Indonesian Health Law, UU no. 23/1992, clause #15.
\textsuperscript{29} Source: AVSC: three private providers/clinics, Palembang, South Sumatra.
\textsuperscript{30} Maternal and Neonatal Health Review and Recommendations for the Ministry of Health, Republic of Indonesia, August 1999, p. iv-v.
Figure 5-1: GOI Sectors Related to SMP
The USAID report goes on to point out a number of specific problems including the fact that "the administrative separation of hospital-based care from community-based care results in data being reported to multiple sources". This results in the decreased ability of district health officers to develop integrated plans and even to analyze the data in a meaningful way. Responsibilities are also segregated based on target group (e.g., one unit responsible for mothers and another for newborns) resulting in poor integration of neonatal care into the package of SM services. Even when useful packages of services, such as the MOH's package of Safe Motherhood and Neonatal Services are developed, there is no single body with the authority to ensure its application to all institutions.

These observations are not new; comments regarding the difficulties involved in working within the GOI SMP structure have been made repeatedly by UNICEF itself in its annual reports to CIDA and in its project documents. Anne Bernard's mid-term report commented on this as well. What seems to be missing is a plan for the development of mechanisms to increase intersectoral coordination beyond planning at the provincial and district levels. Recommendations have been made to establish an independent, inter-sectoral, inter-departmental national Safe Motherhood Task Force to establish overall programmatic direction and update strategies and policies. As we understand it, the SM Task Force would play a coordinating and planning role similar to the one that has been played by the BKKBN in regards to Family Planning. See Recommendation in Section 5.1.6

5.1.3 GOI Policy on Privatization
The evaluation team did not have the opportunity to discuss GOI policies on privatization with officials at the central level. The USAID Maternal and Neonatal Health review goes into some detail on this issue under discussion of financing health services. During our field visits we did have the opportunity to observe some of the effects of the GOI intention to privatize the Bidan di Desa. This effort has the greatest potential impact on the delivery of maternal health services and will be discussed in detail in section 5.2.2.2.

5.1.4 GOI Policy on Decentralization
The GOI recently passed two laws that could significantly affect service delivery, the Law on Local Governance (No. 22/99) and the Law on Budgetary Balance Between National and Local Government (No. 25/99). Law No. 22 states that the basic policy of decentralization is "to authorize local government to take care and manage the needs of the local community according to their own needs, ability and aspirations" within a unitary Republic of Indonesia. Law No. 25 states that the basic policy of budgetary balance is that "local government has authority over all resources available on a shared basis with the central government according to an agreed formula".

The team was able to review notes from a presentation on the principles of these two laws presented by the Ministry of Home Affairs, Operational Secretariat of MCSDP but did not have the opportunity to discuss the implications of these laws in detail with key officials at the central level. The January 2000 draft of the UNICEF-GOI document, "Challenges for a New Generation: The Situation of Children and

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Women in Indonesia, 2000", reviews the differences between the new laws on decentralization and the one it replaced (Law No. 5/1974)\textsuperscript{32}. In summary, the changes mean that the province now has a very limited role. It will mainly act as a deconcentration unit of the central government providing technical assistance to the districts as needed and having authority over inter-district and regional issues not implemented by districts or municipalities, e.g., security, foreign and monetary policy.

Under the new laws, districts are to be fully decentralized with the legislative body fully separated from the executive. The Bupati will be elected by and responsible to this legislative body which has authority to manage local government areas with the exception of those areas outlined above. The sub-district (kecamatan) is now subsumed under the district with the Camat (sub-district head) responsible to the Bupati. The village becomes fully autonomous, with the village head being elected directly by the people and responsible to the Village Welfare Committee whose members are also elected. The village head, or Kepala Desa, is to manage village resources based on an annual action plan drawn up by the Village Welfare Committee with the assistance of sub-district staff.

Discussions with UNICEF staff and other development partners (WHO, USAID, AusAID) emphasized the slow pace of decentralization efforts to date. All shared the concern that once decentralization begins to move more quickly, the districts will have neither the human resources necessary to carry out new duties nor the capacity required to take on the tasks of planning, implementing and establishing local legislation. There is realistic concern that newly elected Members of Parliament will be looking to gain popularity through support of high profile, physical projects demonstrating immediate benefit versus non-physical programmes in social sectors such as health and education expected to provide long-term benefit. Within the health sector, there is fear that with decentralization, the provincial government will have to drop some areas of technical support with a possible negative effect on public health programmes such as EPI and Safe Motherhood.

UNICEF is seen as a leader among development partners in working directly with district level GOI officials to build programme planning capacity as well as increasing their understanding of the need to maintain public health programmes that will yield long-term benefits for mothers and children. According to other donors, one of UNICEF’s strengths is the fact that they have worked with The Ministry of Home Affairs and BAPPEDA (district level planning) officials for many years; they are the “voice of experience” at the Technical Working Group on Decentralization.

UNICEF’s own experience in this area underscores the concerns voiced about the capacity of district and lower level officials to manage a decentralized integrated development programme. As stated in the lessons learned section of the UNICEF Country Strategy 2001-2005 document\textsuperscript{33}:

\textit{The quality of the GOI’s existing bottom-up planning process (PSD) was not raised by the UNICEF supported intervention with a parallel planning process focussed on children and women. Moreover, the UNICEF supported programmes for child survival


External Assessment of CIDA-Supported Safe Motherhood Programme Within the Cooperation of UNICEF and Government of Indonesia in 1995-2000

Agricola Canada Consulting Ltd. and Luc de Luna Internacional

April 2000
and development were viewed less as a social development strategy and more as a discrete project.

Clearly, more needs to be done to improve district, sub-district and village level governance capacity. The difficulties encountered in fostering a true bottom-up planning process, as discussed in Chapter 4, also do not bode well for the imminent success of decentralization. UNICEF recognizes these concerns and now plans to focus on improvement at the district, sub-district and village level to increase capacity to identify, plan and manage their own needs.

5.1.5 GOI Monitoring of Maternal Health Indicators

Some of the ways that the GOI tracks maternal health indicators include:

- a system for routine reporting of deaths of women of reproductive age followed by an investigation into the death within 48 hours;
- the Maternal and Perinatal Audit (AMP) system which is described in detail below;
- a national system to generate maternal health data by province through use of existing systems and surveys (e.g., hospital and health centre reporting);
- vital registration;
- PKK information system; and
- nationwide community surveys such as SKRT and SUSENAS.

Because so many births and deaths happen outside of the health care system, there is significant under-reporting of vital statistics. As most health offices have not yet made reporting activities a priority and are not giving the resources needed to make them effective, there is general mistrust of MOH statistics. While nationwide surveys are more reliable than the present reporting system, they are extremely expensive.

The UNICEF Safe Motherhood project relies upon the Local Area Monitoring for MCH Programme (MCH-LAM) for most of the data used to monitor the project. The Ministry of Health developed the MCH-LAM and introduced it to pilot areas a number of years ago. In collaboration with WHO in 1997, the MOH produced an explanatory booklet describing this programme in detail and launched a widespread training programme on the LAM system. This booklet is submitted to CIDA for their reference.

The MCH-LAM established a recording and reporting system based on a set of six forms to be completed by health personnel in both the public and private sector at the village, health centre, sub-district, district and provincial levels and submitted to the level above them for aggregation and analysis. These forms are:

1. Mothers Cohort Register: a list of the pregnant women cared for by a specific provider (e.g., BDD) or at a particular service delivery centre (e.g., Puskesmas) that is maintained over a period of years. The parameters recorded include the mother’s age, address, name of her husband, gestational age at first antenatal care (ANC) visit, risk factors noted and who (the health care
worker or a community member) first identified the risk factor, months when she attended for ANC, type of delivery assistant, outcome of the pregnancy (abortion, stillbirth, low-weight live birth or normal weight live birth, live mother or maternal death, cause of maternal death) and administration of vitamin after delivery. There is also a "remarks" column. In the case of the BDD, this data is reviewed each month and totals from this record as well as at least 18 different registers for other programmes (EPI, TB control, Family Planning, etc.) are copied by hand and sent on to the Puskesmas level.

2. Health Personnel Delivery Report (Delivery Summary): monthly list of the mothers who delivered sent from the health centre level up the chain to the province. The form includes data on parity, gestational age at delivery, number of ANC visits prior to delivery, whether a mother is referred to another health centre, the reason why and whether she died within 42 days of delivery. There are also columns for recording presenting position of the fetus during labor, type of delivery, sex and condition of the infant at birth and a place to record if it died within a week or a month (28 days) of birth.

3. Recapitulation of MCH-LAM report - three forms:
   - one for the sub-district health centre level to aggregate data from the monthly village level record (from the mothers cohort and delivery record lists) and send on to the district;
   - the second for the district to aggregate data from the sub-districts to send on to the province; and
   - one for the province to aggregate data from the districts and send on to the national level.

All three forms report on the same six key indicators: K1, K4, high risk detection by health professional and by the community, number of babies born ("neonates"), and PN (delivery by health personnel). Under each indicator are columns to tabulate the total number from the previous month, the present month, the absolute cumulative number for the year and the percentage of the "target" number of pregnant or delivering mothers or infants. (See sample form in Appendix M.)

Target numbers used on these forms are derived in one of three ways. The first is to use the actual figure based on census data (or from the actual numbers counted by the BDD and kaders at the village level). It was the evaluation team's experience that the actual number was rarely used at any level above the village and was never used at any level higher than the sub-district in the seven districts and ten sub-districts we visited.

The second derivation of the targets uses the formulae:

- Target # pregnant women = CBR (of the province or the district, if available) x 1.1 x total population.
The additional 10% added to the CBR (in multiplying by 1.1) presumably takes into account those pregnancies that do not end in a live birth (abortion, miscarriage, ectopic pregnancy).

- Target # deliveries/infants = CBR x 1.05 x total population.

We assume that the additional 5% includes an estimated 5% pregnancies lost before delivery and another 5% for stillbirths (therefore equaling the 10% extra in the previous formula).

The third estimate uses the formulae:

- Target # pregnant women = 2.7 (CBR for the country) x local population.
- Target # deliveries = 2.6 (CBR - pre-delivery losses) x local population.

4. The under 5 and preschoolers cohort register: this is the 6th form of the MCH-LAM system. It records name, DOB, sex, birth weight, name and address of parents, neonatal visits (1-7 days and 3-26 days), results of weighing from 0-36 months, administration of iron drops, vitamin A, iodine supplement, immunization record, date of first growth monitoring visit and a place to record deaths and cause of death.

There are multiple problems with this recording and reporting system that are outlined in the 1997 Maternal and Neonatal Health Review, most of which we confirmed in our discussions with other donors and field visits. There are technical problems with the calculations used to arrive at target numbers as described above (including the use of national CBR which is significantly different from some of the districts we visited) that do not bear detailed discussion here. The paper by Oona Campbell’s group noted below reviews the standards for these types of calculations. There are even larger problems with the validity of numbers that are measured against “targets”. Significant incentives associated with reaching targets exist for individual service providers and those who supervise them. Even though the target number may be unrealistic or unattainable (if based on incorrect assumptions in the calculations), the health care worker must strive to meet the target.

One donor agency representative suggested that adequate and accurate monitoring and evaluation is “too threatening” in the Indonesian cultural context. Succeeding in making the numbers look good ensures the support of colleagues and superiors both from the cultural point of view (i.e., you simply don’t give the boss “bad news”) and increases job security and chances for career advancement. We noted the existence of a number of target-achievement incentive programmes for BDD with rewards ranging from certificates and trophies to motorcycles and trips to Mecca. Success in “performing to target levels” is one criterion used in the competition for the few government BDD posts to be awarded once current three year contracts are completed. Rosalia Sciortino comments in her anthropological study of health centre nurses from the early 1990’s (revised in 1995):

34 MNH Review and report to USAID, pp. 14-15 and MNH review and Report to MOH-Indonesia, pp.51-52 and 93.
Although they complain about the incredible amount of paper work, the administrative workers always make sure that programme results registration is complete, nothing left blank, percentages never flagging. In one way or another, the administrators fill out the items on the special forms, juggling with figures as needed. As a result the figures do not always correspond with the actual situation.36

The question of how quality of services is affected by working to “meet the targets” rather than meeting the communities needs will be covered in our discussion of the role of the Bidan di Desa (Section 5.2.2.8).

Other major concerns include the fact that many donor projects have supported experiments to revise the data collection instruments along with this new reporting and recording system resulting in a multitude of “piloted forms”. This has created yet more problems in aggregating data in a meaningful way. The MCH-LAM has yet to be fully implemented across the country and the health staff responsible for compiling and analyzing the data that does reach the district and provincial levels are so overburdened that, as one donor put it, “they are running on the smell of an oily rag!” We noted that there was confusion about the precise definition of the terms on the MCH-LAM forms at all levels. Particularly troublesome was the category of “neonate” that was variously defined to include all babies born alive or dead, all babies born that month that were still alive at the end of the month, or all children under one year of age.

In our limited review, the data recorded in the UNICEF project villages appears to be reasonably accurate, particularly now that MCH statistics are double and triple-checked via the involvement of the PKK and Family Planning kaders in reporting on numbers of pregnant women, births and attendants present at birth in UNICEF project and GSI villages. There are no secrets regarding reproduction at the village level!

As maternal health data is collected, aggregated and passed up the information system chain, it is impossible to track differences at the individual village or even sub-district level. Once the district level is reached, data has been compiled by the name of the Puskesmas where the data from a number of villages has been aggregated, lumping together that health centre’s numbers with those from the villages it serves. Since the Puskesmas name often is not the same as the sub-district where it is located (there are often a number of Puskesmas per sub-district), it is even difficult to isolate data that come from UNICEF project sub-districts. In attempting to measure change related to UNICEF project activities at the village level, the use of aggregated MCH-LAM data from recapitulation forms gathered at the district level makes little sense unless all of the villages in a district are participating in the UNICEF project. As of the end of 1999, this is now the case in Central Java. According to our Semarang field office briefing, all villages in the ten project districts are now fully covered by the UNICEF project.

While this assessment was asked to review the problems with the GOI monitoring and evaluation system, it is beyond the scope of this report to recommend how the national system can be changed or improved. We do, however, make two specific recommendations regarding the use of the GOI monitoring system for monitoring the UNICEF-assisted Safe Motherhood Project.

**Recommendation #1:**
It is suggested that UNICEF-Indonesia add its support to a recommended multi-donor funded evaluation of the many recording and reporting pilot projects underway with a goal to making concrete recommendations to the GOI on how to standardize reporting and make the system more useful.

**Recommendation #2**
It is recommended that UNICEF establish an internal monitoring system to gather data on key MCH indicators from at least the project village level and the district hospital. Figure 5-2 on the following page discusses some of the considerations for developing such a system. This data would ideally be collected quarterly, entered into a FO database and analyzed and reported against project goals at least biannually within UNICEF (as previously suggested by Anne Bernard - recommendation #8) and annually to donors.

**Figure 5-2: Internal Monitoring System — Considerations**

Development of an internal monitoring system to collect data on a few key indicators from a sample of UNICEF project villages, and from the District Hospital would add significantly to UNICEF's ability to report on results. Potentially useful indicators are listed in Table 5-1. Suggested indicators from the village level are: K4, PN, KN and TT1, TT2.

Data gathered at the village level is submitted monthly to the *Puskesmas* that serves the project village, and is aggregated every three months for submission to the district level. In those project sub-districts and districts where not all villages are covered by the UNICEF project (South Sulawesi and East Java), village-specific data would need to be collected. Even in Central Java, where there are now ten full coverage districts, the vast majority of project villages are new. Focussing on a sample of "old" villages that have been part of the project since the beginning and a sample of newer villages would be helpful in showing change over time as well. Village-specific maternal health statistics should be available at the *Puskesmas* before these individual records are aggregated for the LAM-MCH recapitulation form. UNICEF Field Officers would therefore need to develop a system whereby the set of village-specific records for the sample of villages could be transferred to the FO each quarter. If ALL of the UNICEF villages in the provinces of South Sulawesi and East Java and ALL of the full coverage districts in Central Java were monitored the number of collection sites (calculated from the latest lists of project villages supplied to the evaluation team from each provincial field office) would be:

- **South Sulawesi** — 144 villages via approx. 22 *Puskesmas* (12 original villages) and 9 DH
- **East Java** — 370 villages via approx. 115 *Puskesmas* (12 original villages) and 8 DH
- **Central Java** — 10 full coverage districts (126 villages in 1998) and 12 DH

The estimated volume of data to be collected if a subset of these sample villages (e.g., 12 original and 12 new villages from South Sulawesi and East Java and 25 original and 25 new villages from Central Java) were monitored each quarter would be:
the number of project villages from 24 to 50 (gathered from an average of about 10 *Puskesmas* per province);
- multiplied by 3 months, means reviewing 30 sets of *Puskesmas* records;
- multiplied by 5 indicators per village, equals a total of 360 to 750 numbers submitted for input into the FO database each quarter.

In terms of time required for data input each quarter, the maximum calculated number of inputs could be entered in less than half a day. If this data entry was contracted out to an experienced computing service company, it would mean paying for less than one day of computing time per quarter plus the initial investment in designing and setting up a simple database. A set of graphs on changes over time by indicator and by district could then be easily generated.

Data analysis, for UNICEF purposes, would then be up to the Field Officers with technical assistance from the MCH Officer at NATIONAL OFFICE. Presentation and discussion of this data and its meaning could periodically be added to the agendas of the multi-level PA1/MCSDP planning meetings. It could provide a valuable comparison and reality check with data aggregated at the district level and feed back into the process of reviewing the success of interventions at the village level.

A significant problem would be how to ensure accurate transfer of data from the *Puskesmas* to the Field Office without creating yet another tedious record transcription process for health staff at the *Puskesmas* level. We would not suggest adding yet another reporting form (or mail-in questionnaire, as presently being considered in East Java) to the duties of GOI Health Workers duties. If a field officer was unable to collect this data during quarterly field visits, another possible solution would be to contract an NGO or university from each province to travel to the sub-districts to gather this information (i.e., visit 10 *Puskesmas*) each quarter. The initial investment in training NGO staff on the collection, entry and transfer of data (using laptop computers, for instance) would benefit not only the present project, but also build the capacity of fledgling NGOs to work more effectively in many kinds of projects.

Suggested indicators to be monitored from the District Hospitals serving project villages are: the number of cases referred from project villages, percentage of complicated pregnancies receiving care at the DH, percentage of total deliveries at DH that are C-section, and CFR for obstetric complications. Given that the total number of births at the district hospitals we visited was in the order of only hundreds per year, at present this data could easily be collected twice a year during regular district level MCSDP team meetings. This data would take little time to be entered into the provincial database. Besides feeding into the UNICEF-GOI and the DH planning processes, the analysis of this data could also be usefully discussed at district level AMP meetings.

### 5.1.6 Donors' Roles in Maternal Health Care Service Delivery

For a summary of the major donor-supported reproductive health projects by province and intervention area, see the MNH Review and Recommendations to the GOI, Appendix N presents this information in a tabular format. The mechanism for GOI-Donor coordination of this bewildering array of projects and programmes has been the GOI and Donor Agencies Coordination Meetings on Safe Motherhood Initiative. These donor coordination meetings, sponsored by the MOH and supported by WHO, began in 1994 and are meant to happen quarterly. This mechanism has not proven to be very effective and, in reality, very little donor coordination has been achieved.

In the mid-1990's, a number of donors including CIDA were considering a phase-out of development support to Indonesia. The country's status as a middle-income country and its economic outlook as one of the "Asian Tigers" suggested that the country would soon need little outside assistance to achieve its...
development goals. One major SMP donor, USAID, had begun a phase-out plan to withdraw from Indonesia by 1999. However, the monetary crisis and a fear that all of the hard-won gains could be lost resulted in the agency scaling up to a USD $70 million four year project including $20 million for maternal and neonatal health activities. USAID partners on this project include JHPIEGO, PATH and JHCCP. In our discussions with representatives from JHPIEGO, we were impressed at the number of projects planned that should help to integrate the approaches of various donors to the SMP. These plans include an initiative to review and rationalize all of the various IEC materials that have been produced for the programme; support for the completion of a National Reference Document on the standards pertaining to all GOI-health programmes; and support to technical working groups that will review and standardize multiple current maternal health-related “standards” that have been developed over time by WHO, POGI, UNFPA and others. This project also plans to work with professional organizations and teaching institutions on performance improvement of health care providers.

Recommendation #3:
UNICEF-Indonesia should remain an active member of the donor coordination group and Safe Motherhood Task Force, taking advantage of the opportunities to collaborate and harmonize project activities with other donors when possible. UNICEF may be particularly interested in following the JHPIEGO efforts regarding SMP-related IEC materials in its efforts to find materials appropriate to its project areas.

5.1.7 GOI Maternal Health Care Service Delivery System
The district level and below is where most maternal health care services are delivered. Referrals may be made to tertiary level care centres at the provincial level (such as a university or armed forces hospital) for extremely complicated problems but this is rare. Within the district, the main service providers in terms of numbers of women served are the Bidan di Desa, Dukun and Posyandu volunteers. The next level of services includes the staff related to the Puskesmas or sub-district health centre, generally a senior Bidan and a GP. The District Hospital and its medical staff including hospital-based Bidans and specialist physicians (Ob/Gyn, Pediatrician, Anesthetist) is the end of the referral chain. Issues regarding the roles of each service provider and institution in this system and how they work together are discussed in more detail in Section 5.2.2 below.

5.2 Evaluation of Maternal Health Component

5.2.1 Theoretical Framework
The goals and objectives of the MH Component have been reviewed in Chapter 1. The key elements of the project design, as outlined in the Contribution Agreement are listed here:

- **Key Elements**: Work with the Health Services delivery structure to increase availability and improve the quality of ANC, safe delivery and post-partum services; local government service delivery infrastructures become aware of and responsive to area-specific barriers, both physical and non-physical.
Prerequisite: Community mobilization to be started only in project areas having hospitals adequately equipped for dealing with emergency obstetric complications (within 1st year of project); these facilities to exist within two hours of travel from village by normal means or transportation available locally.

Methods: Technical capacity building of service providers through limited training – Life Saving Skills training for Bidan di Desa and orientation of hospital and Puskesmas staff to the same training; technical skill and facilities improvements at the hospital level to be taken care of by GOI or other donor funds; “integration of relevant health and nutritional services for each point of contact with pregnant, laboring and post-partum women will be attempted”.

Specific Requirements: Programme monitoring to be accomplished through the LAM (local area monitoring) mechanism and improving performance of community midwives through technical monitoring and supervision.

The general approach to the evaluation has been discussed in Chapter 2. The theoretical framework for the evaluation specific to the MH component is based upon a modified version of the Three Circles Model of Safe Motherhood Systems as described in the Safe Motherhood Asia Workshop report. As illustrated on the next page (Figure 5-3), this framework defines the members of each component of the Safe Motherhood system in the Indonesian context. This modification of the original model adds a circle within the third circle to show the potential intersection between the sub-district health centre or Puskesmas, the community and the District Hospital. As will be discussed further below, the Puskesmas is one of the weakest links in the referral chain and is generally bypassed. This model also attempts to portray the fact that actors often belong to one or more components. For example, volunteer health workers (kader) are community members, can act as a critical link between the community and community-level agents such as the BDD or nurse, and at times provide basic health services such as growth monitoring and referral to higher level health services. The critical conditions perceived to be necessary to bring the circles together or “bridge the gaps” are presented below the intersecting circles.

The MH review team (MM and AS) have reviewed the activities of the Maternal Health Component of this project to see how well they have been able to bring the last two circles together and address the conditions outlined in the four columns on the right side of the table. Key references regarding lessons learned from the last ten years of the global Safe Motherhood Initiative were also used to evaluate the assumptions made within this project component and are noted throughout the text.

5.2.2 Issues Common to All Three Project Provinces
The issues within the MH Component that are common to all three of the project provinces will be discussed starting at the Central Level (national, provincial and/or district) and then moving down to the village level. The Contribution Agreement between CIDA and UNICEF was signed in late 1995 and

most of 1996 was spent in recruiting and hiring field office and headquarters staff and doing preparatory work at the provincial level. Most field-level activities were really only able to begin in earnest in 1997.

Figure 5-3: Theoretical Framework for Evaluation of MH Component

The Three Circles Model

<table>
<thead>
<tr>
<th>Conditions Necessary to Bring Circles Together</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Community</strong></td>
</tr>
<tr>
<td>Posyandu</td>
</tr>
<tr>
<td>Address barriers: physical, social, cultural, $, and quality</td>
</tr>
<tr>
<td>Adequately train kader (volunteers)</td>
</tr>
<tr>
<td>Commitment of local government</td>
</tr>
<tr>
<td>Motivate kader to hold regular posyandu</td>
</tr>
<tr>
<td>Community actively participates in planning</td>
</tr>
<tr>
<td>Provide services that women find useful</td>
</tr>
<tr>
<td>Essential Obstetric Services</td>
</tr>
<tr>
<td><strong>Posyandu</strong></td>
</tr>
<tr>
<td>Adequately train kader (volunteers)</td>
</tr>
<tr>
<td>Means to include Dukun</td>
</tr>
<tr>
<td>BDD and kader communicate when to seek assistance</td>
</tr>
<tr>
<td>Basic OBS services available 24 hrs</td>
</tr>
<tr>
<td>Care provided during transfer to DH</td>
</tr>
<tr>
<td>Services of good quality</td>
</tr>
<tr>
<td><strong>Village Level Health Services</strong></td>
</tr>
<tr>
<td>Adequate program for training, deployment, and support for BDD</td>
</tr>
<tr>
<td>Means to include Dukun</td>
</tr>
<tr>
<td>BDD in-service training and maintenance of skills</td>
</tr>
<tr>
<td>Means of communication with DH</td>
</tr>
<tr>
<td>Mother and Baby-Friendly</td>
</tr>
<tr>
<td><strong>Village Agents Link to Service Del. Centres</strong></td>
</tr>
<tr>
<td>Adequate provision of drugs and supplies</td>
</tr>
<tr>
<td>Supervision and support - monitor quality of services BDD &amp; Dukun</td>
</tr>
<tr>
<td>Means of communication with DH</td>
</tr>
<tr>
<td>AMP provides better mgt. link with agents</td>
</tr>
<tr>
<td><strong>Puskesmas</strong></td>
</tr>
<tr>
<td>Adequate provision of drugs and supplies</td>
</tr>
<tr>
<td>Care provided during transfer to DH</td>
</tr>
<tr>
<td>Services of good quality</td>
</tr>
<tr>
<td><strong>Essential Obstetric Services</strong></td>
</tr>
<tr>
<td>LEDs</td>
</tr>
<tr>
<td>DH MDs</td>
</tr>
<tr>
<td>GP Pus</td>
</tr>
<tr>
<td>Sub-Dist. Gov't</td>
</tr>
<tr>
<td>District Gov't</td>
</tr>
<tr>
<td><strong>Dukun</strong></td>
</tr>
<tr>
<td>Effective communication skills BDD and kader</td>
</tr>
<tr>
<td>Dukun-Friendly Puskesmas and DH</td>
</tr>
<tr>
<td>Means of communication with service delivery centres</td>
</tr>
<tr>
<td><strong>Kader</strong></td>
</tr>
<tr>
<td>BDD and kader communicate when to seek assistance</td>
</tr>
<tr>
<td>Means of communication with service delivery centres</td>
</tr>
</tbody>
</table>
5.2.2.1 Institutional Capacity Building

At the Central Level, UNICEF has actively promoted institutional capacity building through facilitation of inter-sectoral planning meetings at the national level (country-wide situation analyses and country-programme planning), provincial and district level (BAPPEDA I and II planning and MCSDP/KHPPIA/PA1 support team), sub-district (support team), and village level (support team). The assessment team attended information meetings at all of these levels during the mission and was able to confirm that these inter-sectoral meetings are happening regularly - usually monthly, and at times, more often at the provincial and district levels. One positive short-term outcome of these meetings has been the establishment of excellent communication at the professional-to-professional level both within the various government teams and between UNICEF field officers and GOI officials. We witnessed collegial and collaborative relationships within the GOI teams and particularly between key team members (BAPPEDA Chief, District Medical Officer-MCH and head of the local PKK) and UNICEF field officers.

While the various sector representatives sit together, it is unclear how well planning is integrated or can be integrated given that there is a different source of funds for each sector and funding is not guaranteed from year to year. The MCSDP/KHPPIA inter-sectoral planning meetings exist in parallel to a similar process for planning of other GOI programmes. Establishing this separate process may have been necessary to ensure adequate attention to UNICEF-assisted programmes, but it adds to the already cumbersome bureaucracy of the GOI system. There also exists some confusion as to the fit of other activities and initiatives that are related to maternal health but which are outside of the UNICEF “PA 1 package”. For example, at the provincial and district levels the GOI team addressing MCSDP issues (Tim KHPPIA) and that related to the Mother-Friendly Movement (Tim GSI) are separate groups with variable degrees of overlapping membership and little collaboration. The decision made by the UNICEF South Sulawesi field office and BAPPEDA I to primarily use GSI terminology and link the two sets of activities has meant a higher profile for MCSDP issues and seems to have increased understanding of the goals of UNICEF-assisted activities, particularly at the village level. Village-level meetings to discuss problems and plan for activities to improve maternal health were planned to take place monthly but actually occurred once or twice a year at most.

We consistently asked GOI and community partners at every level to name the “Danger Signs of Pregnancy”. As noted in section 5.1.2, while understanding was good at the provincial level, it was generally poor at the district level and below. This finding may be partly due to the fact that many of the GOI counterparts that were trained or “socialized” in the 1st years of programme have been replaced within the last two years. However, given the ongoing intense level of UNICEF effort, the lack of understanding of basic Safe Motherhood messages is disappointing.

The effects of these meetings on maternal health service delivery, and ultimately on maternal morbidity and mortality, are difficult to quantify apart from recording the number of meetings that have occurred. One measurable process indicator is the production of the annual PIA (Paket Informasi Area), the document outlining the approved MCSDP/PA1-related activities planned for each district and the amount of money allocated for each activity from various budgets (provincial, district and UNICEF). The on-time production of this document should reflect effective inter-sectoral cooperation for planning.
integrated MCSDP-related activities, while the ratio of GOI to UNICEF funding would be an indication of the success of the UNICEF programme in leveraging funds from the GOI budget for these activities. Neither the successful, on-time completion of this document, nor evidence for the leveraging of increasing amounts of GOI funds for MCSDP activities has been regularly reported for all three provinces. The May 1998 Progress Report from UNICEF to CIDA does present a graph from East Java: Allocation of Funds in 1996/97 and 1997/98, GOI vs. UNICEF. This graph shows a nearly two-fold increase in the amount of allocations to MCSDP activities on the part of the GOI in comparison with a stable contribution from UNICEF that equalled approximately a quarter of the total in 96/97 and a fifth of the total in 97/98. This is the kind of reporting that would be very helpful to show results. There is no reporting of this kind for the other provinces in the 1998 report; there is no reporting of this kind in the 1999 report either. The 1998 report does mention that in Central Java the PKK allocated some of its own funds to support Tabulin programmes.

UNICEF field officers and BAPPEDA officials told us that the production of the PIA was a time and energy-intensive process that has rarely resulted in the document being finalized by the deadline. The PUA/PIA approach, originally meant to be a “bottom-up” planning process is, in reality, more “top-down”. The PUA part of the process (in essence, the request for funding for specific activities from the lower levels) has been abandoned. The PIA now is based upon guidelines for activities approved from above. The reality is that with resources and power still residing at the higher levels, a “bottom-up” process just does not work. In some cases, the PIA documents that we were able to review showed little to no GOI funding of MCSDP activities. GOI officials gave us a number of different answers when we asked why this was so:

1. there was significant GOI funding but it was not shown in the PIA because the GOI fiscal year is different from that of UNICEF (FY for GOI ends March 31, UNICEF uses a calendar year with December 31st year end);
2. that due to the financial crisis there is currently very little GOI funding and if UNICEF funding ended, so would many of the activities; or
3. they simply did not know how much GOI funding was allocated to these activities because the funds come from the budgets of a number of different ministries or departments.

UNICEF Field Officers also had difficulty in tracking UNICEF vs. GOI contributions to SMI activities. The Financial Officer for the South Sulawesi FO was able to provide us with a breakdown of the percentage of the total UNICEF budget for the province that went to fund SMI activities each year, but not how this dollar figure compared to the GOI contribution to the same activities.

39 The 1998 Third Progress report to CIDA under section 3.2.3: Leveraged Provincial Funds reads: “Early 1998, the provincial PKK authorized the allocation of Rp. 181 million from their provincial budget to support the Tabulin programme in other non-covered districts...”. In a later clarification, UNICEF staff told us that the “PKK did expand the Tabulin to 14 villages more in 7 additional districts, amounting to Rp.89 million which they funded with their own budget (APBD).”
**Recommendation #4:**

In order to monitor the effectiveness of the efforts to improve planning and funding of SMI/MCSDP activities at the district level, two process indicators that UNICEF could report on are the 'on-time production of the PIA' and the figures on UNICEF vs. GOI contribution to these activities. Given the difference in fiscal years, this reporting might have to be retrospective but UNICEF and GOI financial figures should report on the same time period.

### 5.2.2.2 The Social Safety Net Factor

The economic crisis of late 1997 created demand for a social safety net to protect the millions of newly poor in the country. With support in the form of loans primarily from the Asian Development Bank (ADB) and the International Monetary Fund (IMF), the GOI introduced a Social Safety Net (SSN) programme in mid-1998. Overall coordination is managed by an independent steering committee established by the President and affiliated with BAPPENAS. Even now, 18 months into the programme, its structure and timelines are still not clear. While it was originally meant to end in March 2000, most officials and donors with whom we spoke felt that it would be extended to at least December 2000. What is clear is that the funds for the 1998/99 fiscal year of this wide-ranging programme totalled approximately USD $20 billion. The SSN is managed such that funds are disbursed quickly and are meant to reach the poorest and most vulnerable groups through food security; job creation and sustainable income generation; access to public health and education services; and support for small and medium-size enterprise development.

The controversies associated with defining who qualifies for an SSN card (and therefore, free services) and how the institution of this program has affected the various UNICEF-supported community savings and loans schemes has already been discussed in Chapter 3. So far as the Maternal Health component of this project is concerned, the SSN could be expected to have a confounding effect on attempts to show change in maternal health indicators as a result of UNICEF programming. We saw clear evidence during our field visits that the introduction of the SSN has meant increased use of BDD services for ANC and attendance at delivery in most project villages (averaging more than 50% increase in most cases). This finding was confirmed as being generally the case nationwide during our meeting with representatives from the Indonesian Midwives Association (IBI).

Part of the Social Safety Net funds allocated to district hospitals are to be used to cover the cost of care for poor women suffering pregnancy complications. According to informants at two district hospitals (Lamongan and Muntilan), one effect of the SSN has been an increased demand for district hospitals to provide free services for general medical and gynecological problems including non-emergency conditions. Government SSN grants to the district hospital, meant to cover urgent and emergent care for the poor were insufficient to cover the demand for services in the first year of the programme (funds were depleted half way through the year). This prompted UNICEF to supply block grant funds to a number of district hospitals in each project province to cover part of this shortfall. The UNICEF funds are earmarked for the treatment of obstetrical complications for women who have a SSN card or other proof of inability to pay such as a letter from a village leader. The Rp. 12 million allocated to each district
hospital would be sufficient to cover the costs associated with a C-section or other complicated delivery for about 15 to 20 women per year.

At Lamongan hospital, the use of this fund has been much less than anticipated with only one woman’s care being covered by the fund in the first six months of the hospital’s 99/00 fiscal year. This lack of utilization of the fund (and presumably, district hospital services) is somewhat surprising given the factor of the SSN coverage. Although unlikely, it could be explained by the chance occurrence of fewer than expected pregnancy complications requiring referral of poor women in that six-month period. This finding adds another piece to the confusing puzzle presented by studies on utilization patterns since the crisis. Three studies, the Indonesian Family Life Survey, the RRSS (Remaja Reproduksi Sejahtera Survei) and the 100 Kecematan study done by the Bureau of Statistics (BPS), seem to show that clients are dropping out of the public sector due to a lack of confidence in the quality of care, and are waiting until they can afford private sector care. However, this analysis also seems to reflect a shift from private to public-sector care providers and from formal (MD, Bidan) to informal (traditional healers, Dukun) public sector providers.

It would be interesting to have UNICEF report on the use of the “safety net to the Social Safety Net” funds allocated to district hospitals to track utilization, who is accessing these funds, and for what services. The existence of these funds may prove to be critically important to improving access to EOC services but this is far from certain given the other loan and insurance schemes that are present in many areas and the question of whether even poorer women are preferentially choosing private services.

5.2.2.3 Monitoring and Evaluation – Reporting for Results
The problems with the GOI maternal health statistical monitoring system have been discussed in detail in Section 5.1.7. Common to all three project provinces is UNICEF’s reliance on GOI local area monitoring for reporting on results. We found little to no recent spot-checking of data done by UNICEF field officers. However, at the village, sub-district and district levels, UNICEF does fund some “supervision” and “monitoring and evaluation” activities to be carried out by health staff. These are usually visits by supervisors to review record books to be sure that the numbers are being recorded regularly and are being passed up to the next level. We found little evidence of attempts on the part of these supervisors to validate or check on the reliability of the data.

Within the first two years of the project, it became evident that there were only a few maternal health indicators that were reported with reasonable reliability to the district and provincial levels:

- K4 – the proportion of pregnant women who had four prenatal visits;
- PN – the proportion of pregnant women attended by a trained caregiver at the time of giving birth; and
- KN – the proportion of new mothers who had received two post-natal visits within a month of giving birth.

These indicators then became the focus of UNICEF review and reporting. It has been previously thought that women who go for regular ANC have better pregnancy outcomes. Reporting on K4 is a reasonable
way to measure medical service use/coverage; however, the assumption that women who have regular antenatal care (e.g., at least four visits) will have a better pregnancy outcome has been challenged\(^{40}\). In addition, antenatal high-risk screening has not been shown to be able to accurately predict or prevent life-threatening complications\(^{41}\). While a small number of pregnant women who clearly need referral for obstetric care prior to the onset of labor can be identified by a well-trained BDD (e.g., twins, severe anemia, pregnancy-induced hypertension), the vast majority of women who suffer significant pregnancy-related complications will not be “high-risk” and will not be identified during prenatal care.

There is also the concern that an emphasis on the importance of going for antenatal care will lead to a false sense of security for the pregnant woman and her family should nothing worrisome about her pregnancy be discovered at the ANC visits. We repeatedly heard this misperception expressed by village men and women during our interviews. Many stated that the main message of the SMI activities in their area was that they should “go for ANC” and that now that they had access to local ANC services (through the BDD and Posyandu), they “no longer had to worry” about pregnancy-related problems.

In a 1998 presentation on the Safe Motherhood Villages project in South Sulawesi, that field office outlined some of the key assumptions behind the use of the PN (percentage deliveries assisted by a trained health staff) indicator as a reflection of improved maternal health:

1. If a woman has a pregnancy complication, the chances that she will survive are higher if a bidan and dukun assist the delivery together.
2. PN is a key indicator of care at the village level; discussion about PN at the village level as a community entry point is both positive and preventative.
3. If PN increases, the number of maternal deaths decreases.
4. Increasing PN, and thereby improving “care” of mothers requires a consistent effort to involve families in a process of assessing the local factors that discourage care and identifying actions needed.
5. Local actions must be supported by a spirit of greater professionalism among service providers and a higher quality of maternal health services.

It is useful to have these assumptions stated clearly. Reviews of Safe Motherhood programmes from around the world agree that PN is also a useful indicator to measure service use/coverage\(^{42}\). The ANC visit can be an important opportunity to offer emotional and physical support to the mother-to-be when she may be feeling particularly vulnerable and is also a time to educate the pregnant woman and her family about birth preparedness and general health issues.


\(^{42}\) Campbell, et. al. Lessons Learnt: a decade of measuring the impact of safe motherhood programmes. DFID Research Work Programme on Population, Reproductive Health, Maternal and Child Epidemiology Unit, London School of Hygiene and Tropical Medicine, August 1997.
The GOI and UNICEF count a birth attended by the Bidan di Desa, no matter how late in the process, as a "PN" birth. We were told in most areas that a birth was recorded as PN even if the BDD was only present to cut the umbilical cord and that cutting the cord was sometimes significantly delayed while the Dukun waited for the BDD's arrival. Improving accessibility and utilization of services are important steps on the "pathway to survival". It is important, however, to ensure that these services are of reasonably good quality. Given the concerns discussed below regarding the training and performance of the BDD, it cannot be assumed that, if necessary, effective EOC could always be delivered even when a BDD has been the primary birth attendant. Therefore, the critical factor becomes assumption #5, that the services provided locally (by the BDD) and at the referral centers is of sufficiently good quality that maternal morbidity and mortality can be decreased. Attempts to evaluate service quality in this project have been limited. This is not surprising given that assessing quality of care is very difficult to do. As will be discussed in Section 5.2.2.8, approaches to investigating the quality of midwifery services are presently being developed by IBI in collaboration with other donors. UNICEF may wish to consider offering some of its project sites as pilot testing areas for these tools. The MCH Officer will certainly be aware of the outcome of these pilot studies and will be in the position to suggest those that would be expected to be the most useful to measure quality of care and competence of caregivers in the UNICEF project context.

Finally, reporting on KN (two visits from a trained health care worker within the first month after giving birth) is also a reasonable measure of health care service use/coverage. The expected effect of timely, good quality post-partum care should be prompt identification of post-partum bleeding, infection, other birth complications, depression and breast-feeding problems for the mother. Early identification of babies with risk factors such as low birth weight, prematurity and birth trauma as well as those with infection, feeding problems, jaundice and birth defects should result from these visits. At the present time, KN visits focus almost exclusively on the baby. These visits are actually called "neonatal health care visits". The fact that little attention is paid to the new mother was confirmed in our discussions with these women and with the Bidan di Desa about what a KN visit entails. Given that hemorrhage (particularly post-partum hemorrhage) and infection are two of the commonest causes of maternal death in the country, it is critical that the focus of this visit shifts to include proper assessment of the new mother as well.

In summary, reporting of K4, PN, and KN are useful indicators of accessible maternal health services and are good process indicators for a programme like this one that includes increased access to services as one of its goals. They are not helpful, however, as reflections of improved maternal health. Given that this is what the UNICEF-GOI Safe Motherhood project wants to measure, what are the kinds of indicators or proxy indicators that may be more useful? Table 5-1 lists outcome and process indicators for monitoring maternal health goals as suggested by a number of major agencies involved in Safe Motherhood programmes globally. We have added Early Neonatal Mortality Rate (number of newborns dying within the first week of life/1000 live births) as a proxy indicator for maternal health outcome in Indonesia. According to the 1997 DHS, neonatal mortality (within 1 month of birth) has declined less rapidly than the post-neonatal mortality (after 1 month but within the 1st year) and child mortality (between 1 year and age five) in the last decade. The neonatal mortality rate declined 23% between the time periods from 1982-1987 and 1992-1997 while the post-natal mortality rate went down by 35% and the child mortality

\[ \text{See page A-5 in the Contribution Agreement.} \]
rate declined by 58% during these same time periods. According to the latest DHS, among neonatal deaths, mortality is highest in the first week of life with 71.3% occurring in the first 6 days. The primary causes of neonatal mortality are birth asphyxia, infection and hypothermia, all of which are closely linked to obstetric complications, maternal morbidity and maternal death. While obtaining an accurate count of neonatal deaths on the national level is affected by the lack of a reliable vital registration system, at the village level few of these deaths should be missed. Therefore, Early NMR may be a reasonable proxy for common maternal morbidities as well as much rarer maternal mortality.

Some of these indicators (besides K4 and PN) are routinely being recorded at the village level (TT1 and 2, neonatal mortality) and could be gathered from that level and examined for UNICEF Project villages. Examples of potentially valuable information (calculated from data gathered during field visits) gained from the use of some of the other indicators in Table 5-1 are shown in Section 5.3.

Table 5-1: Outcome and Process Indicators for Monitoring Maternal Health Goals*

<table>
<thead>
<tr>
<th>HEALTH OUTCOME</th>
<th>Addresses Question? / Minimum Acceptable Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maternal mortality ratio (MMR) and/or rate (only useful as a measure of change over long periods of time and in large populations)</td>
<td></td>
</tr>
<tr>
<td>Case fatality rate (CFR) - all complications</td>
<td></td>
</tr>
<tr>
<td>Proxy Indicators for Maternal Health Outcome</td>
<td></td>
</tr>
<tr>
<td>Neonatal mortality rate - early (within 7 days of birth)</td>
<td></td>
</tr>
<tr>
<td>Process Indicators (Indonesian Abbreviation)</td>
<td></td>
</tr>
<tr>
<td>Proportion of pregnant women with prenatal care by trained personnel (K1, K4 )</td>
<td>Are enough women accessing medical care?</td>
</tr>
<tr>
<td>Proportion of pregnant women with tetanus toxoid immunization (TT1+TT2)</td>
<td>Are enough women accessing medical care?</td>
</tr>
<tr>
<td>Proportion of births attended by trained health personnel (PN)</td>
<td>Are enough women accessing medical care?</td>
</tr>
<tr>
<td>Percentage of adults knowledgeable about pregnancy complications</td>
<td>Are enough adults knowledgeable about potential complications and ready to take appropriate action?</td>
</tr>
<tr>
<td>Number of EOC facilities per 500,000 population</td>
<td>Are there enough EOC facilities? At least 4 basic EOC and 1 Comprehensive EOC facility for every 500,000 pop, (N.B. Indonesia already meets this standard)</td>
</tr>
<tr>
<td>Percentage of district hospitals with C-section and blood transfusion facilities</td>
<td></td>
</tr>
<tr>
<td>Percentage of health facilities with basic obstetric care</td>
<td></td>
</tr>
<tr>
<td>Percentage of population within 1 hour travel time of EOC</td>
<td>How well are EOC facilities distributed?</td>
</tr>
<tr>
<td>Proportion of expected complicated cases managed at EOC (Essential Obstetric Care) facilities (met need for EOC)</td>
<td>Are the right women using EOC facilities? 100% of women estimated to have life-threatening obstetric complications are treated at EOC facilities.</td>
</tr>
<tr>
<td>C-sections as proportion of all births in the population</td>
<td>Are sufficient quantities of services being provided? C-sections account for not less than 5% and not more than 15% of all births.</td>
</tr>
<tr>
<td>Admission-to-treatment time interval at health facilities</td>
<td>Is the quality of services adequate?</td>
</tr>
</tbody>
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* adapted from:
5.2.2.4 The Maternal-Perinatal Audit (AMP) Process

Medical and non-medical reviews or audits of maternal and perinatal deaths and "near-misses" (a severe life-threatening complication necessitating an urgent medical intervention in order to prevent the likely death of the mother) can be used to a number of ends. They have been used as a means to raise awareness among policy-makers as well as lay people about the seriousness of the problem of complications of pregnancy and to move these same people to take actions to try and prevent similar tragedies. In its most common form, the "medical" AMP is a process involving health professionals in a critical examination of "what went wrong, why and what could be done to prevent the same from happening again".

UNICEF has primarily supported the development of the medical AMP process as well as funding the costs of holding some medical and non-medical audit meetings in all three provinces. Obstetrician/Gynecologists from East Java have been instrumental in developing the AMP as it now exists in Indonesia. That province is far ahead of the other two in understanding the objectives of the activity, the problems in carrying out the process and the limitations of its use because of these problems.

Dr. Kusumo, Ob/Gyn and member of the East Java provincial KHPPIA - PA 1 team, described the problems with the AMP in detail during our briefing from that team. Similar concerns about the present process were communicated to us in the other two provinces as well. The main problems include:

- poor understanding of the objectives of the process;
- incomplete medical records making it difficult to piece together the "true story";
- primary caregiver's unfamiliarity with preparing and presenting case presentations;
- difficulty in openly discussing cases, a lack of objectivity and focus on "laying blame";
- lack of ingenuity in looking for potential solutions to problems, focus on "getting practitioners to follow standard procedures";
- difficulty in seeing appropriate non-medical interventions that could have made a difference in the outcome of the case (e.g., regarding social or economic problems); and
- little feedback to policy level.

We found only one example of a case where findings from the AMP resulted in a policy change. Because of the AMP process, one district in East Java discovered that large numbers of women suffering post-partum hemorrhage were arriving at referral facilities without intravenous infusions running. Examination of the reasons pointed to the fact that BDD had only a few IV catheters in their delivery kits and were instead using butterfly needles to administer emergency IV fluids. This type of needle is too small to deliver adequate volumes of fluid, is not reliable during a long and bumpy transfer process and was falling out in transit. That district chose to give the referring BDD replacement IV catheters in every case where a woman was transferred with a proper IV in place. This simple move resulted in a drop in maternal morbidity and mortality from PPH in the year following its implementation.

The AMP’s inability to influence the health policy is reflected in the fact that even though AMP statistics on maternal mortality clearly demonstrate that most maternal deaths occur in women in the "low risk"
category, the province continues to base its programme to decrease MMR on the identification of those at high risk.

We saw “support to non-clinical AMP held at the sub-district and village level” listed as an activity in South Sulawesi in 1998 and 1999. Data on the number and location of these meetings was not available at the Makassar office at the time of our field visit. We found that one of the sub-districts we visited had had the Puskesmas GP give a short presentation on the AMP he had attended at the district level but there had been no true AMP meeting held at the sub-district. Central Java Field Office told us that there had been no AMP meetings in that province in the last year. They plan to advocate for such regular meetings in the next year and will request assistance from the MCH Officer at UNICEF NATIONAL OFFICE to help bring non-clinical AMP meetings to the village level.

**Recommendation #5:**

*While the AMP process is potentially valuable, it does not yet have clearly understood goals and objectives. If UNICEF chooses to continue funding the AMP, it should allocate funds for operations research into how to make the process more effective and how its conclusions can be translated into actions that could positively impact maternal health.*

5.2.2.5 District Hospital Services

The District Hospital is generally the last link in the referral chain for women suffering life-threatening pregnancy complications. It provides services to approximately 500,000 people. Ideally, it should have the staff and facilities to be able to carry out EOC/Comprehensive Obstetric Services: all obstetric functions including cesarean section and blood transfusion. The design of the MH component clearly stipulates that “community mobilization activities are only to be started in project areas having hospitals adequately equipped for dealing with emergency obstetric complications (within 1st year of project).” And that “these facilities must exist within two hours of travel from village by normal means or transportation available locally”.

According to the latest data available to us, all district hospitals in East and Central Java have Comprehensive Emergency Obstetric capabilities including blood banks. All have at least one Ob/Gyn at present, and some have two or three. This is not the case in South Sulawesi, as is discussed in Section 5.3.1. The May 1998 Progress Report mentions the Establishment of Emergency Obstetric Care (EOC) Indicators at District Hospitals as a major activity planned for 1998. We did not hear anything about this activity in our briefings and would expect that had this happened, the lack of EOC at two district hospitals serving project districts in South Sulawesi would have been identified and steps to change the situation would have been taken.

As has been pointed out previously, the DH reporting of statistics is separate from the main MCH-LAM system. The Public Health side of the MOH that gathers data from the village and Puskesmas level has little communication with the Health Services side that deals with the district hospital. This lack of communication was reflected in our discussions with DH staff who could not relate their own facility’s health statistics with those for the district as a whole. We visited at least three District Hospitals that