

CENTRE FOR SEXUAL AND REPRODUCTIVE HEALTH

MATERNAL MORTALITY IN SOUTH EAST ASIA

SUMMARY OF THREE PAPERS
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Acronyms and abbreviations

AMDD	Averting Maternal Death and Disability
ANC	Ante Natal Care
ANM	Auxiliary Nurse Midwives
ASREP	Asia Regional Economic Policy
BCC	Behaviour Change Communication
CC	Community Clinics
CEDAW	Convention on the Elimination of all forms of Discrimination Against Women
CPR	Contraceptive Prevalence Rate
CRC	Convention on the Rights of the Child
CS	Child Survival
DFID	Department for International Development
DFP	Directorate of Family Planning
DMH	DeSoya Maternity Home
EmOC	Emergency Obstetric Care
EOC	Essential Obstetric Care
ESP	Essential Service Package
FP	Family Planning
FPCST	Family Planning Clinical Surveillance Team
FWCs	Family Welfare Centres
GoB	Government of Bangladesh
HIV	Human Immunodeficiency Virus
IAS	Indian Administrative Services
ICPD	International Conference on Population and Development
IEA	International Epidemiological Association
IMR	Infant Mortality Rate
IPC	Inter-personal Communication Skills
IPD	Integrating Population and Development
JSI(UK)	John Snow International UK
LHV	Lady Health Visitor
MCH	Maternal and Child Health
MCI	Medical Council of India
MCWC	Maternal Child Welfare Centre
MHS	Maternal Health Strategies
MMR	Maternal Mortality Ratios
MOHFW	Ministry of Health and Family Welfare
NGO	Non Governmental Organisation
NPPP	National Project Professional Personnel
PHC	Primary Health Care
PNC	Post Natal Care
PoA	Programme of Action
RH	Reproductive Health
RTI	Reproductive Tract Infection
STI	Sexually Transmitted Infection
TBA	Traditional Birth Attendants
TFR	Total Fertility Rate
TORs	Terms of Reference
U5	Under Five
UH	Urban Health
UHC	Urban Health Centre
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
UNJSMI	UN Safe Motherhood Initiative
WHO	World Health Organisation

1. SUMMARY

A symposium on Maternal Mortality in South East Asia was held during the South East Asia Congress of Epidemiology. The session was commissioned by ASREP, DFID which has placed a high importance on raising the issue of maternal mortality at appropriate forums. The session was organised by JSI(UK). Three speakers presented key achievements and challenges in making pregnancy safer. Dr. Dr. Dileep Mavalankar spoke on Policy Barriers Preventing Access to Emergency Obstetric Care in Rural India, Prof. Harshalal Seneviratne spoke on Safe Motherhood Strategies and Results in Sri Lanka, and Dr. Syeeda Waris considered the Safe Motherhood Strategy of Bangladesh.

While echoing international research on maternal mortality which highlights the need for skilled attendance at delivery, and for accessible quality Emergency Obstetric facilities, key issues that emerged from these presentations were:

- Importance of government and non-governmental collaboration;
- Need to strengthen medical and midwifery skills and remove inappropriate professional barriers;
- Need to improve quality and accessibility of services in order to increase uptake.

It was noted that while progress in reducing maternal mortality has been inadequate, there are lessons to be learnt from the rich experience in the region. However, there is still a need to focus efforts to research and highlight best practices so that health services are driven by evidence-based policies.

The three-way collaboration between DFID, JSI(UK) and the IEA was deemed to be successful. Lessons learnt were: clear TORs for JSI(UK) and IEA where both knew their respective roles in the development of the session was helpful; giving one expert the responsibility for the conduct of the session worked well; clear TORs for the speakers were essential; the opportunity for the speakers to liaise together by email before the session was useful; the appointment of speakers should be made as early as possible, as many South Asian experts need long notice periods to enable their organisation to release them; there is a richness and diversity of expertise in safe motherhood in the region which this exercise helped to identify; and - conference sessions are better attended and more lively before lunch.

2. BACKGROUND

The session ‘Maternal Mortality in South East Asia’ was held during the three day Congress of the International Epidemiological Association which was held from 24 – 27 February 2002 at Jhansi, Uttar Pradesh in India. The theme of the congress was “From Preventing Disease to Promoting Health and Quality of Life”.

The maternal mortality symposium was supported by the UK Department for International Development India Office and funded by ASREP as part of its on-going investment in the reduction of maternal mortality. It was organised by John Snow International UK, DFID Resource Centre for Sexual and Reproductive Health, in

collaboration with Dr. Babu L Verma, IEA Congress Secretary General. Dr Dinesh Nair, of the DFID Health Advisory Group in India supported the technical development of the session. Dr. Dileep Mavalankar from the Indian Institute of Management, Ahmedabad, India, carried out the local coordination and provided technical assistance to JSI(UK) in organising the programme and the selection of speakers.

The purpose of the session was to raise the profile of maternal mortality to gain wider attention among planners, researchers and programme implementers. Maternal mortality ratios (MMR) in the countries of South East Asia vary from 39 per 100,000 live births in Malaysia to 540 in Nepal.^[1]

Three speakers presented papers to the audience, which met in the Museum Auditorium at the congress venue from 2-4 p.m. on 26 February 2002. Dr. Paul Garner from the UK Liverpool School of Tropical Medicine chaired the panel. The three speakers were:

Dr. Dileep V. Mavalankar, currently working as a management consultant to the Averting Maternal Death and Disability (AMDD) project of the Mailman School of Public Health of Columbia University USA. He is seconded from his position in Ahmedabad;

Professor Harshalal R. Seneviratne Obstetrician/gynaecologist from the University of Colombo, Sri Lanka;

Dr. Syeeda Tazneen Waris Assistant Director, Directorate of Family Planning, Ministry of Health and Family Welfare of Bangladesh.

The three presentations are outlined below and the full texts are available as Appendices 1-3.

Policy Barriers Preventing Access to Emergency Obstetric Care in Rural India, presented by Dr. Dileep V Mavalankar, MD Dr.PH

Dr. Mavalankar drew attention to the key policy barriers that restrict access of rural women in India to life saving emergency obstetric care (EmOC). He described how 'utopian' policies restrict basic doctors from performing obstetric surgical procedures including caesarean and other surgical procedures. This applied even in remote areas where no specialist obstetrician was available; neither were such non-specialist doctors licensed to administer anaesthesia. Similarly paramedical staff such as Auxiliary Nurse Midwives and 'Lady Health visitors' were not permitted to manage basic obstetric emergencies in rural areas in the absence of doctors. New blood banking rules too were very idealistic, with a number of expectations which were not essential to maintain safe blood supply provision; these further reduced access to blood transfusion in rural areas.

Dr. Mavalankar pointed out how epidemiologists could help through research to expose such policy barriers and provide data for more rational policy making.

^[1] United Nations Development Programme 2001. Human Development Report.

Concerned that new policy initiatives of the Government of India had not fully addressed the importance of EmOC, and that the influence of the demand for excellence was having a negative impact on the safety of rural and poor women, he called for legislation that would permit basic doctors and Auxiliary Nurse-Midwives to expand their scope of practice to better serve the needs of rural women for accessible EmOC. Such changes would involve a public health approach to policy and provision, appropriate training, quality assurance and a challenge to restrictive professional practices. The provision of scientifically sound and appropriate emergency care to rural and remote populations was essential. Clear policies, proper strategies, political courage and government commitment are vital to reduce the high level of maternal deaths.

Safe Motherhood in Sri Lanka: Strategies and Results, presented by Professor Harshalal R. Seneviratne MB BS DM FSLCOG FRCOG

Dr. Seneviratne traced the progress of Sri Lanka over the last 150 years in reducing maternal mortality through inevitable fluctuations to current levels. He described how early special maternity care provision had provided an enduring template for current community oriented services combined with free education, enhanced status of women and family planning provision. Dr. Seneviratne also emphasised the role of skilled midwives in achieving the successes.

The strengths of the health structures in Sri Lanka were however meeting new challenges with indirect causes of maternal death such as heart disease becoming more important and demanding fresh approaches to meet the changing health profile of women. Other important challenges were the ineffectiveness of the referral system, quality of care and the high cost of services. Sri Lanka benefits from a high literacy rate and an increased awareness of the benefits of good health care services; this, with the changing global economy and high costs of contemporary medicine had put great strain on the comprehensive free services. Restructuring was essential to meet these demands

Safe Motherhood Initiative: Emergency Obstetric Care and Maternal Health Strategy of Bangladesh, presented by Dr. Syeda Tazneen Waris MBBS

Dr. Waris detailed the country's recent successes in providing EmOC services through Maternal and Child Welfare Centres (MCWC). Distributed at the district level and below, these centres are staffed by basic doctors (generally women) and nurses trained in the essentials of obstetric care. Dr. Waris presented the national strategy for maternal health, which details the country's approach in addressing the three delays leading to maternal death. These three delays are in seeking care; reaching a health facility; and receiving quality treatment. The Maternal Health Strategy focuses on promoting access to high quality EmOC services that are women friendly; and on reducing unsafe abortion. These strategies are linked to broader objectives of improving the nutritional status of women and adolescent girls.

Dr. Waris focused on how the UNFPA supported program built the capacity of the MCWC staff to provide comprehensive EmOC. The basic doctors were trained to perform all EmOC functions including Caesarean Section. Bangladesh's achievements in involving non-Government partners in provision of quality health care were

highlighted as one of the success stories that needed to be continued. Improving the quality of care in MCWCs increased their utilisation substantially.

Dr Waris' presentation demonstrated how Bangladesh had succeeded in reducing under-five mortality substantially, but that this had not been matched by satisfactory improvements in other indicators such as maternal mortality and skilled attendance at birth. This was currently only at 13% of births, with problems for women being compounded by early marriage and first birth and high discontinuation rates for contraception. She concluded that Bangladesh had an obligation to protect the rights of women through the life cycle with the long-term effect of reducing maternal mortality and morbidity.

3. CONCLUSIONS AND EVALUATION

After each session there were questions and answers where the participants raised interesting points related to the presentation and shared their experiences. The audience actively participated in the discussion, which showed their interest in the topic and the presentations.

Winding up the session, Dr. Paul Garner highlighted the inadequate progress countries in the region had made in impacting maternal deaths. While there were valuable lessons from the region that could be shared, he noted the need to continue to focus efforts in applying research for fundamental issues like improving access to care especially for the poor and marginalized. Researchers therefore had a clear role in highlighting best practices, so that health services would be driven by evidence based policies.

The Congress itself was relatively well attended with about 250 participants consisting mainly of medical teachers, health administrators, researchers and representatives of international agencies including WHO. While most of the participants were from India, there was representation from other Asian, African and European countries and international associations.

It was clear that DFID's support helped the Congress organizers to focus on the critical public health issue of maternal mortality. The session was successful in drawing health planners' and researchers' attention to the need for more evidence based policies to impact critical health outcomes like maternal deaths and provided a forum for sharing experience from various countries.

The management of the session was well evaluated with thanks being offered to JSI(UK) for putting it together. Recommendations were made that a similar organisational strategy should be adopted for the future.

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Appendix 1

POLICY BARRIERS PREVENTING ACCESS TO EMERGENCY OBSTETRIC CARE IN RURAL INDIA

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Abstract

India with its one billion people contributes to about 20% of all maternal deaths in the world. Even though infant mortality has declined in India maternal mortality has remained high at about 540 per 100,000 live births. Recent scientific evidence shows that access and use of high quality emergency obstetric care is the key to reducing maternal mortality and that high risk approach in ante natal care do not help in reducing maternal mortality significantly. This paper analyses the policy level barriers, which restrict access of rural women to life saving emergency obstetric care in rural India. The paper is based on study of policies, research reports and experience of working in the area of maternal health over last several years. The paper describes how policies restrict basic doctors³ from performing obstetric surgical procedures including caesarean section even in remote areas where there is no specialist obstetrician available. The para-medical staff such as the Auxiliary Nurse Midwife is also not allowed to manage obstetric emergencies in rural areas. The policy also does not allow nurses or basic doctors to give anaesthesia. As there is limited number of anaesthetists in rural areas, this further reduces access to life saving emergency surgery. New blood banking rules are very utopian, requiring many unnecessary things for licensing of a blood bank. Due to this, already limited access to blood transfusion in rural area has further reduced. Thus many restrictive policies of the

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³ Basic Doctor in India has five and half year of medical training after high school graduation. This training includes one year of practical internship. The basic medical degree is called Bachelor of Medicines and Bachelor of Surgery (MBBS). This is equivalent to MD in USA.

government have made emergency obstetric care inaccessible in rural areas leading to continued higher maternal mortality in India.

Key Words: *Maternal Mortality, Policies, India, Emergency Obstetric Care,*

Anaesthesia, Blood

Background

India has over one billion people with per capita gross national income of only \$ 460. About 35% of the population lives below poverty line and 86% has incomes below 2 \$ per day.

India has one of the highest maternal mortality ratio in the world. The two national health surveys, done in 1992-3 and 1998-9 showed that the maternal mortality ratio (MMR) was 437 and 540 per 100,000 live births respectively (1, 2). Other smaller studies also report somewhat similar high rates of maternal mortality (3, 4). At this MMR it is estimated that about 100,000 –120,000 women dies every year in India, which is about 20-24 % of all maternal deaths in the world. The key question is why maternal mortality so high in India while infant mortality has gone down from about 146 in 1951s to about 72 per 1000 live births in 1998 (5). There have been some studies trying to measure maternal mortality levels, but fewer researchers have focused on analysis of reasons for high maternal mortality (6).

Since late 1950s government of India has been developing network of Primary Health Care (PHC) centres and Sub- health centres staffed by doctors and Auxiliary Nurse Midwives (ANM)⁴ respectively to provide MCH services. The major focus of the PHC system has shifted from basic MCH care in the 1950-60s to family planning, ANC with high risk approach, training of TBA in 1970-1980s and immunization program in 1980-1990s with resultant neglect of intra-natal care. This has happened under influence of various international health initiatives supported by donor funds.

Pioneering research done at Columbia University, school of public health over the last 15 years has conclusively shown that the best and most cost effective strategy for reduction in maternal mortality is to provide Emergency Obstetric Care (EmOC) services within the reach of all pregnant women. This is because it is not possible to predict or prevent complications of pregnancy and childbirth but there is generally time of several hours before a woman dies, so she can be saved by effective EmOC services (7). WHO, UNFPA and UNICEF have also now accepted this strategy of promoting EmOC and recommend to measure the availability and use of EmOC as process indicators for measuring progress towards reducing maternal mortality (8).

There has been some research and analysis on level of maternal mortality and its causes (9, 10, 11, 12), but there has been scant attention paid to analysis of access and use of EmOC. There is only one study in India which shows that in most of the 10 districts studied only a small proportion of expected obstetric complications reached

⁴ ANM is trained for one and half year and learns nursing and midwifery. She is posted in rural area after training to serve a population of 5000.

first referral hospitals (13). In India and globally also there is not much focus on how medical care policies limit access to EmOC (14, 15). Here we examine how policies related to practice of obstetrics, anaesthesia, and blood transfusion affect access to life saving EmOC services in rural areas. Even though the paper focuses on India, such policy barriers may well be existing in many other developing countries as well as some remote and poor parts of developed world.

The information presented in this study is collected by review past research, policy and program documents, documents of international agencies and work experience as research adviser and consultant to national and international agencies in the area of maternal health over last 5 years in India.

Medical care policies & their impact on access to care

Given the new knowledge in the area of prevention of maternal mortality the critical variable is access to, and use of high quality EmOC by pregnant women with complications. Unfortunately this new scientific knowledge has not been well communicated in India to the policy makers and program implementers. The recently developed new Population policy and draft Health Policy of government of India does not fully recognize importance of EmOC in reducing maternal mortality (1, 16). Due to this the government program focus is still on ANC and high-risk approach, training of TBA, neglecting delivery care and provision of EmOC.

Obstetrics only by obstetricians

The current government policy allows only a postgraduate qualified obstetrician to do Caesarean Section operation or any abdominal surgery. Basic doctors are not allowed to do this even in emergency. In contrast to this, some countries in Africa and Latin America allow basic doctors to do Caesarean Section after some practical training. In a poor country like India, where 70 % of the people lives in 550,000 villages, it not possible to provide obstetricians to do Caesarean Section everywhere. In many districts there are only one or two government obstetricians for an average of 2 million people! On the other hand each district already has about 60-70 basic doctors in various government hospitals in and health centres. But the policies restrict these basic doctors from doing Caesarean Section. In theory basic doctors can do some EmOC procedures like manual removal of placenta, suturing tears, assisted vaginal delivery etc. But they have never been asked to do it nor their performance in EmOC monitored.

ANMs, who are the lowest level of government health workers and their supervisors - the Lady Health Visitors⁵, are not allowed to do many of the emergency obstetric procedures such as treating infection with antibiotics, stabilizing a case of eclampsia and manual removal of placenta. All such cases are referred up.

Due to these restrictive government policies women who need Caesarean Section or other emergency obstetric procedures in rural and remote area have to travel for hours

⁵ A Lady Health Visitor is also trained for one and half year and supervises four ANMs. Some LHV's are promoted from ANMs after 10-15 years of experience and have to under go 6 months training.

to the district hospital where obstetrician is available. Referral to higher level increases the overall cost of the treatment, which many poor families cannot afford. Recent cost-recovery policies at district levels government hospitals have further increased the expenditure of the referred patients. Such policies restrict access to emergency care by the poor and delays treatment. Due to all this many women hesitate to seek care and die at home or in transit. Studies done in states of Andhra Pradesh, Maharashtra, and Rajasthan showed that 52%, 47%, 42% of maternal deaths happened in the home or in transit to a hospital respectively (12, 17, 18).

Anaesthesia only by Anaesthetists

There are very few anaesthetists in rural areas of India. National data are not available but limited data indicate that each district has only 1-6 qualified anaesthetists and most of whom are attached to the district hospital. At the sub-district level hardly any anaesthetists are available. This is because only a few positions are available for postgraduate training in anaesthesia and of the small number who become anaesthetists the majority enter into private practice in urban areas due to much higher earnings and comfortable city life.

In India, as a policy anaesthesia training is only given to doctors – nurses cannot become anaesthetists, even though in USA, and some countries in Africa there is training for Nurse Anaesthetists. In rural areas it is not uncommon to find obstetrician or surgeon working in the sub-district hospitals but generally there is no anaesthetist. Hence patients needing major surgery have to be referred to higher level where anaesthetist is available. Thus very restrictive policies about anaesthesia, intended to provide very safe anaesthesia, make access to it very much limited.

The curriculum prescribed by Medical Council of India (MCI)⁶ for basic doctor includes that each doctor during internship will acquire skills of spinal anaesthesia, local anaesthesia, and will provide general anaesthesia under supervision (19). But government policy does not allow basic doctor to give spinal or general anaesthesia.

At some rural hospitals obstetricians and surgeons do give anaesthesia and then operate while a medical officer or a nurse maintains anaesthesia. But this is not accepted as a regular policy by government. Some state governments have trained basic doctors in anaesthesia for 3 months for providing some kind of back up anaesthesia if needed during abdominal sterilization operations for family planning program. Some of these 3-month anaesthesia trained medical officers have been giving anaesthesia on regular basis for many years and are quite proficient. But government does not recognize them as anaesthetists even though WHO and World Federation of Societies of Anaesthesiologists recommend, in their joint publication “Anaesthesia at District Hospital” that doctors trained for one or two years in anaesthesia can give safe anaesthesia (20).

To provide quick redress to consumer complaints the government passed a new act called Consumer Protection Act, under which semi-judicial process was developed for providing fast justice. The recent inclusion of doctors under the purview of Consumer

⁶ MCI is an autonomous body created by act of parliament to decide standards of medical education and practice. It registers all the doctors in India and gives them license to practice.

Protection Act, has made it much easier to sue a doctor in event of an adverse outcome. The fear of this act has made doctors practice more defensive medicine where more patients are referred to higher levels to avoid risk to the doctors (21).

Recognition of qualifications and postings of specialists

In some states of India, doctors with post-graduate qualification in anaesthesia or obstetrics have to join as a general duty medical officer and work in that position for 5-10 years before they can be promoted as specialists. Due to this policy doctors with specialist qualification are posted at a Primary Health Care Centre or an urban clinic as a medical officer where there is no scope for any anaesthesia or surgery. For example in two districts where data was collected 7 out of 12 doctors having postgraduate qualification in Anaesthesia were posted in PHC centres or urban clinics. Whereas in those districts none of the sub-district hospitals where obstetricians or surgeons are posted, had any anaesthetist. Thus local policies of recruitment and postings are also responsible for improper distribution of the anaesthetist leading to further decrease in access to critical services needed for emergency obstetric care. Such policies also waste very scarce technical resources in a poor country like India.

Access to blood

In India, Anaemia among women is very common. Recent national survey showed that 52 % women have anaemia and 17 % have moderate or severe anaemia (2). Data collected on causes of maternal mortality by Registrar General of India shows that anaemia is responsible for 14-24% of the maternal death, while bleeding during pregnancy is responsible for 16-26% of maternal deaths (3). Access to blood is very important to treat maternal complications, but more so in a country like India where anaemia is common.

Access to blood in rural areas of India is very difficult due to continued neglect of the blood banking services by the government in the past. Secondly due to high level of illiteracy, poverty and superstition, very few people are ready to donate blood in rural India.

Not understanding these ground realities, and not realizing the dangers of restricting access to blood the government of India made very utopian rules regarding licensing and control of blood banks in 1999 (22). This was done in response to Public Interest Litigation in the supreme court of India, by consumer groups pointing out that there was lack of safety in blood banks in India.

These rules for blood banks stipulate some good conditions such as all blood banks must be licensed and that they must test all blood for HIV and Hepatitis. But the rules also stipulate many conditions which are unnecessary for ensuring safety of the blood, such as blood bank must have 8 rooms, 3 of which must be air conditioned. The rules also have some conditions which are useful for large blood banks in urban areas which are collecting thousands of units of blood each month, but not cost effective realistic or essential for the safety of the blood in a small blood bank in rural area which only needs few hundred blood units per month. These conditions are that blood bank must have minimum staff of 3 full time people including a pathologist (or a medical officer with one year training in blood banking), a blood bank technician and

a nurse. Due to such excessive requirements laid down by government for blood banks the costs have gone up and some blood banks had to be closed down. Many African countries where HIV rates are very high as compared to India, they do not have such utopian rules for blood banking.

In many states in India, there is only one blood bank in each district which has a population of about 2 million people and has about 800 -1500 villages. In some districts there are no blood banks at all. Some hospitals in remote areas were collecting relative's blood when needed, test it and transfuse it to the patient without storage. This is called un-banked direct blood transfusion. This life saving practice had to be stopped after the new regulations.

Blood is not free. Even in the government hospitals in many states there is charge of about \$ 5-10 per unit of blood for testing and materials used. This charge can be waived if patient can produce a certificate that she is poor, which many poor cannot.

Thus utopian policies have made blood even more difficult to get in rural areas. If we assume even a conservative figure of 25% of maternal death due to non-availability of blood, then the 25,000 - 30,000 maternal deaths in India every year would be due to lack of access to blood.

Why do such policies exist?

It is important to understand why such restrictive policies are present in poor country like India.

Firstly, doctors, their association and councils are politically strong, have heavy urban bias and want to protect earnings in the private sector, especially for specialists. They have little social concern or public health perspective. Hence they want to restrict provision of care only by the fully qualified members of the profession and specialty.

Secondly, the central government's policy-making wing is largely composed of non-technical people. The ministers of health at state and national level are politicians and need no qualification. The health and family welfare secretaries are career bureaucrats from the Indian Administrative Services (IAS). The technical officers in health department have much less power than the secretaries. The technical officers at the national level are most of the times clinicians without any public health, health management or public policy training. Only the officers from the Central Government Health Service, which are mainly in the urban areas, are eligible for these posts in the central government and hence they have no direct experience of working in rural areas. Thus no one in the policy-making circles is trained to take public health view balancing technical needs and rural situation.

Thirdly the public health professionals, the international agencies and academics have focused mainly on the Primary Health care development, but neglected secondary health care and the areas of health policy and management. Thus their inputs in policy making for secondary level care are limited.

Feminist organizations are powerful in India. They have been active in blocking certain policies such as introduction of injectable contraceptives in India. But they

have not taken any cognizance of these restrictive medical care policies, which limit access to life saving technology for rural women. This may be due to their urban and anti-technology bias.

Local press and judicial and administrative processes have also contributed to this situation. The press does not take note of thousands of deaths happening at home of poor mothers due to obstetric complications, but if a single death happens in a small hospital there will be much adverse publicity in the local newspapers. Relatives of the woman may also bring in a law suite against the doctors and the hospital. This leads to further defensive practice and more referrals.

The government's administrative process also tries to find faults with the doctors if a patient dies in the hospital, but does not bother if the mother dies at home or while being referred.

The way out

The national and state governments have to actively change the policies that constrain access to EmOC in rural areas in India. Government must strive for the best possible services, but when they are not feasible to achieve in near future, it must establish simple but safe standards of services which can be provided by basic doctors and nurses, and not insist on services to be provided only by specialists at even at rural and remote hospitals.

Basic doctors must be trained for 9-12 months to provide anaesthesia in rural hospitals. In remote areas where even such doctors are not available, then nurses and technicians should be trained for anaesthesia. Such training should be of good quality and authorized by law. In very remote areas basic doctors should be trained for 1-2 years to do all basic surgical functions needed in a rural areas including Caesarean Section, and even other emergency abdominal surgery. Such doctors should be posted at sub-district level hospitals where there is no specialists and should be legally allowed to do surgery.

Blood banking regulation should focus on essential minimum safety requirements rather than desirable, but non-essential and expensive things. Un-banked, but properly tested blood transfusion should be allowed at sub-district level towns where there is no blood bank. District level blood banks should be strengthened and basic blood banks should be started at all sub-district hospitals.

Conclusions

In India maternal mortality has remained high, due to various policies which have limited access to life-saving technology to women in rural areas. In trying to promote Primary Health Care and Family Planning, secondary level hospital based health care is neglected. Health policies should be in line with realities of rural India and be based on latest scientific understanding about maternal mortality. Uniform policies at all places (cities and rural areas) which restrict access to life saving technology, are very unjust to the people living in rural and remote places, and violate their fundamental human rights to life and liberty which is enshrined in Indian constitution.

Government, the donors and academics need to focus action at policy level barriers that restrict access to care. Government will have to adopt a public health approach and counter powerful lobbies of doctors and specialist in urban areas and in private practice, to ensure availability of appropriate and scientifically sound emergency care to the rural and remote populations, if maternal mortality reduction is to be achieved in India. This needs a clear policy, proper strategy and political courage and commitment.

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Appendix 2

“SAFE MOTHERHOOD IN SRI LANKA: STRATEGIES AND RESULTS”

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Mr. Chairperson, honoured guests, ladies and gentlemen I was deeply touched by the invitation to speak at this symposium and it shall remain a high point of my professional and personal life.

South Asia can boast of advanced civilizations from ancient times. It also contributes to 47% of the Maternal Deaths in the world. Because of the diversity amongst its member states in issues related to human development and health care, conclusions on service delivery are difficult to derive. Amongst the South Asian Countries Sri Lanka has:

- A long tradition and history of providing health care to its people;
- Maintained good health statistics;
- A good status of Maternal and Child Health.

For this discussion I have used the Maternal Mortality Rate of Sri Lanka as the base to analyse the development of services in the country. The MMR of the country is available from the year 1881 and has progressed in an interesting sequence to reach the current figure of 60 per 100,000 live births. Our experience has shown that three key elements have interacted to bring about the decline in maternal mortality in Sri Lanka. These are:

- Development of the Health care structure;
- Social advancement;
- Introduction and expansion of family planning.

During this presentation I shall refer to the manner in which these three components have played their part in the Developing the Services for Safe motherhood in Sri Lanka. An overview of the maternal mortality rate of Sri Lanka illustrates four different phases of development. These are:

- The Early Period from ancient times up to the year 1926;
- The Pre – independence period 1926 – 1948;
- The Post – independence period 1948 – 1990s;
- The present era.

From ancient times free health and education was provided under the patronage of the King. Women's involvement and empowerment has been a key issue in the proper utilization of these facilities. Literacy amongst females estimated as 26.4% in the year 1901 advanced to a figure of 83.2 by the year 1981. The change over from Maternal and Child Health to Reproductive Health (RH) in the late 1990s has been a step in the right direction and expansion of RH education in schools has been an important recent strategy for further enhancing these benefits.

The early years saw the overall establishment of western medicine in Sri Lanka under the colonial rulers. It was during British rule that the Health care was consolidated. The establishment of the General Hospital in Colombo, the initiation of the Colombo Medical School in 1870 and commencement of the DeSoysa Maternity Home (DMH) by donation were key events in the development of health care at that time. Further improvement occurred when the first Specialist Obstetrician was appointed to DMH in 1899 and training of midwives was commenced at DMH in 1910. These measures were very individual ones and did not operate at a national level.

During the **next phase** the focus was on attempts at organization of the health care structure. The first health unit was commenced in 1926 at Kalutara a district 40km south of Colombo. The health unit thus formed provided field and domiciliary maternity care by public health midwives, public health nursing sisters and area medical officers of health. At that time the aims were:

- To identify all pregnant women by home visits;
- To provide maternal care including health education at the local clinic and or at home;
- To refer high risk cases for specialist care.

The basic health care structure in the country continues to use the health unit as the template for the provision of Public Health Services. While the maternity care infra structure developed further the three-tiered health care structure was established at a national level with good coordination between the field and institutional services and organization of special campaigns and units for defined facilities. During this period important social changes also occurred in the country which greatly enhanced the effects of the health inputs. These are:

- Universal adult franchise which gave women and men the power to vote;
- Free education which provided a higher literacy so that the people of the country could recognise their health needs. The reason for the late age of marriage at 24 years and the age of first birth at 25.5 years amongst the women of Sri Lanka is thought to be the higher level of literacy and education enjoyed by the women in Sri Lanka.

One may wonder then why the maternal mortality fluctuated so much and at times reached very high number in the immediate pre – independence period. These peaks were the result of the many epidemics of malaria which spread very rapidly. We are fearful of a recurrence of the high maternal deaths as malaria is on the rise once again.

The benefits of these health and social interventions manifested during the **next phase**, which was immediately after independence. A new player was the

introduction of Family Planning in the year 1953 by the formation of the Family Planning Association of Ceylon. The role played by family planning in providing for safe motherhood is clear when the Total Fertility Rate (TFR) is plotted against the Maternal Mortality Rate (MMR). It is interesting to note that:

- Until the MMR reaches a value of 50 per 10,000 LB family planning does not make a significant impact in ensuring maternal safety. Other social and health interventions would be therefore necessary to improve maternal safety;
- From MMR of 50 per 10,000 LB there is a linear relationship between reduction in the TFR and MMR.

Sri Lanka has seen a steady increase in the Contraceptive Prevalence Rate as family planning was considered a priority from the 1950s to the 1980s. It is clear that family planning services played a significant role in the reduction of maternal mortality from 1970s to the end of the 1980s.

Several other related events occurred to further increase contraceptive use and also decline the MMR still further. Of these the organization of the maternal death audit and the introduction of the Integrated Reproductive Health Programme were priority items in the march towards safer motherhood.

Maternal death auditing was commenced in 1985 and from 1992 every maternal death could be considered as being investigated. The results show features which are very different from the traditional causes seen for maternal death in a developing country. Medical disorders have come into prominence as a leading cause of maternal deaths and in 1997 cardiac disease (21%) and liver disease (19%) were the commonest. In the University unit in Colombo the papers on cardiac disease in pregnancy published since 1950 shows a rise in the incidence of congenital heart disease while the incidence of rheumatic disease shows a proportionate decline. In absolute terms however the number of pregnancies complicated by heart disease including those of rheumatic aetiology has increased.

Other interventions in the 1990s which helped to improve maternal survival are the introduction of the “national partogram” and the expansion of the facilities for critical care. At national level the partogram is meant to be a tool for the identification of abnormal labour before it creates the severe intra partum complications which are known to be responsible for maternal morbidity and mortality.

The Reproductive Health (RH) Charter, which was proposed by the International Planned Parenthood Federation, was adopted by the world community in 1992. The Government of Sri Lanka incorporated RH into its health care structure in 1998. The Reproductive Health Concept involves several key features. These are:

- Health Service delivery from adolescence to the post reproductive phase of life.
- Horizontal integration of the different units and health care campaigns providing for the individual components of RH.
- Providing for the RH needs of both men and women without gender bias.

With its country wide health care structure Sri Lanka was ideally suited to implement the integrated Reproductive health programme. Today this component of health care is accepted as the norm.

By the mid 1990s it was clear that MMR was insufficient to assess the safe motherhood status in Sri Lanka. The health managers had the option of looking at other health indicators such as perinatal mortality and maternal morbidity to evaluate the quality of services provided. At this time an entirely new concept was formulated to link several key social and rights issues. With this was initiated the Women's right to life and health project.

The Women's Right to Life and Health Project looked at "Safe Motherhood" as a basic right and as the first part was to assess the availability, accessibility and the utilization of facilities for Emergency Obstetric Care. A study was conducted in carefully selected areas in the country where the services provided by, facilities available at and client utilization of specialist and non-specialist hospitals were evaluated. This study which was funded by the Bill and Melinda Gates Foundation was most useful as it confirmed the presence of gaps in the provision of Emergency Obstetric Care (EmOC) in Sri Lanka. It indirectly indicated the situation regarding "Safe Motherhood" in Sri Lanka.

What then would be the future development of Safe Motherhood in Sri Lanka? What would be the priorities and the controversies? In formulating the future programmes the policy makers need to take into account client needs and attitudes while balancing these with the logistics of provision of Reproductive Health Care. Once again the triad of:

- Development of Health Care infra structure;
- Social and economic development;
- Expansion of Family Planning.

Would be the path through which future development will progress. It is therefore prudent to examine the current situation regarding these three areas.

Health care development: The present constraints in health care development relate to three main items. These are:

1. The over use of specialist services. The data on the place of deliveries indicate that from the late 1980s there has been a major shift of the place of deliveries from the secondary health care institutions to the specialist / tertiary level institutions. The report on EmOC has further highlighted the deficiencies in this regard. The over use of specialist facilities is partly due to the small family size (Total Fertility Rate 2.61) and the desire to utilize the facility that is considered as the best for the safety of these few pregnancies a Sri Lankan couple would go through. It is clear that the distribution of health care facilities has to be rationalised if adequate coverage is to be provided for all districts.

2. While the field and institutional infrastructure is generally in place its efficient management needs strengthening. The government of Sri Lanka has addressed this issue in recent times.

3. The cost of running the Health service with its policy of free health care to all is a tremendous financial commitment. Foreign aid provided only 4% of the total health

budget and it is essential that future policy would also focus on income generation as a means of easing the financial burden imposed by free health care.

Social development and literacy: While the high level of literacy has been a major achievement in social development the policy makers did not fore see the changes in expectations that come with it. In addition the school enrolment rates indicate a 30% reduction in secondary school attendance of female students from the 96% seen in primary schools. This means that this number of female students and an equivalent number of male students will be unexposed to the reproductive health education programme that is presently conducted in schools. An alternative strategy is required to reach out to these young school leavers if good reproductive health practices are to be ensured in the future.

Future Family Planning Strategies: In spite of an international reputation for achievements in family planning the negative areas in its service delivery and client compliance are many. The priority area for the provision of family planning guidance and contraceptive service delivery so as to improve maternal safety is in medical disorders such as organic heart disease, diabetes and chronic hypertensive disease. There is an urgent need to eliminate medical barriers to family planning amongst these clients so that they may plan their pregnancies appropriately.

The high level of literacy also has negatively affected contraceptive use. The high contraceptive prevalence in Sri Lanka is mainly due to the high proportion of use of the traditional methods and sterilizations. It is interesting to note therefore that in spite of the high literacy rate the use of modern technological non-permanent methods is limited. A further surprising feature is that the highest non-users of contraceptives next to the uneducated in the country are its highest educated. It appears that the public is fearful of the perceived complications of the individual family planning methods. As the desire for adequate spacing between pregnancies is very strong amongst the Sri Lankan public it is no surprise then to see an increase in illegal abortions being performed. If this situation is to be corrected it is vital that the strategies to promote contraceptive use shifts away from its population benefits and be more focused on the non-contraceptive health benefits of the use of family planning methods.

Sri Lanka therefore has much to do in maintaining the high status of maternal safety it has achieved. The past strategies brought in the results enjoyed today. New strategies based on the needs and aspirations of its public are required for the future. Past experience would no doubt provide the foundation on which future policies for safe motherhood can be developed.

Appendix 3

SAFE MOTHERHOOD INITIATIVE: EMERGENCY OBSTETRIC CARE AND MATERNAL HEALTH STRATEGY OF BANGLADESH

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