Abstract

Every year, many women suffer pregnancy-related complications and a number die. Linked to this is the burden of perinatal mortality and morbidity. Most of these deaths and complications can be averted with basic and effective low cost interventions even where resources are limited and Beyond the numbers (BTN) presents an approach for understanding how this can be done. The first regional BTN workshop was held in Issyk Kul, Kyrgyzstan, from 30 May to 2 June 2004, with the participation of Kazakhstan, Kyrgyzstan, the Republic of Moldova, Tajikistan and Uzbekistan and partners such as UN agencies (UNFPA, UNICEF) and non-governmental organizations (ZdравПлюс, Project Hope). The workshop was organized by WHO-Regional Office for Europe Making Pregnancy Safer programme, with support from WHO-Geneva. The concepts of BTN were introduced, how these can be used as a tool for improving clinical management and outcomes of care. The aim is to help countries introduce the BTN approaches to acquire experience and develop general recommendations for reducing the burden of severe maternal and neonatal morbidity. During working group sessions, the country teams developed drafts for national action plans. A number of recommendations were made for implementing BTN in national settings.
Making Pregnancy Safer

Regional Workshop on “Beyond the Numbers”

Reviewing maternal and perinatal deaths and complications

Report

Issyk Kul, Kyrgyzstan, 30 May - 2 June 2004
Abstract

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Keywords

PREGNANCY COMPLICATIONS – prevention and control
MATERNAL MORTALITY
INFANT MORTALITY
MATERNAL HEALTH SERVICES – organization and administration
EUROPE
KAZAKHSTAN
KYRGYZSTAN
UZBEKISTAN
TAJIKISTAN
REPUBLIC OF MOLDOVA

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### Contents

1. Executive Summary ........................................................................................................ 1
2. Recommendations from the workshop ................................................................. 1
3. Background .................................................................................................................. 3
   3.1 *Beyond the numbers* ............................................................................................ 3
   3.2 Situation analysis ................................................................................................... 5
4. Objectives of the workshop ......................................................................................... 6
5. Workshop proceedings ................................................................................................. 7
Annex I – Programme ....................................................................................................... 10
Annex II – List of participants ........................................................................................ 12
Annex III – Group work – constraints and strategies for implementing BTN .......... 16
Annex IV – Country presentations .................................................................................. 21
1 Executive Summary

Every year, many women suffer pregnancy-related complications and a number die.Linked to this is the burden of perinatal mortality and morbidity. Most of these deaths and complications can be averted with basic and effective low-cost interventions, even where resources are limited. In order to do so, the right kind of information is needed upon which to base actions. Beyond the numbers (BTN) presents a number of approaches that go from counting the number of deaths to developing an understanding of why these occur and how they can be avoided.

In the Central Asian Republics and the Republic of Moldova, the rate of perinatal death is 13 per 1 000 births, as compared to 7 for Europe as a whole and for the EU (following expansion to 25 countries on 1 May 2004). The average rate of officially reported maternal deaths per 100 000 live births is 31 for the Republic of Moldova and 41 for the Central Asian Republics, compared to 5 both for Europe and the EU after May 2004\(^1\). However, pilot studies demonstrate that these numbers are an underestimation, and that the real figures can, in some case, be several times higher – up to 1 000 maternal deaths per 100 000 live births.

The first regional workshop to introduce BTN in the European Region was held in Issyk Kul, Kyrgyzstan, from 30 May to 2 June 2004, organized by WHO-Regional Office for Europe Making Pregnancy Safer programme, with support from WHO-Geneva. Five countries were represented: Kazakhstan, Kyrgyzstan, the Republic of Moldova, Tajikistan and Uzbekistan. Each sent a minimum of four representatives including officials from the Ministry of Health, leading midwives and obstetricians\(^2\). Participants also included partners such as UN agencies (UNFPA, UNICEF) and non-governmental organizations (ZdravPlus, Project Hope).

The concepts of BTN were introduced, with an overview of the rationale behind reviewing maternal and perinatal deaths and how it can be used as a tool for improving clinical management and outcomes of care. The purpose of BTN is aimed at helping countries introduce, at national, state or facility level, any one of the BTN approaches, to acquire experience, develop general recommendations for saving maternal and newborn lives, and in this manner reducing the burden of severe maternal and neonatal morbidity. During working group sessions, the country teams developed drafts for national action plans. A number of recommendations were made for implementing BTN in national settings.

2 Recommendations from the workshop

Case reviews should be conducted against standards for clinical management of proven effectiveness, supported by up-to-date evidence-based clinical protocols. This basic requirement may be linked to a national initiative develop and/or update evidence-based clinical and managerial guidelines.

The overall consensus of the meeting was based on what is known as the rule of “P’s”; i.e., the introduction of any technique for maternal and perinatal death reviews should be:

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\(^{1}\) Source: HFA Database, 2002 figures. WHO Regional Office for Europe. Copenhagen, Denmark.

\(^{2}\) See Annex 2 – list of participants
Practical

Using an approach (among the five included in the BTN) that is realistic and feasible for a country’s specific circumstances. Country representatives all agreed that it was important to “start small” and to learn and refine programmes based on experience. For the majority of countries, although a full scale confidential enquiry into maternal deaths is the gold standard, it was recognised that some interim steps need to be taken; it is easier to start with facility-based reviews or, in some places, verbal autopsies, before going for national in-depth reviews of all maternal deaths.

Piloted

As a basis for good practice, country representatives agreed that, whatever the approach chosen, it should first be piloted so that questionnaires can be refined in the light of experience and address any other problems or difficulties that may emerge.

Partnership based

Country representatives agreed that developing and implementing the clinical audit methodology should be done in partnership with all key stakeholders (Ministries of Health, leading obstetricians and midwives, public health officials, women’s groups, international donors and non-governmental organisations), starting at the planning phase through interpreting and assessing results to allow development and implementation of recommendations.

Have political support

It was recognised that although there are benefits from undertaking case reviews at facility level these depend on the enthusiasm and commitment of particular individuals. By working through the Ministry of Health, national ownership is assured and necessary actions, such as development of a national programme of evidence-based management and/or clinical guidelines, can be taken at central level. Legal changes may also be required to enable health care providers to freely participate in case reviews and promote the use of national clinical guidelines.

Be supportive and not punitive

A major obstacle to the implementation of effective case reviews is the threat of punishment of health care staff that has cared for women who have died. Most countries reported systems whereby maternal deaths are currently openly reviewed by teams of assessors who can then suggest punitive measures against the health care worker(s). Such systems make health care providers uncomfortable in reporting the true circumstances of any death or “near miss” (severe morbidity case), and valuable opportunities to learn from experience are missed. It was agreed that BTN-style case reviews will require a shift in attitude, but workshop participants believed this shift would be possible over time. Some countries therefore suggested running the new and old case review systems in parallel for a short period.
3 Background

3.1 Beyond the numbers

Beyond the numbers (BTN) is a new tool developed by WHO within the Making Pregnancy Safer initiative to do case reviews of maternal deaths and complications. Maternal mortality rates do not give the real reasons why mothers die: who are these women, how could these deaths have been avoided, what remedial and/or preventive factors could have saved them.

The philosophy of BTN is simple: it is possible to avoid maternal deaths even in resource poor countries, but this requires the right kind of information on which to base effective interventions. It is not enough to know the rates of maternal mortality; an understanding of the underlying factors that led to the deaths is essential. Each maternal death or case of life-threatening complication has a story to tell and can provide indications on practical ways of affecting the outcome. Case reviews of maternal deaths provide evidence of where the main problems lie to avoid maternal mortality and what can be done in practical terms, highlighting the key areas requiring interventions by the health sector and community, as well as guidelines required to improve clinical outcomes. The information gained from case reviews are a prerequisite for action.

Systematically combining the findings of individual reviews of women’s deaths into wider maternal death or morbidity reviews provides evidence of why they occurred and barriers to accessing skilled care, allowing a more robust analysis of where the main solutions for preventing maternal mortality and morbidity. The outcomes of such reviews, wherever they have been adopted, have shown to result in practical changes in the delivery of maternity care, with significant improvements to outcomes of care. These have been achieved by acting on review results and applying resources or efforts to key areas – not always health sector-based – enabling health sector and community interventions as well as developing of up-to-date clinical guidelines.

Translating findings into action is the whole purpose of these case reviews, for without interventions based on review recommendations the review process is worthless. The findings form a baseline against which to monitor the success of changes in clinical practices. Therefore, a method for monitoring implementation of review recommendations are being should be part of the system; this both provides a stimulus for health sector action and reminds review committees to ensure their recommendations are evidence-based.

The results of case reviews can also have a powerful advocacy role and can be used by Ministers of Health, government and decision-makers to raise awareness and mobilize national and donor resources. Maternal mortality and safe motherhood committees, as well as all other stakeholders in maternal health, can use the information generated through use of the BTN approaches.

Without the ability to diagnose why so many pregnant women are dying or suffer severe complications from pregnancy, the opportunity to identify correct remedial actions for specific women in different circumstances is lost. There is no “one size fits all” solution. Even though the causes and determinants may be similar, each country, district, facility or community faces a unique set of problems and constraints and needs to work out an individualised approach. The
philosophy proposed in BTN and its methodologies for case reviews can be the essential first step in this process.

BTN is a practical guide written by leading international experts and describes five proven strategies or approaches for reviewing cases of maternal death or morbidity, with the practical steps in how to undertake each approach, and can be used at different levels, national or district, in communities and health facilities. These were described by facilitators during plenary sessions and are summarised below:

<table>
<thead>
<tr>
<th>Approach</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community-based maternal death reviews (verbal autopsies)</td>
<td>A method of finding out the medical causes of death and ascertaining the personal, family or community factors that may have contributed to the deaths in women who died outside of a medical facility.</td>
</tr>
<tr>
<td>Facility-based maternal death review</td>
<td>A qualitative, in-depth investigation of the causes of and circumstances surrounding maternal deaths occurring at health facilities. Deaths are initially identified at the facility level but such reviews may be able to be expanded to identify the combination of factors at the facility and in the community that contributed to the death, and which deaths were avoidable.</td>
</tr>
<tr>
<td>Confidential enquiries into maternal deaths</td>
<td>A systematic multi-disciplinary anonymous investigation of all or a representative sample of maternal deaths occurring at an area, regional (state) or national level. It identifies the numbers, causes and avoidable or remediable factors associated with them.</td>
</tr>
<tr>
<td>Reviews of severe morbidity (near misses)</td>
<td>The identification and assessment of cases in which pregnant women survive obstetric complications. These can be used in addition to reviewing maternal deaths through any of the other approaches described here.</td>
</tr>
<tr>
<td>Clinical audit</td>
<td>Clinical audit has been described as a quality improvement process that seeks to improve patient care and outcomes through systematic review of aspects of the structure, processes, and outcomes of care against explicit criteria and the subsequent implementation of change. Where indicated, changes are implemented at an individual, team or service level and further monitoring is used to confirm improvement in healthcare delivery.</td>
</tr>
</tbody>
</table>

The results of case reviews will determine what, if any, avoidable or remediable clinical, health system or community-based factors were present in the care provided to the women and will enable health care providers and health planners to learn from the errors of the past.

Any of the BTN approaches will result in recommendations for change. These recommendations made should, particularly in resource-limited countries, be evidence-based, simple, affordable, effective and widely disseminated. Most of the clinical recommendations likely to emerge will be very similar to the evidence-based guidelines which form part of the
WHO Integrated Management of Pregnancy and Childbirth (IMPAC)$^3$ tools, which can be adapted to local circumstances and introduced immediately, without the need of developing guidelines from scratch.

## The maternal mortality/morbidity review cycles

1. **Identification of cases**

2. **Confidential data collection**

3. **Confidential analysis on agreed criteria**

4. **Recommendations and action**

5. **Evaluation and refinement**

### 3.2 Situation analysis

Today, with better understanding of the difficulties involved in measuring maternal mortality and the cost of conducting full scale exercises to determine overall maternal mortality rates (MMRs), there is increasing interest in directing a larger share of limited resources into efforts to understand the real reasons why mothers die and what can be done to avert deaths and cases of severe morbidity. Answering these questions is vital for health planners, managers and care providers to help them meet the Millennium Development Goal no 5: to reduce the maternal mortality rates in all countries by 75% by 2015. Neonatal mortality represent in general half of all infant deaths.

Whilst it may appear simple to use MMRs to compare or track changes in maternal mortality over time or analysing what vital statistics may be available to attribute the causes of death to clinical categories, neither method provides information on the real causes of why women die or what steps can be taken to prevent them. MMRs give no indication of the clinical conditions, what factors led to death or whether the majority of these occur amongst women from any particular groups in society or geographical areas. In the United Kingdom, the apparently low MMRs hides a twenty-fold difference in maternal mortality amongst women from the more vulnerable groups in society compared to those from the more affluent$^4$.

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$^3$ IMPAC is a comprehensive set of norms, standards and tools that can be adapted and applied at the national and district levels in support to country efforts to reduce maternal and perinatal morbidity and mortality. Available from Department of Reproductive Health and Research, WHO Geneva. Consult website [http://www.who.int/reproductive-health/index.htm](http://www.who.int/reproductive-health/index.htm) for other information.

Death certificates, even if the coding of cause of death is correct, give no information on the reason of death. For example: a woman who dies as a result of haemorrhage may have not understood the need to seek care, had money for or access to transport, have been deterred from seeking help by traditions, received inadequate clinical care or treated in a facility without access to blood products. Knowing the precise reasons why a woman dies will enable a start to be made in addressing the specific problems. Recommendations may include the community and personal awareness, provision of transport, updating health care provider training or improving the blood supply.

➢ Maternal morbidity

Maternal deaths are the tip of the iceberg of maternal morbidity and for every woman who dies many more will survive but often suffer life-long morbidity. It is difficult to accurately determine the precise number of women suffering from complications for many reasons. Although a number of studies have been published on the incidence of severe maternal morbidity, or ‘near-misses’, comparisons between them are difficult due to the different definitions used for morbidity.

The death to “near-miss” ratio in these studies ranges from 1:5\textsuperscript{iii} to 1:118\textsuperscript{iv} per maternal death. But whatever the death to disability ratio, the fact is that, as with MMR, it will always be too high. Since women are disabled by the same conditions that cause maternal deaths, reducing the risk factors for maternal deaths will also reduce the numbers of women who experience significant medical or psychological problems during or after birth, sometimes with long-lasting or permanent sequelae.

➢ Looking Beyond the numbers

Thus, whilst the numbers of maternal deaths are stark, they tell only part of the story. In particular, they tell us nothing about the faces behind the numbers, the individual stories of suffering and distress and the real underlying reasons why particular women die. Most of all, they tell us nothing about why women continue to die in a region of the world where the knowledge and resources to prevent such deaths are available or attainable.

Perinatal mortality has similar causes and may be reviewed using a similar approach. The workshop added this concept to the BTN approach.

4 Objectives of the workshop

The main objective of the workshop was to introduce the new WHO Making Pregnancy Safer tool Beyond the numbers to the Central Asian Republic and the Republic of Moldova. BTN outlines the principles of maternal death and morbidity case reviews and gives practical advice on how to use any of the five approaches to review maternal deaths and complications.

The specific objectives for the workshop were:

1. To review the different methods of investigating maternal deaths and cases of severe morbidity (“near misses”) and introducing perinatal morbidity and mortality case reviews;
2. To consider which approach is most feasible for each country or institution; and

3. To develop country plans of action to introduce and implement the chosen approach at the pilot level, with later expansion to the regional and national levels.

5 Workshop proceedings

The meeting was opened by a representative of the Minister of Health of Kyrgyzstan, who welcomed participants and wished them a successful meeting. Dr Alberta Bacci then outlined the purpose and scope of the workshop and presented the Millennium Development Goals in the European Region. Dr Luc de Bernis from WHO-General gave a presentation on the global MPS initiative. Each country then gave a short presentation on their maternal health programme and its particular successes or challenges. The philosophy of BTN was introduced by Dr Gwyneth Lewis. The benefits and drawbacks of each of the BTN approaches were set out over the next two days. Each country present gave a presentation on the status of maternal and child health in their national settings.

The core part of the workshop was the group work. On the second and third day, each country team met separately, assisted when required by the facilitators. The aim was to discuss the practical steps and obstacles in introducing one or more BTN approaches. Each country used using three worksheets including all the issues to be addressed before devising a country specific workplan. The groups were extremely hard working and characterised by the frankness and willingness of participants to address and discuss some challenging issues.

The issues working groups were asked to consider were:

- General information requirements
- Components of the maternal mortality/morbidity surveillance cycle
- How to define a maternal death
- How to identify a maternal death
- Deciding which approach to adopt
- Planning and implementing the process
- Questionnaire design
- Training workers
- Analysing results
- Devising and disseminating the recommendations
- Evaluation
- Ensuring confidentiality and the legal and ethical framework

By Day three, all country teams had developed their national action plans, presented in plenary. All countries had developed realistic plans, mostly opting for facility-based reviews. The Republic of Moldova, where there are few maternal deaths, proposed confidential enquiries and “near miss” reviews.

5 The country presentation are included as Annex 4
Country representatives agreed that case reviews should be nationally or regionally owned and have the support of health care planners, health care providers and the Ministry of Health. The data provided should be of sufficient robustness to enable:

- National or district policy development for improvements in maternal health care programmes and provide a sound basis for seeking an increase in programme funding if and when available.
- The production of up-to-date clinical guidelines and wider service development strategies which should impact directly at an individual level on saving women’s lives.
- Feedback to be given to the community, women’s groups or women in general, to help them in their advocacy and to understand key messages regarding their own health and pregnancy.

Country representatives also agreed a broadly similar process for developing and instituting their maternal death reviews. In summary these steps were:

- To discuss with officials at the Ministry of Health how such reviews can help improve women’s health and to gain their support.
- To set up national or district level maternal mortality committees if one does not already exist.
- To decide on national or district data collection, which cases to include and which approach to adopt.
- To adopt measures that will ensure confidentiality or anonymity for participants.
- To obtain national support and identify any regulations or laws that may need to be modified or introduced.
- To hold professional and other conferences to introduce the review methodology and its benefits to health providers and to address their queries or anxieties about confidentiality.
- To plan data collection and determine time-frame for reporting and completion.
- To set up regional teams of assessors and set up and train local co-ordinators.
- To regularly assess deaths, collate and analyse the findings and prepare recommendations for action.
- To disseminate the findings and recommendations.
- To evaluate and refine.

Country representatives left the meeting with a plan of action and proposals for the development and implementation of maternal and perinatal case reviews. The facilitators agreed to work with countries to help develop these further and all countries asked for a similar meeting in a year or two to exchange information and to learn from each other’s success and failures. In the interim, they also proposed some inter-country activities and joint workshop and professional meetings.

The workshop was characterized by a real commitment by country representatives and individual participants to take forward the action plans, and all fully committed and enthusiastic. Numerous spontaneous statements were made, both in the formal sessions and informally, concerning the need to start to take action immediately. For some, the workshop was

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6 See Annex 3 – Group work
a turning point for adopting new views or opinions. Issues raised and discussed ranged far beyond the principles of *BTN* and encompassed the use of best practice and evidence-based guidelines as well as addressing the more problematic issues such as the legal framework, current punitive actions against health care providers whose patients have died and how best to ensure confidentiality and commitment.

In closing the workshop, Dr Bacci thanked everyone for their very hard work, enthusiasm and commitment and assured the participants that both WHO-Europe and WHO Headquarters will continue to support implementation of *BTN*.
Annex I – Programme

➢ Sunday, 30 May 2004

19.00-20.00 Facilitators pre-meeting
20.00 Registration of participants

➢ Monday, 31 May 2004

08.30-9.00 Inaugural session and objectives of the workshop
          Participants’ introduction
09.00-09.30 The need for quality improvement in maternal and
          newborn health programme in achieving MDGs  Luc de Bernis
09.00-09.45 Achieving MDGs in the European region  Alberta Bacci
09.45-10.30 Three countries experiences
10.50-11.35 Three countries experiences
11.35-12.15 Introduction to reviewing maternal deaths and
          complications to make pregnancy safer  Gwyneth Lewis
12.15-12.30 Discussion
14.00-14.45 50 years experience of Confidential Enquiries into
          Maternal Deaths in UK  Gwyneth Lewis
14.45-15.30 Audit of severe maternal morbidity (near-miss) cases  Alberta Bacci
15.50-16.00 Introduction of first worksheet (mapping current
          situation)  Gwyneth Lewis
16.00-16.45 Country worksheet 1 completion
16.45-17.00 Feed back

➢ Tuesday, 1 June 2004

08.30-09.15 Experience in implementing maternal death reviews  James Drife
09.15-10.15 General principles of clinical audit: deciding which
          approach to adopt  Gwyneth Lewis
10.15-10.40 Introduction to worksheet 2 and 3  Gwyneth Lewis
11.00 – 12.30 Working groups

14.00 – 15.30 Working groups continued

16.00-16.30 Presentation of the progress of proposal development and clarification of critical issues

➢ Wednesday, 2 June 2004

08.30 – 09.15 Experience in implementing perinatal death reviews  James Drife

09.15 – 10.00 Feedback on progress of proposal development. Dealing with emerging themes or problems and group discussions

10.20-12.30 Final developments to country programme worksheet 2 and database completion 1

14.00-16.10 Group feedback and way forward

16.30-17.00 Closing session  Alberta Bacci

17.00-17.30 Facilitators wind up with WHO, UNICEF and other partners
Annex II – List of participants

Participants

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Programme Assistant, Making Pregnancy Safer, Denmark

WHO Headquarters

Luc De Bernis  
Making Pregnancy Safer, Geneva, Switzerland
Annex III – Group work – constraints and strategies for implementing BTN

➢ Kazakhstan

1 What could be the next steps for the implementation of maternal and perinatal morbidity and mortality audit?
   – Orientation meeting at the national level
   – Identify a pilot region / health facility
   – Establish a working group
   – Training members of the working group (external expertise)
   – Develop clinical guidelines based on evidence
   – Develop questionnaire for maternal mortality and severe morbidity reviews at facility level
   – Identify format of distribution and potential users for review results

2 What is required to start audit implementation?
   – Approval of procedures for maternal mortality and severe morbidity reviews by MoH
   – Assign responsibilities (officials, professionals, experts)
   – Identify sources of information (existing and additional, if necessary)

3 What could be the obstacles to effective audit?
   – Difficult to achieve true confidentiality
   – Lack of trust amongst health workers
   – Conflict with existing system

4 What strategies can you suggest to overcome these obstacles?
   – Piloting of the model
   – Dissemination of positive experience
   – Improvement of management practices and clinical guidelines based upon lessons learnt

➢ Kyrgyzstan

1 What could be the next steps for the implementation of maternal and perinatal morbidity and mortality audit?
   – Create a legislative framework and norms for care (standards, protocols)
   – Change mentality of specialists and decision makers
   – Create a national Committee for maternal death review
   – Create an action plan for pilot audit in selected rayons

2 What is required to start audit implementation?
− Endorse by prikaz the establishment of group of experts for national, oblasti and rayon level

3 What could be the obstacles to effective audit?
− Ensure the confidentiality during the review; a constraint may be the faire of administrative blame

4 What strategies can you suggest to overcome these obstacles?
− To stop the punishment and blaming function of high level structures

➢ Republic of Moldova

1 What could be the next steps for the implementation of maternal and perinatal morbidity and mortality audit?
− Administrative mobilisations and health providers awareness - partially done
− Update the draft of prikaz that has been developed during 2003 by the national working group according the BTN workshop working group recommendations, with the endorsement of the steps bellow.
− Establish a national Committee – done. Establishment of regional Committee (local coordinators). Identify enthusiastic persons for local coordination.
− Planning for intervention (including planning for the transition period, designing a study for near miss case and choosing pilot facilities for the near miss study) – partially done through the national working group
− National workshop
− Prepare forms of data collections with only useful information (questionnaires and assessors form) – partially done. Update existing protocols and create new if needed.
− Training national trainers on data collection, interview and assessors
− Training providers on data collection, interview and assessors
− Data analysis
− Recommendations
− Scientific publications and disseminate recommendations
− Evaluation and planning for further steps

2 What is required to start audit implementation?
− Protocols and definitions for near miss and main causes of maternal deaths. Revise actually used classifications.
− International consultancy for national workshop
− International consultancy for training trainers
− External expertise of the adapted questionnaires
− International expertise of the study design for near miss case
− International mild term evaluation of the near miss case study
− External expertise of the final report on near miss cases

3 What could be the obstacles to effective audit?
- Compromised confidentiality
- Ongoing legislative framework
- Behavioural resistance of health providers
- Lack of finance for national coverage of training providers
- Not enough evidence based standards and protocols
- Too ambitious recommendations (without financial and human resources coverage)

4 What strategies can you suggest to overcome these obstacles?

- Identification of motivated and enthusiastic persons responsible for audit at local level
- Initiate the process of the review of the existing legislative framework; administrative, community and politician’s mobilisation
- Trainings with the emphasis on behavioural impact
- Fundraising
- Continue to develop and revise national evidence based protocols
- Make realistic recommendations

Tajikistan

1 What could be the next steps for the implementation of maternal and perinatal morbidity and mortality audit?

- Orientation meeting for national and oblast management of the service.
- Orientation intersectorial multidisciplinary meeting with government (all ministries involved) with WHO and international experts
- Working group (repress. of MoH, research institute, academicians, pilot regions, incl. midwives)
- Coordinator (young, English, additional education abroad)
- Start with review of MM cases and near-misses at the level of health care facility.

2 What is required to start audit implementation?

- Standards of care
- Select pilot site and/or pathology to be audited
- Define leaders from experienced staff, members of committees for review of MMR
- Training for working group and leaders attracting WHO experts
- Attracting of partners for methodological and financial support
- Increase status of midwife
- Reveal estimates of MMR

3 What could be the obstacles to effective audit?

- Legal constrains within system healthcare (san-epid, epress information)
- No feedback from top to down (‘tell stories’)
- Non confidential behaviour
- Local staff not sure if they will be secured
- Existing punitive practice in health care system
4 What strategies can you suggest to overcome these obstacles?

- Review existing prikazes that are not in line with confidentiality.
- Educate management and staff.
- Ensure feedback from top to down (‘tell the stories’)
- Put these stories on specialised media or distribute for all maternities
- Transparency of all activities
- Change recommendations of MM committees from punitive to constructive/advisory

Uzbekistan

1 What could be the next steps for the implementation of maternal and perinatal morbidity and mortality audit?

- Conduct preliminary roundtable/s
- Conduct National Orientation meeting
- Establish working group
- Identify interested, skilled and potential parties
- Identify pilot regions/sites
- Prepare questionnaires and the other needed documents/forms
- Develop and adopt evidence based clinical guidelines, protocols

2 What is required to start audit implementation?

- Set up accurate goals and objectives, scope of work and purpose based on the participation of the stakeholders/interested sides
- Define and agree upon near miss definition
- Define and agree upon common methodology
- Train/educate team
- Agreement with, and support, the goals/objectives, scope & purpose by MOH
- MOH and government support confidentiality

3 What could be the obstacles to effective audit?

- Absence of legislative base for introducing audit
- Low interest of the sides
- Lack of financial means
- Administrative type of management and top down approach solely utilized
- Set up unfeasible nationwide activities
- Absence of common updated national clinical protocols based on evidence
- The absence of feedback from grassroots, implementation level
- Punishment oriented audit rather then aiming on care development, change of attitude and practice to any better
- Fear of punishment
- Confidentiality and reliability by the data provider/source
4 Strategies to overcome these obstacles

- Piloting
- Legislation supporting confidentiality, and guaranteeing no punishment
- All the stakeholders participation
- Both the top down and bottom up approach utilized
- Develop/adapt and adopt clinical protocols
- Develop anonymous questionnaires
- Work with the community
- Inter-sectorial approach
- Work with mass media
Annex IV – Country presentations

➢ Kazakhstan

➢ Kyrgyzstan

➢ Republic of Moldova

➢ Tajikistan

➢ Uzbekistan

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Women’s Reproductive Health status in Kazakhstan

Head of maternal and child health department

Ministry of Health of Republic of Kazakhstan

Bekbai Khairulin
Main national distribution of the republic (%)

- Kazakh: 57.2%
- Russian: 27.2%
Strategy of development of Republic of Kazakhstan «Kazakhstan 2030»

The President of the Republic of Kazakhstan, N.A.Nazarbaev determined that health and education of citizens are at the distinguished place in the system of social values of the state
Main demographic indicators of the republic
(1000 of population)
Decree of the President of the Republic of Kazakhstan “About Governmental Programme “Health of nation”

The set of actions was included concerning maternal and child health, in particular drug supply for pregnant, confined women, newborns; observation of the pregnant for intrauterine infections, congenital fetus anomalies, screening of the most often met diseases of newborns
Population structure of the Republic of Kazakhstan (%)

- Men: 51.8%
- Women: 28.6%
- Children: 48.2%
Gynecological morbidity of women (%)

- девочки-подростки
- женщины детородного возраста
- женщины старше 50 лет
National Policy on strengthening of women’s reproductive health

- Strengthening of maternal and child health
- Safety motherhood
- Abortion and family planning
- Medical/genetic consultation
- Prevention and treatment of infertility
- Prevention and treatment of genital tract infections
Maternal mortality rate in Kazakhstan

(100,000 live births)

1999: 65.3
2000: 60.9
2001: 48.6
2003: 42.1
Structure of maternal mortality

- Obstetric bleedings: 26.9%
- Other complication during pregnancy, deliveries: 24%
- Abortions: 22.1%
Pregnancy of adolescents

- Deliveries: 5%
- Abortions: 1.5%
Number of abortions in Kazakhstan

No of abortions per 1000 women of fertile age (15-49)

1999: 34
2003: 29
Medical/social actions

- Regulation of reproductive behavior
- Prevention of unwanted pregnancy
- Reducing of abortions
- Prevention of genital tract infection
• Support to regional programmes on reproductive health of population through the study of its effectiveness and experience distribution

• Study of medical-demographic aspects of reproductive health taking into account regional and ecological peculiarities

• Formation of the society mentality towards support to the matrimony, family planning principles, protection of own health
• Provision with modern contraception and implementation of safe abortion methods

• Adaptation and implementation of international protocols on antenatal care of fetus and safety motherhood
• Strengthening of non pregnant women’s health to raise health rate
• More broaden advocacy and implementation of healthy life style, active participation of society, population in the strengthening of reproductive health
• Improving of specialists’ skills квалификации, working in the field of reproductive health care
Kyrgyzstan

Mother and newborn care
Maternal mortality in Kyrgyz Republic
(per 100 000 live births)
Maternal mortality per 100 000 live births, Kyrgyz Republic, 2002–2003

Kyrgyz Republic, Bishkek city, Chui oblast, Jalal-Abad oblast, Batken oblast, Osh oblast, Talas oblast, Naryn oblast, Issyk-Kul oblast.
Structure of Maternal Deaths causes for Kyrgyz Republic in 2003

- Hestosis 40.0%
- Haemorrhage 18.0%
- Sepsis 16.0%
- Other 22.0%
- Rupture of the uterus 4.0%
Maternal mortality, per 100 000 live births, 1990-2002
Percentage of pregnant women with anemia in Kyrgyz Republic

1990: 25.2%
2001: 56.2%
2002: 45.3%
2003: 52.7%
Percentage of deliveries with attendance of skilled medical staff

<table>
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<th>Percentage</th>
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<td>95.2%</td>
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<tr>
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CONTRACEPTION COVERAGE
OF WOMEN FERTILITY AGE IN KYRGYZ REPUBLIC

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<tr>
<td>2002r</td>
<td>26.6</td>
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<tr>
<td>2003r</td>
<td>41.7</td>
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</tbody>
</table>
Perinatal mortality per 1000 births, 1990-2002

- Кыргызстан
- Казахстан
- Россия
- СНГ
- Европа
Realization of «Jan-ene» Program and implementation of PEPS initiative allows

• To improve organization and quality of obstetrics – gynecology care provided to women.

• To implement effective system of training and advanced training of staff working in obstetric facilities.

Realization of «Jan-ene» Program and implementation of PEPS initiative allows

• To reduce maternal mortality in Kyrgyz Republic by 10% until 2006 (and by 15-20% in selected regions), including:
  ➢ From abortions – by 50%
  ➢ From hemorrhages – by 15%
  ➢ From hestosis – by 10%
  ➢ From purulent-septic complications - by 15%. 
Overview on the maternal and perinatal mortality in the Republic of Moldova

Valentin Friptu,
Head, professor, Chair of Obstetric & Gynecology, State Medical University,

“Beyond the Numbers” workshop
Issyk Kul, Kyrgyzstan, 30 May - 2 June 2004
Trends in the perinatal mortality, 1990-2003
Perinatal deaths, causes, 2003

Causes of perinatal deaths, 2003

- Other causes: 23%
- Trauma: 5%
- RDS: 8%
- Infections: 12%
- Abnormalities: 20%
- Fetal distress and newborn asphyxia: 32%
Maternal deaths per 1000,000 live births, RM versus CIS and EU

- 1997 – 50.46 (versus 6.01 UE)
- 2001 – 43.9
- 2002 – 30.81 (28)
- 2003 – 21.9
Main causes of maternal deaths, last 10 years

- Complications of abortions: 30.3%
- Puerperal sepsis: 18.1%
- Haemorrhage: 19.7%
- S. A. trombemboli: 5.3%
- Preeclampsia/Eclampsia: 9%
- Amniotic fluid embolism: 11.2%
- Ectopic pregnancy: 6.4%
Causes of maternal deaths, Republic of Moldova, 2003

- Ectopic pregnancy: 37.50%
- Abortion complications: 12.50%
- Pregnancy induced hypertension: 37.50%
- Other complications: 12.50%
Maternal deaths, by place of death

- Third level facilities: 27.8%
- Raion facilities: 37.2%
- Other institutions: 9.3%
- Home: 25.7%
Maternal deaths, by residence

- Rural area: 58.3%
- Urban area: 25%
- Raions: 16.7%
Health system aspects on maternal care

• Facility based care
• Referral system
• Skilled attendant care
Medical audit experience

• Facility level (peer review of cases of maternal mortality and perinatal mortality)
• MoH level (case presentations and discussion, peer review)
• Severe obstetrical complications case reporting from facility to the Perinatal Centre (since April 2003)
MPS: promoting audit in the MCH

- Established the national working group on Maternal mortality audit, February 2003 (order of MOH nr. 38 12.02.2003)
- Developed the project of MOH order on CE and near miss cases
Confidential Enquiry and near miss case audit

Tools developed:

• The conceptual scheme
• 2 forms (maternal death notification form and Assessor Control form)
• The scale of assessment of the cases
• The scale of consensus for disputable cases
• The lists of candidates for key groups involved in CE
• The working definition of the major obstetric complications
• The criteria for optimal care of major obstetric complications.
Maternal and Child Health
In Tajikistan

A. A. A. – Deputy MOH, MCH
• Population- 6 506 489
• Children 0-15л –2 764 251
• IMR - 17.2  (per 1000 live birth)
• MMR - 45.00  (per 100 000 live birth)
• Birth rate – 20,7  (per 1000)
• Fertility - 3,5
• Poverty is a major factor affecting maternal and child health;
• More than 80% of population are below poverty line
• According to World Bank, GNP is $178.50 ($14.90 per month).
• Lack of public/state financial means
• Access to and quality of MCH
National priorities

- Reduce the number of people below the poverty level by 60%
- Reduce IMR by 2/3 by 2015
- Reduce MMR by 3/4 by 2015
- Stabilize HIV/AIDS spread by 2015
- Increase access to reproductive health services by 30%
- Stop spread of malaria, TB, and others
Trends in Maternal Mortality

1990: 41.8
1995: 30.6
1998: 66.5
1999: 53
2000: 44.6
2001: 51.1
2002: 45
Home births according to regions in % for 2002

- Dushanbe: 11.5%
- Sogdei Region: 63.2%
- Hatlon Region: 4.9%
- ГБАО: 48.6%
- Tajikistan: 38.7%
Causes of Maternal Death

- Bleeding: 37%
- Gestosis: 26%
- Abortion: 13%
- Sepsis: 12%
- Conditions unrelated to pregnancy: 12%
Conclusions

- IMR is much higher than official data
- IMR is affected by antenatal, postnatal quality care and socio-economic factors
- Delayed care seeking due to poverty
- 70.8% of neonatal deaths are early neonatal deaths
- Causes of post-neonatal death are infectious diseases (58%) and malnutrition (42%);
- Most of the infant deaths are preventable
Causes of neonatal mortality

- Pneumonia: 20%
- Prematurity: 28%
- Diarrhea: 6%
- Birth trauma: 4%
- Infections: 3%
- Birth trauma: 4%
- Others: 9%
- Asphyxia: 19%
- Congenital malformations: 11%
Causes of post-neonatal mortality

- Sepsis, 14
- Anaemia, 9
- Pneumonia, 19
- Malnutrition, 17
- Diarrhea, 27
- Measles, 3
- Menengitis, 6
- Others, 5
- Diarrhea, 27
- Measles, 3
- Menengitis, 6
- Others, 5
PRIORITIES

• Perinatal care
• Introduce live birth definitions
• IMCI
• Immunization
• Micronutrient deficiency and breastfeeding
• Quality improvement and better access to PHC services
Presentation
Maternal and Infant mortality
in Republic of Uzbekistan

Clara Yagdarova
Ministry of Health
Demographic data (2003)

- Population – 25,626,800
- Women of fertile age – 6,751,863
- Children (0-14) – 9,553,900
- Birth rate – 19.8
- Maternal mortality rate – 32.2
- Infant mortality rate – 16.7
Crude birth rate in Republic of Uzbekistan in 1993-2003

<table>
<thead>
<tr>
<th>Year</th>
<th>Rate</th>
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<tbody>
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<td>1993</td>
<td>31.5</td>
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<tr>
<td>1995</td>
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<td>1997</td>
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<td>1999</td>
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<td>2001</td>
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<td>2002</td>
<td>20.9</td>
</tr>
<tr>
<td>2003</td>
<td>19.8</td>
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</tbody>
</table>
Deliveries took place:

- Central Rayon Hospitals: 77.4%
- Republican Health facilities: 2.5%
- Oblast’s Health facilities: 7.6%
- City’s Health facilities: 12.5%
Structure of Maternal Deaths causes

- Extra-genital diseases: 16.1%
- Sepsis: 15.2%
- Hestosis: 15.3%
- Amniotic fluid embolism: 2.0%
- Hemorrhages: 51.4%
Maternal death rate in Uzbekistan, 1993-2003

- 1993: 42.8
- 1995: 32.2
- 1997: 28.2
- 1999: 31.2
- 2001: 34.1
- 2002: 32.0
- 2003: 32.2
Health Care facilities where deaths took place

- Rural District Hospital – 0.8%
- Central Rayon Hospital – 44.9%
- City’s Hospitals – 21.0%
- Oblast’s Hospitals – 11.6%
- Republican Clinics – 20.1%
- Medical-Sanitary Units – 1.6%
Infant mortality rate in Uzbekistan, 1991-2002
Structure of infant deaths causes

- Conditions of Perinatal period: 32.2%
- Respiratory diseases: 45.3%
- Infectious and parasitic diseases: 7.1%
- Congenital anomalies: 7.4%
- Traumas and poisoning: 2.6%
- Other: 3.7%
Structure of infant deaths causes (UNICEF, 2002)

- Intestinal Infections: 12.1%
- Respiratory system diseases: 13.3%
- Congenital anomalies: 10.7%
- Other: 8.8%
- Accidents: 4.4%
- Perinatal causes: 50.7%
Number of dead and still-born children under 1 year age, in % (UNICEF, 2002)

<table>
<thead>
<tr>
<th>Period</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>The dead in early neonatal period</td>
<td>45.0</td>
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<tr>
<td>The dead in late neonatal period</td>
<td>13.5</td>
</tr>
<tr>
<td>The dead in post-neonatal period</td>
<td>41.5</td>
</tr>
</tbody>
</table>
Analyses of infant mortality (UNICEF, 2002)

Neonatal deaths ratio in structure of infant mortality

Neonatal deaths 45%

Early neonatal deaths ratio in structure of neonatal mortality

Early Neonatal deaths 76.9%
Abstract

Every year, many women suffer pregnancy-related complications and a number die. Linked to this is the burden of perinatal mortality and morbidity. Most of these deaths and complications can be averted with basic and effective low cost interventions even where resources are limited and Beyond the numbers (BTN) presents an approach for understanding how this can be done. The first regional BTN workshop was held in Issyk Kul, Kyrgyzstan, from 30 May to 2 June 2004, with the participation of Kazakhstan, Kyrgyzstan, the Republic of Moldova, Tajikistan and Uzbekistan and partners such as UN agencies (UNFPA, UNICEF) and non-governmental organizations (ZdravPlus, Project Hope). The workshop was organized by WHO-Regional Office for Europe Making Pregnancy Safer programme, with support from WHO-Geneva. The concepts of BTN were introduced, how these can be used as a tool for improving clinical management and outcomes of care. The aim is to help countries introduce the BTN approaches to acquire experience and develop general recommendations for reducing the burden of severe maternal and neonatal morbidity. During working group sessions, the country teams developed drafts for national action plans. A number of recommendations were made for implementing BTN in national settings.