

# The Availability and Quality of Data on Reproductive Health in Indonesia<sup>1</sup>

Budi Utomo

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*Abstracts. Reproductive health programs in Indonesia pass across sectoral boundaries and formal authorities that they turn out to be intersectorally and vertically complex. Accordingly, the provision of data for reproductive health program planning, monitoring, and evaluation is not easy. Among those topics covered in reproductive health definition, only family planning data generally available and in a comprehensive shape. The management information systems (MIS) of data on other reproductive health topic such as on reproductive tract infections (RTIs), sexually transmitted diseases (STDs) and maternal health need to be initiated or more activated.*

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**Keywords:** Data collection; quality of data; reproductive health; Indonesia.

## 1. Introduction

International Conference on Population and Development in Cairo in 1994 defined reproductive health to cover not only family planning but also other essential topics including reproductive tract infections and sexually transmitted diseases, and maternal health and child bearing. As these topics in many countries including Indonesia pass across sectoral boundaries and formal authorities, reproductive health programs are intersectorally and vertically complex. Accordingly, the provision of data for reproductive health program planning, monitoring, and evaluation is also not easy.

Reproductive health data are generally limited and the available data suffer from low quality. Data on family planning are generally more available

and complete than data on other reproductive health topics. Although there will unlikely be any comprehensive Reproductive Health Management Information System (RH MIS) that can routinely provide data for reproductive health program planning, monitoring, and evaluation, the MIS for particular topics in the context of reproductive health concept such as reproductive tract infections (RTIs) and sexually transmitted diseases (STDs) and maternal health may be initiated and activated.

This paper on the availability and quality of reproductive health data in Indonesia contains several sections covering family planning, RTIs/STDs, and maternal health topics. Each section presents current and past status of data availability, issues of data validity and reliability, problems of measuring trends, and suggestions for project/program innovation in the MIS.

## 2. Source of Reproductive Health Data

Data needed for evaluating the impact of reproductive health programs are particularly limited. Ideally, such data can be supplied by the vital registration system but it does not adequately function in Indonesia. The vital registration system in Indonesia has existed as early as 1911 but limited to some areas and sections of population. The recording and reporting of vital events, notably birth and death, is severely underreported. Coupled with irregular flow of data recording and reporting, the existing vital registration system has not yet been able to produce routine birth and mortality statistics at various community aggregation levels. As a result, various unfavorably indirect methods based on population censuses and surveys are now still being used for estimating the demographic impact of reproductive health programs.

For program monitoring, there is no comprehensive integrated reproductive health management information system. The data availability and quality differ substantially between various reproductive health topics. Generally, data on family planning are more available and complete than data on other reproductive health topics. Data on RTIs/STDs and maternal health are relatively scarce and limited.

Since the beginning of the family planning program, the National Family Planning Coordinating Board/NFPCB (*Badan Koordinasi Keluarga Berencana Nasional/BKKBN*) has developed and initiated the FPMIS

(Family Planning Management Information System) that can routinely supply most of the information needed by the program. Population-based surveys to collect macro-level data on family planning knowledge and practice are also regularly conducted. Recently, with the family welfare movements, the FPMIS has been modified and improved, and annual registration of family welfare data has been developed and implemented.

Unlike family planning, data to support other reproductive health programs are lacking. *Pusat Data Kesehatan* (Center for Health Data of the Ministry of Health) annually publishes Indonesian health profile but the data are compiled from secondary sources (Ministry of Health/MOH, 1995). The collection of data was conducted by sectors within and outside of the Ministry of Health. As there is no official bureaucratic structure between the sectors collecting data and Center compiling data, there is no built-in data quality control.

Worthy to mention is the SP3 (*Sistem Pendataan dan Pencatatan Puskesmas/Data Recording and Reporting System*) as it actually has the potential to be the source of reproductive health data<sup>2</sup>. Various data are recorded at the *Puskesmas* (*Pusat Kesehatan Masyarakat/Community Health center*) and supposed to be reported to the supra-system at the *Kabupaten* (district), province, up to central level. Two case studies, one conducted in West Java (Universitas Indonesia and Pusat Data Kesehatan, 1996) indicated various problems that reduce the quality of data derived from SP3. Among such identified problems are the followings: (a) there are too many forms of data collection while many of them are overlapped<sup>3</sup>; (b) information filled in the forms are often incomplete and inconsistent; (c) vertical reporting data is often not timely processed; (d) lack of feed-back from the supra system; (e) lack of guidance, manuals, and supporting materials for the data recording and reporting; (f) lack of training among the personnel in charge. It is also not clear how the data collected are used for improving the management of services at *Puskesmas*.

The above facts indicate the need to urgently improve the MIS to support reproductive health programs particularly those of RTIs/STDs and maternal health. Various inefficient forms used in SP3 needs to be simplified and include only core variables that needed by the program. Personnel in charge need to be educated and trained to increase their awareness about the importance to have accurate data and to improve their skills in data recording

and reporting. Manuals and supporting materials need to be provided to improve vertical data reporting.

### **3. Family planning**

The importance of having appropriate data for family planning program management and evaluation was acknowledged at the initial development of family planning program efforts in the early 1970s. The National Family Planning Coordinating Board (BKKBN), which has the official responsibility of coordinating and managing family planning program efforts, created a system to collect and publish monthly family planning service statistics (MFPSS) in 1972, and has extended and modified the system over the following 25 years.

The family planning information system has been singled out as one of the most important elements of program effectiveness, and has attracted much international attention. Over the years the system has evolved from an initial clinic base to a much broader community based framework of activities. The data collected in the MFPSS include numbers of acceptors and current users, tabulated according to geographic regions, contraceptive methods, type of service points, and general characteristics of clients. At some points of the system development data were available on major and minor complications, contraceptive failures, and a number of other measures of impact of contraceptive use, but there has been some concern over the quality of such complex data.

The importance of population-based family planning measures was acknowledged at the outset of program development. While routine family planning statistics obtained from the Management Information System (MIS including MFPSS) reflect program performance in providing family planning services, population based measures provide information on the degree of program achievement at the population level. Thus, the two different data collection systems, the MIS and the population based measures (PBM), complement each other<sup>1</sup>. Special population-based surveys at national and small scale levels collecting and analyzing family planning related data have been conducted by various institutions, mainly the BKKBN and the Central Bureau of Statistics (CBS), often in collaboration with other national or international agencies. To date, the following is population-based surveys that collected family planning related data (Box 1).

BOX I  
POPULATION-BASED SURVEYS COLLECTING FAMILY PLANNING  
RELATED DATA IN INDONESIA

1973 Fertility Mortality Survey  
1976 Indonesia Fertility Survey (World Fertility Survey)  
1980 Population Census which included data on family planning  
1983 Contraceptive Prevalence Survey (in five cities)  
1987 Indonesia Contraceptive Prevalence Survey  
1991, 1994 and 1997 Indonesia Demographic Health Surveys  
1993, 1997 and 1998 Indonesia Family Life survey

Generally, these surveys provide information on levels of family planning knowledge and contraceptive use details by method, source of services, by demographic characteristics of acceptors such as age, parity, education, region, province, and place of residence. In addition, small-scale studies were also conducted to address specific issues emerged during the course of family planning program development. Some of the issues include the concept of family planning self reliance, family planning privatization, changing family norms, discontinuation of contraceptive use, family planning quality of care, family planning program cost effectiveness, and the technical competence of providers.

In the past ten years the concept of family planning has been gradually linked to the concept of family welfare, the concept that has been cited at the outset of family planning program. Now, the family planning program is no longer a vertical program but it becomes a community mobilization or movement for achieving the norms of small prosperous families. As an elaboration of these norms, three waves of movements to improve family welfare began to be developed in the early 1990s. These three movements are (1) Family Welfare Reproductive Movement (*Gerakan Reproduksi Keluarga Sejahtera*), (2) Family Planning Welfare Economic Movement (*Gerakan Ekonomi Keluarga Sejahtera*), and (3) Family Welfare Resilience Movement (*Gerakan Ketahanan Keluarga Sejahtera*).

With the growing family welfare movements, types of data recorded and reported by the MIS are also extended and expanded. Since 1993/94, various forms to record and report family welfare data have been developed and used at various administrative levels from households, neighborhood organization (*rukun tetangga/RT*), local area organization (*rukun warga/RW*), village, subdistrict, district, province, up to the central level. Considering the

totality of coverage, various information to be collected and various forms to be used, and complex vertical recording and reporting, the task of family welfare data collection is not easy. Despite the complexity family welfare data collection, a report on family welfare statistics has been officially presented to include information on the data coverage at various administrative levels: number of eligible couples by age of wife; prevalence of current contraceptive users; contraceptive users by method and source of contraceptive; reproductive characteristics and intentions, and antenatal care; number of families, family size, and household size; demographic characteristics of household head; and family welfare status (NFPCB, 1996).

Despite the high availability of data covering family planning and family welfare topics and issues, significant problems remain. There has been considerable variation in the availability and quality of data, and also the extent and quality of data analyses between the various family planning and family welfare topics. The family planning data and statistics currently available show some degree of inconsistency but overall they appear sound. Although Streatfield (1985) indicated that contraceptive prevalence estimates derived from the service statistics tend to be higher, around 30 per cent relative-difference, than those derived from the population survey, the case occurred in Java-Bali only. At about the same time, however, the NFPCB changed the method of estimating current users from the logistic-based to the field worker surveillance approach. With that changing method, it was hoped that the difference of estimates between the service statistics and the population-based survey could be minimized.

While both the population-based survey and the fieldwork surveillance are needed for estimating current contraceptive users at the community levels, these two different methods of data collection have their own merit and purposes. Population-based surveys are primarily used for estimating the current users and other program impacted measures at the macro levels at *kabupaten* (district) or at higher administrative levels. The population-based surveys are usually conducted occasionally or regularly every relatively long intervals, notably, every two or three years. On the other hand, fieldwork surveillance of current contraceptive users is needed to continuously monitor as to how far the community has been reached by the program. Unlike the population-based survey data, the surveillance data can speak more on the program operations levels. With the advance of the programs, however, the existing fieldwork surveillance of current users suffers from shortcomings due to the growing expansion of family planning

service points which now include village family planning extension helper (*Pembantu Pembina KB Desa/PPKBD*), midwife, physician, pharmacy, government clinic, and private clinic and to the growing dynamic of contraceptive use. As the family planning movement is growing rapidly it requires information showing the dynamic of pace and coverage of the movement progress at more frequent intervals, notably, every quarter or if possible every month. To suit with this growing family planning movement, thus it is important to improve the currently surveillance system to monitor current users.

While relatively much is known about the levels of family planning knowledge and contraceptive use, less information is available on characteristics and patterns of such knowledge and contraceptive use. Obviously, there is substantial variation in the extent of family planning knowledge among those categorized as knowing about family planning, and in the quality of contraceptive use. For the renewal contraceptives, for example, the correct and regular use and the continuity of using such contraceptives are essential to effectiveness. Thus, studies to assess the extent of knowledge and compliance issues are still needed.

With the current emphasis on improving the quality of family planning services, information regarding the number who discontinue using contraceptive due to side effects is important but routine statistics cannot be used to collect valid reasons for discontinuation. Information on contraceptive complications and failure is available in the MFPSS, but it is often of low quality. According to one NFPCB official, the available service statistics data on contraceptive complications are related to the release of funds for the treatment of medical problems. Thus the figures can be underreported where treatment is not sought or not reimbursed. Conversely overreporting can arise where program administrators submit false reports in order to access budgets. They thus may not reflect the truth and need to be verified. Since 1994, however, the NFPCB modified the way to collect information on contraceptive complications in order to reduce the likely of false reporting. While quality of service statistics data on contraceptive complications needs to be examined, special studies to follow up contraceptive complications are necessary.

One of the important issues in family planning program is whether a woman get a contraceptive she wanted. The issue is related not only to the quality of care and the women reproductive right but also to the contraceptive

continuation. A study by Pariani et al. (1991) indicates that user's satisfaction to the method adopted is associated with the level of contraceptive continuation. Exit interviews or semi annual surveys of new users could be done to evaluate impact and quality of counseling for method selection to find out whether women got the method they asked for and whether they are happy with it; whether women got a different method and are happy with it. These surveys should also ask users what side effects they may get with the method ---to see if they were told. As significant number of acceptors are recruited under special efforts such as *safari*, it is important to conduct a particular study to interview women about why they chose to accept a particular family planning method during a *safari*, whether they know about other methods, why they think they will like the method given during the *safari*, and what they were told about side effects and complications and what they should do if problems arise.

With the fast evolving programs towards quality of care, dynamic studies and information to scientifically support these evolving programs are needed. Important issues arising along with the evolving programs include human resource development. Although quality of care covers many essential elements, human resource development is closely associated with service quality issues; for example, how to produce skilled providers to give high quality family planning services. It is considered important to monitor providers every so often to see if they are well-informed about contraindications, side effects, and symptoms and signs of complications, and what to do about them. Regular observations should be conducted of providers in action, with a check list for each method provided (Box 2).

#### BOX 2

##### A CHECKLIST FOR EACH FAMILY PLANNING METHOD PROVIDED

- Was patient told about effectiveness and side effects of various methods?
- Was patient offered choice?
- Did provider wash her hands before and after procedures?
- For injection, IUD, and implant users, did she use a new needle or inserter?
- What did she do with the needle afterwards?
- Was good privacy maintained?
- Was client treated sympathetically?

Other innovations needed in family planning monitoring include (1) measure of regularity of services using COV (coefficient of variation) or COV<sub>r</sub> (coefficient of variation based on a fitted linear regression);



(2) microanalysis of method-pooling (high proportion using one method) to identify client preferences, or administrative problems; (3) surveys to assess contraceptive behavior which is not identified with the FP National Program (eg. rhythm, abstinence, withdrawal); (4) specialized studies of 'problem' methods including sterilization, condoms, and menstrual regulation/abortion.

In conclusion, while family planning data are already highly available, more data are still required to suit with the growing dynamic of the program. As there is evidence of incomplete data coverage and representativeness, which indicate low quality of data, efforts to improve family planning and family welfare data quality are constantly required.

#### 4. RTIs/STDs

Available publications indicate that data on sexually transmitted diseases (STDs) and reproductive tract infections (RTIs) are limited. Among such publications include the MOH publication series from Communicable Disease Control-Surveillance (CDC-Surveillance) and the Journal published by the Faculty of Medicine of the University of Indonesia. Routine STD statistics based on surveillance and reports from the service points are characterized by lack of coverage and lack of continuity. As a special case, reports on number of cumulative HIV positive and AIDS cases detailed by victim's characteristics including age, sex, risk factor, nationality, and province origin are regularly distributed to various sectoral ministries, related donor agencies, and research institutions. These statistics, however, are often regarded as under estimated as they are based on passive surveillance. Prevalence rates of syphilis and gonorrhoea are presented in the MOH publications (MOH, 1995), but information on how the rates are calculated are not provided. There is no recorded RTI/STD data available at referral health centers, STD specialists and *mantri* (health provider) private practices. Although public and private hospitals routinely collect data on visitors with STD diagnoses, no one is confident about the data quality and the possibility of misclassification. As an alternative, special studies are often the main sources of RTI/STD information (Linnan, 1995).

Several factors explain the limited availability of RTI/STD data. Persons with STD symptoms tend to hide their diseases by not visiting the public hospitals nearby. If their income allows, STD patients prefer to seek medical services from private practices. For confidentiality and other reasons,

these private practices generally are reluctant to send STD related information to the STD data management authority. Health or laboratory facilities capable of detecting various RTI/STD are limited. Thus, many STDs and RTIs are likely misdiagnosed or misclassified, and, consequently, mistreated. Recent studies conducted in Surabaya showing the relatively high incidence of STDs not only among sex workers and their clients but also their spouses and partners obviously supports the description of STDs as the silent epidemic (Linnan, 1995). Another study in rural Bali also found high incidence of RTIs. Among the RTI patients many reported recurrent lower abdominal pain with fever and some had genital sore (Iskandar et al., 1996).

Special efforts must be carried out for effective prevention and control of RTIs/STDs, including HIV/AIDS. Information, education, and communication (IEC) activities should be conducted continuously to reach wide community audiences to improve knowledge of STD preventive practices among the general population. Among these preventive practices, avoiding sex with multiple partners and use of condom in sex with non-regular sexual partner are the important preventive measures. With the recent government policy on 100 per cent use of condom during sex with sex worker (MOH, 1996), condom should be widely available in all sex industry areas.

For the effective prevention and control of RTIs/STDs, those who are sexually active should know symptoms of RTIs/STDs, where to go for treatment, how to prevent transmission, and what to do when infected – abstain or use condom when in sex, and the RTI/STD patients should receive correct and complete information about their condition. Exit interviews could be done in family planning, antenatal, and STD clinics to determine percentage of women with such knowledge and percentage of STD patients who were given correct and complete information about their condition (Box 3). In addition, repeated behavioral surveillance surveys targeted to various high risk behavioral groups of population should also be conducted to monitor their changing preventive practices, and market surveys of condom should be also regularly conducted.

**BOX 3****RTI/STD INDICATORS DERIVED FROM SPECIAL SURVEYS OR EXIT INTERVIEWS**

Percentage of women/men with more than one sexual partners (in various population groups)  
 Percentage of women/men using condom in sex with non-regular sexual partner in last year  
 Percentage of sex workers using condom in last sexual contact  
 Percentage of commercial sex sites with the condom access  
 Percentage of women/men know symptoms of RTI/STDs  
 Percentage of women/men understand the need for partner treatment  
 Percentage of women/men know where to go for treatment  
 Percentage of women/men know how to prevent transmission  
 Percentage of women/men know what to do when infected  
 Percentage of RTI/STD patients received correct and complete information about their condition

It is important that each province should increase number of service delivery points with technically competent personnel to perform RTI/STD screening and treatment not only in clinical base but also in the population. There should also be a mechanism being developed to enable partners of STD patients are confidentially referred and treated in STD clinics. Family planning clinics should perform a general procedure that all IUD users should be screened for RTIs. Corresponding to these efforts, the STD surveillance and the STD-MIS should be improved to be able to provide provincial routine statistics to be derived for the necessary indicators (Box 4). It is particularly important that in coordination and collaboration with related institutions, the MOH-CDC Directorate should take an initiative to systematically improve and strengthen the existing RTI/STD Surveillance and Management Information System.

**BOX 4****RTI/STD INDICATORS TO BE DEVELOPED FOR PROVINCIAL ROUTINE STATISTICS**

STD incidence  
 Number and percentage of service delivery points with technically competent personnel to perform RTI/STD screening  
 Number and percentage of laboratories properly equipped  
 Number of laboratory technicians trained  
 Percentage of providers/laboratory technicians following guideline procedure  
 Number of partners of infected clients referred and treated at STD clinics  
 Percentage of IUD users who are screened for RTIs and percentage of IUD candidates with RTIs

To support the STD-MIS, all health providers including public and private hospitals, health centers, and private medical practices should be organized to regularly report every month the following information (Box 5).

**BOX 5**  
**ITEMS OF INFORMATION TO BE MONTHLY REPORTED BY RUSTD HEALTH PROVIDERS**

Number of patients presenting for treatment
Condition diagnosed
Laboratory confirmation
Treatment given
Number of asymptomatic patients screened and type and number found positive

To make the task of health providers easier, the following log book form can be standardized to record all visiting patients. This can work for screening as well as for symptomatic patients (Box 6).

**BOX 6**  
**LOG BOOK TO RECORD ALL VISITING PATIENTS**

Patient's name	Number	Age	Sex	Use of FP	Dx	Lab. Conf. Y/N	Rx
	1						
	2						
	3						
	4						

## 5. Maternal Mortality and Morbidity

Socio-economic factors are associated with maternal mortality (Loudon, 1992: 44), but socio-economic development alone will not automatically reduce maternal mortality (Tinker and Koblinsky, 1993: 6). Only improved quality of obstetric services will significantly reduce maternal mortality (McCarthy and Maine, 1992: 28). Maternal death generally occurs because of failure in managing complications of pregnancy, delivery, and postpartum. Major maternal complications include hemorrhage, complications of abortion and sepsis, toxemia, obstructive labor, and postpartum sepsis. Some maternal complications can be avoided, but many cannot. Postpartum sepsis and abortion complications can be avoided through

aseptic safe delivery and termination, but other major complications such as toxemia, hemorrhage, and obstructed labor are difficult to avoid as they can arise during pregnancy with no previous risk factors and can occur even among healthy nourished pregnant mothers (McCarthy and Maine, 1992: 28). Most maternal complications cannot be predicted or detected through screening of risk factors (Rosenfield and Maine, 1985: 84; McCarthy and Maine, 1992: 28).

The provision of adequate medical care cannot entirely stop maternal complications, but it can prevent maternal complication turning into maternal death. To reduce maternal mortality, health services need to use essential drugs such as oxytocin and antibiotics, provide blood transfusion, conduct cesarean sections and other obstetrical operations, and manage severe obstetric complications (Tinker and Koblinsky, 1993). Because of acute life threatening character of the majority of maternal complications, high quality obstetric services should be widely available and easily accessed by pregnant mothers (Tinker and Koblinsky, 1993: 10).

At subdistrict and village level, health center (*Puskesmas* and *Pustu/Puskesmas Pembantu*), integrated health post (*Posyandu/Pos Pelayanan Terpadu*), village midwives and their supporting elements should integrate to function as front-line health services providing basic obstetric services to pregnant and inpartu women. These basic services should be able to improve the nutritional status of pregnant mothers (risk reduction), detect maternal complications (risk management), perform aseptic safety birth delivery (reduction of complications), and identify complications, provide initial supporting treatment, and timely refer the patient to higher level of health facility (management of complication).

Role of traditional birth attendants (TBA) in maternal health matter cannot be ignored. For maternal health matter, members of the majority of population, especially those in rural TBA areas, go to the TBA first before going to the midwife. Generally mothers go to the midwife only when the TBA cannot handle the maternal complications. For various reasons, mother prefers TBA than midwife.

For geographic and social-economic reasons, access to modern obstetric services is limited. While mild and moderate maternal complications could be handled at the subdistrict levels, several maternal complications such as hemorrhage, toxemia, and obstructive labor require

referral to higher facility health services at district level. In fact, among the majority of mothers referral processes are often complicated.

District hospital should be capable of providing 24 hours basic and comprehensive obstetric services including Caesarian surgery, hysterectomy, blood transfusion, and other emergency services. While not all district hospitals have such capability, traditional beliefs, unfamiliarity and distrust to hospitals hamper the increased utilization of hospital services. This distrust situation often makes people go to hospital only if he or she is in severe illness condition that his/her life cannot be saved. In turn, this bad experience adds again to the existing distrust.

Especially in the past decade, the Indonesian government through the Ministry of Health, NFPCB, and the State Ministry on the Role of Women has initiated various programmatic efforts to reduce maternal mortality and improve maternal health. To see the outcomes and impact of these programmatic efforts, indicators for program monitoring and evaluation are needed. As there has been no adequate vital registration system, accurate maternal mortality rates are difficult to obtain. Consequently, proxy indicators should be used in measuring outcomes and impact of programs to reduce maternal mortality. Among such potential proxy indicators are percent of maternal complications treated in hospital and case fatality rate of maternal complications in hospital.

Current statistics indicate that from approximately 4 million births per year 15 per cent will involve a life-threatening that requires emergency obstetric care, that is 600,000 deliveries with complications. At the estimated maternal mortality ratio of 600 per 100,000 births (Stanton et al., 1996), there will be about 24,000 maternal deaths or overall case fatality rate of 4 per cent. Based on these current statistics, programs should target that 100 per cent of maternal complications reach hospital by 2006; hence, hospitals report a minimum to 600,000 complicated deliveries by 2006, and the case fatality rate for maternal complications is reduced to one per cent by 2006. To monitor towards these two targets, every hospital, including the private ones and health centers with beds will need to report the following statistics (Box 7).

**BOX 7**  
**MATERNITY CARE STATISTICS**

**General obstetric statistics:**

- the number of admissions for normal deliveries
- the number of admissions for complicated deliveries
- the number of maternal deaths including those on wards other than OB/GYN
- the number of maternal deaths in the community

**Statistics of maternal complications:**

- the number of cases and the number of deaths with antepartum hemorrhage
- the number of cases and the number of deaths with postpartum hemorrhage, prolonged or obstructed labor, and ruptured uterus
- the number of cases and the number of deaths with pregnancy-induced hypertension (PIH) and eclampsia
- the number of cases and the number of deaths with puerperal sepsis
- the number of cases and the number of deaths with abortion

**Statistics of obstetric procedures:**

- cesarean sections
- hysterectomies
- laparotomies
- manual removal of placenta
- blood transfusions
- IV insertions for fluid replacement
- forceps and vacuum deliveries
- manual vacuum aspiration of uterine contents
- labors monitored with the partograph
- and use of (number of doses administered) the following drugs:
  - oxytocin
  - antibiotics
  - magnesium sulfate
  - diazepam

The answers on how the above information will be obtained from the private sector and what proportion of births now take place in private or military facilities remain to be explored. Exploratory visits at public provincial hospitals in Manado and Surabaya indicate that these hospitals have recorded but not disseminated most of the above required statistics. It was further noted that the available statistics are yet optimally interpreted and used for improving services. Visits to other data sources such as private hospitals and district hospitals to assess the data availability are still needed in order to obtain more confirmed conclusions. For obtaining the required

hospital-based indicators at higher aggregation levels, however, a system of recording and reporting hospital maternity data is needed. Accordingly, such a system should be adequately backed up with trained personnel and computer facilities.

## 6. Conclusion

The limitation and low quality of the data on reproductive health programs in Indonesia has made it difficult to undertake proper planning, monitoring and evaluation of the program. Program that covers not only family planning but also other essential topics including reproductive tract infections (RTIs), sexual transmitted diseases (STDs), maternal health and child bearing, needs a comprehensive and integrated reproductive health management information system in order to be successfully carried out.

The Indonesian family planning information system created in 1972, has been known as one of the most important element that leads to program effectiveness. The system, which has been developed based on the monthly statistics of the family planning service, has evolved from an initial clinic base to much broader community based framework of activities.

Despite the high availability of data covering family planning and family welfare topics and issues, significant problems on the completeness of data coverage and representativeness need to be addressed constantly.

The other important data needed by reproductive health programs are data on reproductive tract infections (RTIs) and sexual transmitted diseases (STDs), and data on maternal health and child bearing. None of them shows high availability nor high quality of data. The socio-economic, technical and human resource factors are believed to be the main issues to be addressed comprehensively. All of the society's elements namely, the government, the military, the private sectors and the non government organization (NGOs) that are involved in the programs as policy makers, as well as the hospital/clinic managers, or the information-education-communication (IEC) conductors should work hand in hand to support the programs.



**Notes:**

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2. The system is often called SP3 which stands for *Sistem Pencatatan dan Pelaporan Puskesmas* (Faculty of Public Health University of Indonesia and Center for Health Data, 1996). The system covers data from *Puskesmas* and also all *Posyandu* under the *Puskesmas* supervision. It is potential because *Puskesmas* and the *Posyandu* are the front-line of primary health care services in Indonesia.
3. On average each *Puskesmas* under study has 40 to 90 different forms of data collection.
4. In terms of generating indicators, measured as rates or percentage, the MIS lacks important denominators and the PBM (population based measures) lacks of important programmatic enumerators but combining the two systems reduces the weakness on both sides.

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**Budi Utomo, Ph.D.** Lecturer and Senior Researcher at the Department of Population and Biostatistics, Faculty of Public Health, University of Indonesia, as well as the Lecturer at the Post Graduate Program, University of Indonesia.

E-mail: butomo@cbn.net.id