

Country Analysis of Data from the Global Survey on Maternal and Perinatal Health

*Report of the Technical Group Meeting
SEA Regional Office, New Delhi, India, 22–23 January 2009*



**World Health
Organization**

Regional Office for South-East Asia

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Executive Summary

A global survey in Asia, a multistage stratified sample survey of the mode of delivery and maternal and perinatal outcomes, was conducted in nine countries of the Western-Pacific and South-East Asia regions in 2007–2008 with technical and financial support from the Department of Reproductive Health and Research, World Health Organization Headquarters (WHO-HQ), Geneva. Four South-East Asian countries, namely India, Nepal, Sri Lanka and Thailand, took part in the survey. WHO Regional Office for South-East Asia organized a technical group meeting to facilitate the countries to further analyse the data arising from the survey. This meeting was organized in collaboration with WHO HQ for the members of the survey team and programme managers from India, Nepal, Sri Lanka and Thailand.

The main objectives of the meeting were to: (i) further review country data collected through the Global Survey and to analyse it from the perspective of individual country needs and consider possible in-depth quantitative or qualitative studies; and (ii) identify specific activities in consideration with the WHO-supported current workplans for 2008–2009 as well as for 2010–2011.

During the meeting, the participants had an opportunity to share their country experiences related to the organization of the survey, tools, data collection and primary analysis of data. The participants discussed approaches for secondary analysis of data, identified the need for further analysis and the use of information from the survey for improving maternal and perinatal outcomes. The meeting recommended that country participants were to: (i) disseminate the results of the survey and identify relevant secondary analysis of data, plan for further research and actions in order to improve maternal and perinatal health in collaboration with respective ministries; and (ii) WHO country focal points to identify possible sources of funds to undertake further actions agreed by ministries of health (MoH) and other relevant sectors. In addition, a newly proposed multicountry study by the Department of Reproductive Health and Research (RHR), WHO-HQ, on a global data system to evaluate the quality of care and burden of severe maternal complications and pre-term births was presented for comments. The technical comments and suggestions gathered during the meeting will be accommodated.

1. Introduction

The South-East Asia (SEA) Region, in the 2000s, accounted for approximately 170,000 maternal deaths and 1.3 million neonatal deaths every year, which are 33% and 35% of the global figures, respectively. In addition, one million stillbirths occur in the Region. Although some SEA countries have done well in reducing maternal and perinatal mortality, many others are still struggling to achieve the universal coverage of maternal and newborn healthcare and the targets set for Millennium Development Goal 5. As countries continue to promote skilled care at every birth and some countries even focus on institutional delivery, it is of utmost importance for priority settings and actions to collect and analyse information on maternal and perinatal health over time.

The Department of Reproductive Health and Research, WHO-HQ, initiated the WHO Global Survey on Maternal and Perinatal Health in 2004 with the objective of developing a network of health facilities worldwide to collect up-to-date information on maternal and perinatal health services. The Survey was conducted in Asia in 2007–2008 and focused on assessing the relationship between the mode of delivery and maternal-perinatal outcomes. Four countries from the South-East Asia Region, namely India, Nepal, Sri Lanka and Thailand took part in this survey, in addition to five countries of the Western-Pacific (WP) Region.

However, along with the advantages there were also limitations in the study which required further consideration. One of the main limitations was the fact that the results of the survey provided information on only those health facilities where the number of deliveries was 1000 per year and above. In many countries of the Region, facilities with these criteria would be a secondary or tertiary referral hospital. Therefore, the issues related to generalizing of data from the survey were to be considered, especially in countries with a low institutional delivery rate.

The other challenges included maximizing the use of collected information and to continue maintaining or expanding the information network in countries to make it possible to periodically collect and use the data for national and sub-national/local actions. The technical group meeting was organized by the Regional Office in collaboration with the RHR Department, WHO-HQ, as a follow-up of the dissemination meeting

held in October 2008 in Phnom Penh, Cambodia. It aimed at reviewing the detailed data from SE Asian countries and facilitating further analysis of the results of the Asia Survey on Maternal and Perinatal Health and its use by these countries.

2. Objectives

The meeting aimed at facilitating four countries of the Region in further analysis and use of the data from the Global Survey on Maternal and Perinatal Health. It focused on the following specific objectives:

- (1) To further review and analyse country data arising out of the Global Survey on Maternal and Perinatal Health in the context of individual country needs and the consideration of possible in-depth quantitative or qualitative studies.
- (2) To identify specific activities for consideration in the WHO-supported Programme Budget 2010–2011 for country-wise workplans while also taking into consideration the workplans of the Programme Budget 2008–2009 and its linkages.

3. Highlights of the meeting

In her welcome remarks, Dr Dini Latief, Director, Department of Family and Community Health, SEA Regional Office, congratulated the participants on the successful completion of the survey and highlighted the challenges in maximizing the use of the information collected. She also emphasized the importance of the actions required by the country teams to fill the gaps in data analysis and its use for policy and programme decisions. These would be useful for accelerating efforts towards improving maternal and perinatal health in these countries.

4. Regional situation on maternal and perinatal health

Dr Ardi Kaptiningsih, Regional Adviser for Making Pregnancy Safer/Reproductive Health and Research, SEA Regional Office, presented the

situation of maternal and perinatal health in the Region. According to recent UN Agencies and World Bank estimates, the Region accounted for one third of the estimated global burden figures in relation to maternal and neonatal deaths, as well as stillbirths. Although there are positive trends in the maternal mortality ratio (MMR) from 1995 to 2005, the level of MMRs are still high in many countries of the Region and the progress has been slow. The stillbirth rate is usually slightly lower than the neonatal mortality rate (NMR); while early neonatal mortality (deaths within the first week of life) is approximately 75% of NMR. In many countries, stillbirths are under-reported because of socio-cultural issues, among others. Both stillbirth and early neonatal deaths are related to maternal health problems, including obstetric complication and maternal infection, as well as care during childbirth.

5. WHO Global Survey for maternal and perinatal health

In her presentation, Dr Katherine Ba-Thike, Area Manager for Asia and the Pacific, RHR Department, WHO-HQ, provided background information of the Global Survey for Maternal and Perinatal Health. The Global Survey was started in 2004 and held in Latin America, followed by Africa and Asia regions and is currently in progress in Canada. The reports from Latin America have been published in the *British Medical Journal (BMJ)* and other internationally recognized journals, while reports from other regions are in a preparatory phase. The objectives of the survey were: (i) to provide up-to-date data on care during childbirth; (ii) to study the relationship between mode of delivery and pregnancy outcomes worldwide; and (iii) to test an online data management system for large-scale studies.

A study sample was selected from the 14 WHO sub-regions based on levels of child and adult mortality. The Asia study included four countries in the SE Asia Region and five countries in the WP Region randomly selected with probability proportional to the population. Within the selected country, the capital plus two provinces were selected, which was followed by a random selection of seven facilities based on a census of all facilities with the number of deliveries equal to or above 1000 births/year. The survey lasted from mid-October 2007 to mid-February 2008 with data collection lasting two months for those facilities with more than 6000 births and three months for facilities with less than 6000 births a year. Special characteristics of the

survey include: large samples (close to 100,000 births by region), online data management, extensive network of collaborators (more than 600/region), including institutions not previously collaborating with WHO, strengthening WHO research network and that of local institutions.

6. WHO Global Survey for maternal and perinatal health in the SEA Region

Dr Pisake Lumbiganon and Dr Malinee Laopaiboon informed that data was collected between October 2007 and May 2008 in 122 facilities in nine countries of the South-East Asia and Western Pacific Regions. The completed facility forms were channelled (via post, hand delivery or the Internet) to the Regional Coordinating Centre based in Khon Kaen University, Thailand, for further management. However, data entry of individual forms was organized by countries themselves with direct online entries in the MedScinet system. Quality control and verification of the data, constant communication and technical feedback were provided to minimize or eliminate possible errors. Monthly status reports were shared between country, regional and global coordinators and the final data set was provided to each country.

When analysing the data, survey coverage was calculated by comparing the number of delivery forms with the total number of deliveries as independently recorded in the hospital logbooks. Frequencies were used to describe the modes of delivery for each country and facility characteristics for each group of modes of delivery. Odds ratios and 95% confidence intervals from the multilevel model were used to assess the effect of Caesarean section (C-section) on maternal and newborn outcomes measured at the individual level for socio-demographic, medical and ante-partum, as well as facility characteristics. The multilevel model was adjusted for clustering effect due to the facility. Overall, 96.3% deliveries and 91.6% C-sections in the selected hospitals were covered by the survey.

The limitations of the study include: (i) not accounting data on the second baby in case of more than one newborn; (ii) maternal deaths due to lack of access to C-section; and (iii) inability to consider possible seasonal variations due to the data collection being limited to 2–3 months. Maternal age was adjusted in multilevel analysis and hence it was not possible to determine the average age of the women under study.

7. Country presentations: Proposed further analysis at the national, provincial/state and hospital levels

Country teams presented the reports of the Global Survey carried out in their respective countries. The presentations covered steps in orientation, preparatory phases, coordination, training and implementation of the survey, including data collection, data entry and recurrent monitoring and feedback. Preliminary data analysis on characteristics of the population under study (e.g., age, parity), mode and outcome of last pregnancy, mode of and assistance provided during delivery, mode of delivery and type of institution, major indicators for C-section, pattern of antibiotic prescription, birth weight, initiation of breastfeeding in institutions, and so on, were shared by the countries.

The teams shared their experiences in management and the difficulties they overcame in the course of conducting the survey. Missing data, unstable political situation, electrical power cuts and insufficient Internet speed were some of the extreme challenges experienced. In general, direct online entry of data at the facility level was the major challenge and different local alternatives and solutions were found, including centralized data entry where Internet access was limited.

The country teams expressed their interest in further analysis. The topics of interest included types of C-section vis-à-vis number of pregnancies, ruptured uterus, pre-eclampsia, singleton vis-à-vis multiple births on gestation, foetal presentation status at birth, and hysterectomies. The following are the highlights of the results of preliminary data analysis:

- **India.** Analysis showed that 12.8% deliveries in selected hospitals were induced; hence, inviting the need for further investigation on the reasons for induction of labour. Further analysis was also required to find the proportion of C-sections and hysterectomy with real indications for the surgery. There was a possibility that rupture of the uterus could be associated with the introduction of *misoprostol* as many of these cases took place in one single province of India, which may need further investigation.

- **Nepal.** The findings were of three types of data sets – aggregate, tertiary and secondary referral hospital levels. Approximately 20% deliveries in the facilities were by C-section; 23 maternal deaths were recorded during the 3-month survey in the selected eight hospitals.
- **Sri Lanka.** Crude preliminary analysis demonstrated that about 50% mothers were given antibiotics, which clearly required further investigation. Though measurement improvements were not made, it was still encouraged to make further analysis of low birth weight (birth weight curves). Additional sub-samples may also be required to look for further variables.
- **Thailand** also reported widespread use of antibiotics, particularly for a vaginal delivery. A sub-group analysis could be done to find the associations and patterns of antibiotic use. A more detailed country analysis on the magnitude of the problem, high-risk pregnancies in terms of past obstetric history, C-section, breech delivery, perinatal mortality (early neonatal deaths, foetal deaths) was suggested at the global level, analytical studies could address issues of teenage pregnancy, elderly pregnancy, inducing of labour, delivery attendance.

During the discussion, the participants clarified the following issues:

- Country-specific challenges and gaps faced by this study; technical follow-up; programmatic and research implications, including secondary analysis
- In order to avoid any misclassification bias, emergency and intra-partum C-sections were not included in the regional analysis;
- Misrecording was a common problem and there is scope for further improvement of the data collection instrument for its validity (understanding and proper interpretation by the data collector);
- A final report of the Global Survey, Asia, was not yet presented for publication and was to pass through a peer review process and circulated before its submission to the *Lancet*. It was noted that the identity of the institutions which took part in the survey was kept strictly confidential unless

there was a formal written approval of the directors of the participating hospitals to disclose their identity;

- Countries own the data set and if there was any need to use the data to answer policy, programme and research questions, WHO expressed its readiness to assist.

8. Conceptual approach to secondary analysis of data

Dr Joao Paulo Souza, Medical Officer, RHR Department, WHO-HQ, introduced a conceptual approach to secondary data analysis, which includes analysis that is not part of the main regional analysis. This analysis can be performed at the country level or by using a multi-country data set.

At the country level, simple tabulations and descriptive frequencies could be used, thus providing a tool to attribute a local meaning to regional findings. The indicators of a specific country should be evaluated on the evidence produced by the primary analysis and the local context to inform local policymakers. A more in-depth, analytical approach could also be used at the country level though it would be less powerful in identifying associations and require more refined statistical support.

For a global perspective, a multi-country database across Africa, Asia and Latin America would involve very robust analysis and be ideal to study topics that require large sample sizes. Some examples of future analysis could include: (i) twins, risk factors and outcomes; and (ii) the relationship of a previous C-section and complications in the current pregnancy. The WHO Global Survey Coordinating Unit will monitor secondary data analyses to track the results of the project, avoid duplication of work and provide the required technical assistance in relation to regulations about data ownership, data use and authorship, depending on each country's needs.

9. Country group discussion: Data analysis at the national, provincial/state and hospital levels

Dr Akjemal Magtymova, Medical Officer, Making Pregnancy Safer, SEA Regional Office, introduced the participants to the session dedicated for

country group discussions on the scope for secondary data analysis and development of plans to address the issue of maternal and perinatal health in these countries. Participants worked within their respective country teams and presented their plans along with proposed activities, time frames, parties responsible for the activities and potential resources.

- **India's** plans for secondary analysis were proposed to be carried out by Indian Council of Medical Research with external financial support from donors. The plans included: (i) detailed analysis of maternal and perinatal health, such as correlation of hysterectomy with other maternal and foetal indicators; (ii) use of prophylactic utero-tonic and maternal morbidity and mortality; and (iii) relation of mode of delivery and presentation with neonatal outcomes. For programmatic aspects of maternal and newborn health, hospital-level plans focused on conducting facility-based maternal death reviews and setting up centres of excellence for training.
- **Sri Lanka** proposed, among others: (i) descriptive studies at the country and facility levels on the use of anaesthesia and maternal and foetal outcomes; (ii) C-section and antibiotic use; (iii) length of hospital stay; (iv) estimation of the "near miss" cases using the proxy variables and to study their correlates; (v) the association between ICU admissions and maternal and foetal outcomes; (vi) the association between birth weight and maternal complications, maternal nutrition and obstetric complications at the time of delivery; and (vii) the data set for developing the birth weight curve. Detailed analyses of modes of deliveries and characteristics of staff assisting in delivery with maternal and foetal outcomes were also planned. Multivariate analysis using regression models on the above selected associations will be applied to see the adjusted odds ratios. The immediate plan of action in relation to primary and secondary data analysis was presented, which reflected that the Family Health Bureau, MoH, planned dissemination of the study findings and recommendations to policymakers and relevant stakeholders in March 2009 and further incorporation of the recommended actions in the National Strategic Plan of Maternal and Newborn Health. Possible assistance from WHO and UNICEF was also envisaged.

- **Nepal** suggested (i) descriptive analysis on the mode of delivery and maternal and perinatal outcomes and associated variables in the national context; and (ii) comparative analysis between and among two levels of hospitals. This can potentially yield useful information for improving the quality of care at the facility level; however, ethical considerations including confidentiality of information will have to be taken into account. Other research plans included a one-year prospective study on the causes of maternal and perinatal death in a hospital setting and an interventional study to promote spontaneous delivery in those with a previous history of C-section. This study will be carried out at tertiary teaching hospitals.
- **Thailand** proposed the following descriptive studies: (i) maternal mortality and severe morbidities; (ii) high-risk pregnancy; (iii) Caesarean section; (iv) breech delivery; (v) antibiotic use (during different modes of delivery, i.e. vaginal delivery vis-à-vis C-section and its appropriateness); (vi) perinatal mortality (foetal death, early neonatal death); and (vii) pre-term delivery and birth asphyxia. With regard to C-section, the questions of its increasing rate and economic and medico-legal implications would need to be analysed and explored. Also, analytical studies at the global level were suggested on: (i) maternal age and pregnancy outcomes; (ii) delivery attendance and pregnancy outcomes; (iii) induction of labour and pregnancy outcomes; (iv) previous C-sections and pregnancy outcomes; and (v) low birth weight.

It was stated that due to the limitations of the design of the Global Survey, which selected specific settings (e.g. facilities with comprehensive emergency obstetric care and 1000 deliveries or more per year) or province-based level, the analysis of secondary data was applicable only for the facility level, while country-level generalizations were not feasible.

10. Additional issues

10.1 Patterns and predictors of Caesarean section in Asia

The meeting also provided an opportunity for presenting another research on Caesarean sections in Asia. Increased C-section rates in the Region and

their impact on mortality varies from country to country and is difficult to measure as the association is often confounded by other factors (such as clinical indication, prognostic factors, complications of pregnancy). Dr Tippawan Liabsuetrakul, researcher from Songkla University, Thailand, presented a study on the patterns and predictors of C-section in Asia involving multiple centres. The study was motivated by the fact that there was lack of information on the basic epidemiological patterns and determinants of C-section in Asia.

The main objectives of the study were to: (i) determine the C-section rate and compare the complication rate among patients of vaginal delivery, elective C-section and emergency C-section in each of the collaborating centres; (ii) determine the average cost of a normal delivery, elective C-section and emergency C-section across the collaborating centres; and (iii) identify predictors for elective and emergency C-section among social variables of the patients, obstetrician and hospital. The study used a diversified methodology. To determine the rate of C-section, the 1600 patients admitted to each hospital were studied. To define complication rates, prospective cohort study was supported using the hospital's annual reports and additional interviews with staff, were consulted. The data on patient factors were retrieved from medical records and direct face-to-face interviews were conducted to determine the predictors of C-section. A stratified cross-sectional design was used for cost comparison with variables on medical, non-medical and indirect costs. Univariate analysis comparing independent variables among the three groups of deliveries (vaginal delivery, elective and emergency C-section) and logistic regression were used for statistical analysis.

It was discussed that the findings and recommendations of the study needed careful interpretation, as most of the results were hospital-based, i.e. the "high C-section rate" emerged from using total deliveries at a hospital as denominator – which would not reflect the real situation of the country involved.

10.2 Multi-country study on severe maternal morbidity and preterm births

The meeting was also used as a forum for getting inputs on the proposed WHO global/multi-country study on severe maternal morbidity and preterm births using the network of health facilities established by the Global Survey

Project. Dr Joao Paulo Souza highlighted the proposed research intents to: (i) study the incidence of major maternal complications, maternal near miss and pre-term births, their associated factors and outcomes; (ii) examine the relationship between the use of preventive and therapeutic interventions related with major maternal complications and the occurrence of maternal near miss and perinatal outcomes; (iii) examine the relationship between the use of preventive and therapeutic interventions related with preterm birth and maternal and perinatal outcomes; and (iv) test the implementation of the near miss concept integrated with process indicators for evaluating the quality of care.

Data collection will be based at two levels – the individual and the cluster. Medical records of all women delivering at the selected institution will be reviewed and abstracted. Cases of severe maternal complications, preterm labour and preterm births will be prospectively followed up until discharge from the hospital. A two-page, simple data collection form will be used and data will be gathered for the country, regional and global databases. The analysis will be on two issues: (i) focusing on maternal complications and near miss and (ii) on pre-term labour and birth. Multilevel modelling multiple logistics regressions adjusted for clustering will be used in the analysis.

It is expected that the study will obtain estimates of maternal and perinatal morbidity and mortality and describe healthcare services and their quality – but again at the facility level – and would not represent the country as a whole. The information could be used to improve maternal and perinatal health programmes, especially at the facility level, strengthen national research capacity and support the implementation of best practices. The participants provided technical feedback and the data collection form. Further inputs were expected using various forums.

10.3 Classifications of Caesarean section

With the rise in C-section rates in many countries over the last 20 years, especially in urban areas, the need for its classification has become more evident. Historically, classifications have been based on the indication of C-section, overall rates and particular groups of women. Dr Joao Paulo Souza presented Robson's 10-group classification of C-section as another option, which was chosen for analysing data from the Global Survey in Latin America. This classification uses the information of previous obstetric

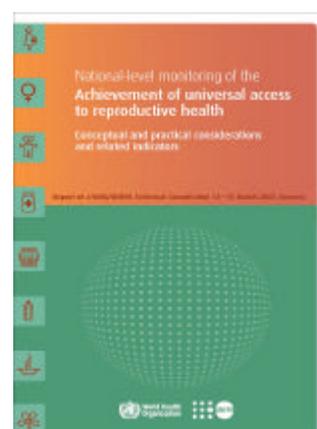
records (nulliparous, multiparous without scar and multiparous with scar); category of pregnancy (single cephalic, single breech, single oblique or transverse lie, multiple), course of labour and delivery (spontaneous, induced, C-section before labour, spontaneous), and gestational age (in complete weeks at the time of delivery) to determine the class of C-section.

Table 1: Classification of Caesarean sections, the Robson's 10-group classification

Group	Characteristics
One	Nullipara single cephalic presentation = 37 weeks spontaneous labour
Two	Nullipara single cephalic presentation = 37 weeks induced or C-section before labour
Three	Multipara (excluding previous C-section) single cephalic presentation = 37 weeks spontaneous labour
Four	Multipara(excluding previous C-section) single cephalic presentation = 37 weeks induced or C-section before labour
Five	Previous C-section single cephalic = 37 weeks
Six	All nulliparous breeches
Seven	All multiparous breeches (including previous C-section)
Eight	All multiple pregnancies (including previous C-section)
Nine	All abnormal lies (including previous C-section)
Ten	All single cephalic \leq 36 weeks (including previous C-section)

10.4 Universal access to sexual and reproductive health: Concepts and indicators

Dr Katherine Ba-Thike's presentation on universal access to sexual and reproductive health focused on the definition of universal access in the context of the Millennium Development Goals and indicators to measure progress. There are two targets of MDG 5 for improving maternal health: (i) reducing maternal mortality by two thirds between 1990 and 2015 and (ii) achieving universal access to reproductive health by the year 2015. As all components of reproductive health impact on achieving MDG 5, in addition to measuring MMR and proportion of



births attended by skilled health personnel, the following indicators were selected: (i) contraceptive prevalence rate; (ii) unmet need for family planning; (iii) adolescent birth rate; and (iv) antenatal care attendance. The ultimate aim of measuring the progress is to ensure that all aspects of reproductive health are achieved. This could be done by measuring outcome/impact indicators (mortality and morbidity), process indicators (access, availability, information and quality) and contextual indicators (policy and social determinants).

With the aim to assist countries to monitor their progress towards universal access to reproductive health, WHO and the United Nations Population Fund (UNFPA), in March 2007, developed a framework for national-level monitoring, as elaborated in the guideline. Three sets of indicators are proposed: (i) core indicators that all countries should report on; (ii) additional reporting based on special needs; and (iii) extended indicators depending on contextual needs.

11. Outcome of the meeting and next steps

Surveys on maternal and perinatal health, while mainly gathering information for inter-regional and inter-country comparisons, could be well-suited for use at the national, sub-national and facility levels for policy, research and programmatic decision-making. This meeting provided an opportunity to review and discuss the outcomes of the Global Asia Survey on Maternal and Perinatal Health in four South-East Asian countries (India, Nepal, Sri Lanka and Thailand) with its limitation and implications, as well as necessary follow up.

The following key points were discussed as a result of the meeting:

- (1) Limitations of the Global Survey, which included information only on women and newborns who utilized selected health facilities that perform more than 1000 deliveries/year and provide C-section.
- (2) Maximizing the use of the collected data by: (i) identifying topics and research questions for secondary data analysis; (ii) facilitating the implementation of other relevant research in maternal and perinatal health within the country context; and (iii) facilitating programmatic actions/interventions to improve maternal and

perinatal health through discussions with relevant health programmes and sectors.

- (3) Maintaining and expanding an institutional network for further research within a country, as well as regionally and globally.

The participants agreed on the following next steps:

- (1) Country teams: to follow up with the ministries of health and respective stakeholders on the above-mentioned issues.
- (2) WHO Country Offices: to facilitate the process and identify possible funding sources for the above-mentioned activities through collaboration with development partners.
- (3) SEA Regional Office and WHO-HQ: to provide support on these activities, as necessary and when requested by countries.

Annex 1

Agenda

Thursday, 22 January 2009

- | | |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 08:30 – 09:00 | Registration |
| 09:00 – 09:10 | Welcome remarks
<i>Dr Dini Latief, Director, Family and Community Health</i> |
| 09:10 – 09:20 | Introduction to the meeting
<i>Dr Ardi Kaptiningsih</i> |
| 09:20 – 09:30 | Introduction of participants
<i>Dr Akjema Magtyмова</i> |
| 09:30 – 09:45 | Regional situation on maternal and newborn health
<i>Dr Ardi Kaptiningsih</i> |
| 09:45 – 10:00 | WHO Global Survey for Maternal and Perinatal Health
<i>Dr Katherine Ba-Thike</i> |
| 10:00 – 10:30 | Discussions |
| 11:00 – 12:00 | WHO Global Survey for Maternal and Perinatal Health in SEAR:
Tools, data collection, data analysis and results.
<i>Dr Pisake Lumbiganon</i>
<i>Dr Malinee Laopaiboon</i> |
| 12:00 – 12:30 | Conceptual approach to secondary analysis of data.
<i>Dr Joao Paulo Souza</i> |
| | Discussion |
| 13:30 – 15:00 | Country presentation: Proposed further analysis at national,
provincial/state and hospital levels.

<i>India</i>
<i>Nepal</i>
<i>Sri Lanka</i>
<i>Thailand</i> |
| | Discussion |
| 15:00 – 15:30 | Examples of national, provincial/state and hospital level data
analysis |

Dr Joao Paulo Souza

Discussion

16:00 – 16:10 Introduction to the country group discussion.
Dr Akjemal Magtymova

16:10 – 17:00 Country group discussion: Data analysis at national, provincial/state and hospital levels.

Friday, 23 January 2009

08:30 – 10:30 Country group discussion: Data analysis at national, provincial/state and hospital levels (continued).

11:00 – 11:30 Presentation of the results of country group discussion:

Thailand
Sri Lanka
Nepal
India

Discussion

11:30 – 12:00 Multi-country study on maternal and perinatal health: Severe maternal morbidity and pre-term birth.
Dr Joao Paulo Souza

Discussion

12:00 – 12:30 Challenges to implementation of the Multi-country study on maternal and perinatal health in countries.
All participants – with reference to the Executive Summary and a form sent to participants.

Discussion

13:30 – 14:00 Patterns and predictors of caesarean section in Asia.
Dr Tippawan Liabsuetrakul

Discussion

15:00 – 15:30 Next step and closing

Annex 2

List of participants

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WHO SEARO in collaboration with WHO HQs organized a technical group meeting to facilitate the countries for further analysis of the data arising from the Global Survey of mode of delivery and maternal and perinatal outcomes conducted in 9 countries of the Western-Pacific and South-East Asia regions in 2007-2008. The meeting was attended by the survey team members and programme managers from Sri Lanka, India, Thailand and Nepal.

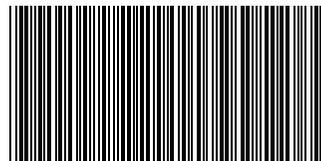
The meeting provided a forum to review country data collected through the Global Survey and plan possible follow-up quantitative or qualitative studies and secondary data analysis, including identifying specific activities in consideration with the WHO-supported work plans. In addition, the participants reviewed the protocol of a multi-country study proposed by the Department of Reproductive Health and Research, WHO-HQs on global data system to evaluate the quality of care and the burden of severe maternal complications and preterm birth.



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