



EXPANDING BEYOND THE NUMBERS
Maternal Mortality and Morbidity Case Reviews
Inter-country Workshop for South Eastern Europe

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CONCEPT NOTE

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1. Background

Pregnancy is a normal, healthy state which most women aspire to at some point in their lives. Yet this normal, life-affirming process carries with it serious risks of death and disability. Most of these deaths could be avoided if preventive measures were taken and adequate care available. For every woman who dies, many more suffer from serious conditions that can affect them for the rest of their lives (1).

United Nations recently reported that globally, the maternal mortality ratio dropped by 45 per cent between 1990 and 2013, from 380 to 210 deaths per 100,000 live births. Worldwide, almost 300,000 women died in 2013 from causes related to pregnancy and childbirth (2).

The health of the mother is closely connected with perinatal health and outcomes, as maternal mortality and morbidity can have a negative impact on the survival chances of the new baby.

Worldwide, the mortality rate for children under age five dropped almost by 50 per cent, from 90 deaths per 1,000 live births in 1990 to 48 in 2012: of the 6.6 million deaths in children under age five in 2012, 2.9 million deaths occurred during the first 28 days of life (0–27 days)—the neonatal period. Encouragingly, neonatal mortality is on the decline worldwide. Between 1990 and 2012, the world neonatal mortality rate fell by almost one third, from 33 to 21 deaths for every thousand live births. However, the pace of decline has fallen behind that of post-neonatal mortality. As a result, the proportion of deaths occurring in the first 28 days of life has increased, from 37 per cent in 1990 to 44 per cent in 2012. Most neonatal deaths are preventable. The best possible way of reducing neonatal mortality is through greater investment in maternal care during the first 24 hours after birth, particularly in labour and delivery care and other high-impact interventions (2).

In the World Health Organization (WHO) European Region, official statistics in several countries report high coverage (up to 90-99%) for key interventions, such as skilled attendants at birth, antenatal care, breastfeeding. However, outcome indicators show still high maternal and perinatal mortality figures, with significant differences between official statistics and UN estimates (3), indicating that under-reporting is common. Part of the under reporting is historically due to the fact that international definitions were not used when calculating the indicators for both coverage (such as for example those for exclusive breastfeeding), and outcomes (perinatal mortality, maternal mortality).

In addition, a system of official/institutional audit of maternal and neonatal deaths cases is in place in many countries, which main aim is to identify “guilty” professionals and provide punishment, thus reinforcing concealing of key information and under-reporting of cases.

The mismatch between very high coverage to institutional delivery care and unsatisfactory outcomes clearly points to the existence of unaddressed issues in the quality of care, if compared to countries with a similar health system context in other regions of the world.

Quality of care is a neglected issue in the international health agenda, particularly with respect to care around childbirth (4). The existence of a quality gap is the most likely explanation for slow progress towards MDG 4 and 5 where access to institutional births is high, such as in countries of Central and Eastern Europe and the Commonwealth of Independent States (5).

Substandard or poor quality of care is an important contributor to avoidable maternal and neonatal mortality and morbidity in all countries, and particularly in countries with high coverage of skilled care at birth. Access to care without quality is a cost for the health system and for the households and poor quality care can be harmful to mothers and newborn babies.

Differences in quality (by social status, by gender, by ethnicity) in the quality of care delivered are another important contributor to inequity in health outcomes.

Poor and disrespectful care is not complying with the Universal Declaration of Human Rights.

2. Response

Recording the number and the causes of deaths of pregnant women and babies is essential health information to identify problem areas. Effective management of the health of a population is dependent on basic statistics that allow for the identification of problem areas. Recording the number and causes of deaths of pregnant women and babies falls into this category and is essential.

In response to the apparent woeful lack of progress in reducing maternal deaths worldwide, many institutions, regions and countries started to improve counting of the numbers and causes of maternal deaths.

Maternal mortality offers a litmus test of the status of women, their access to health care, and the adequacy of the health care system in responding to their needs. However, it is difficult to measure, particularly where civil registration of deaths and of causes of deaths is weak. Different approaches have been developed for measuring maternal mortality in such circumstances but they are of limited use for regular, short-term monitoring (1).

Whilst this is a welcome first step, merely collecting and counting these numbers, or identifying causes of death from national statistics, does not provide the hard evidence required to really be able to start develop strategies to overcome the clinical, social and societal barriers to care these mothers face (7).

In order to develop country or locally based specific safe motherhood strategies there needs to be a more accurate diagnosis of the underlying barriers to care and their root causes. Maternal mortality ratios—the standard international tool widely used for bench marking/measuring improvements in maternal health—provide no indication of what clinical conditions individual women are dying from, what factors led to their deaths, how they could be prevented or which specific groups of mothers are dying. Whilst mothers’ clinical causes of death tend to be generally the same, (unsafe abortion, haemorrhage, sepsis, eclampsia and obstructed labour) the real, underlying, reasons why they occur in the first place vary. For example, barriers to care maybe due to cultural practice, the poor status of women, a lack of money or transport or local facilities, or poor clinical care (7).

Experience in a number of countries is emerging which shows that expanding routine data collection into more in depth maternal mortality and morbidity audits is helping answer these underlying questions and providing the backbone for the development to modernized maternity care. The results of these reviews enable the remediable factors and missed opportunities identified to form the basis for national or local guidelines and recommendations for beneficial changes to the maternity and neonatal health services overall as well as clinical practice. Their purpose is to review and learn lessons from mothers' deaths occurring during pregnancy, childbirth and in the postnatal period. They review and assess the clinical care the mother received, as well as identify underlying factors which led to mothers' deaths, and learn lessons from these, in order to develop and promulgate recommendations to overcome the barriers and impediments to safe maternity care in future (7).

3. Beyond The Numbers (BTN)

The information that countries need to address maternal mortality goes beyond just measuring the level of the problem. Policy-makers ask "Why do maternal deaths occur and what can be done to prevent them?" Programme managers ask "Where are things going wrong and what can be done to rectify them?" Answering these questions is as important as knowing the precise level of maternal mortality. **Beyond the numbers** proposes ways of finding the answers to such questions and offers diagnostic tools that shed light on what needs to be done to prevent maternal deaths (1).

- Knowing the level of maternal mortality is not enough; we need to understand the underlying factors that led to the deaths.
- Each maternal death or case of life-threatening complication has a story to tell and can provide indications on practical ways of addressing the problem.
- A commitment to act upon the findings of these reviews is a key prerequisite for success.

Today, with better understanding of the difficulties involved in measuring levels of maternal mortality, there is increasing interest in directing a larger share of limited resources into efforts to understand why the problem persists and what can be done to avert maternal deaths and cases of severe morbidity. Answering these questions is vital for programme planners and service providers. Different strategies and tools have been developed to help find out why mothers die.

Beyond the Numbers describes the main existing approaches and provides practical guidance on how to generate information that looks beyond the numbers to the underlying avoidable causes of maternal death (1).

BTN (1) presents ways of generating this kind of information.

The approaches described go beyond just counting deaths to developing an understanding of why they happened and how they can be averted. For example, are women dying because:

- they are unaware of the need for care, or unaware of the warning signs of problems in pregnancy?
- or
- the services do not exist, or are inaccessible for other reasons, such as distance, cost or sociocultural barriers?
- or
- the care they receive is inadequate or actually harmful?

3.1 BTN - principles

- The purpose of the case reviews is to save lives and not to apportion blame
- Ensuring confidential, non-threatening environment
- Participating in reviews is, in and of itself, a health care intervention
- Learning lessons and acting on the results is the whole purpose of using these approaches
- All BTN approaches will result in recommendations for change
- Recommendations should be simple, evidence-based, affordable, and effective
- Recommendations should be widely disseminated
- Monitoring how the recommendations are implemented

A fundamental principle of all the approaches described in Beyond The Numbers is the importance of a confidential, usually anonymous, non-threatening environment in which to describe and analyse the factors leading to individual women’s deaths. Ensuring confidentiality leads to an openness in reporting which provides a more complete picture of the precise sequence of events. Participants, including health care and community workers and family members, should be assured that the sole purpose of the case reviews is to save lives and not to apportion blame. A prerequisite, therefore, is that strict confidentiality and anonymity must be maintained. These reviews seek only to identify failures in the health care system, not to provide the basis for litigation, management sanctions or blame (1).

Participating in reviews such as those described here, whether by describing their contribution to the care of a particular woman, extracting information from the case notes or by assessing the case anonymously, is, in and of itself, a health care intervention. Experience has shown that the use of these approaches can have a major impact on those involved. Often, those participating in the review are motivated to change their practice or service delivery, even before the formal publication of the results. These health care workers, who have seen for themselves the benefits from such relatively simple reviews, including the adoption of simple changes in local practice, become advocates for change. They then motivate and enthuse others to undertake similar work and to help spread evidence-based best practice guidance (1).

Learning lessons and acting on the results is the whole purpose of using these approaches. There is no point in committing valuable resources to collecting information that just gathers dust on shelves. The information collected must be used to help improve maternal health outcomes and empower health professionals to examine their current practices or those of the facility in which they work. Because action is the ultimate goal of these reviews, it is important that those with the ability to implement the recommended changes actively participate in the process. It therefore needs to be agreed at the outset that the information obtained will be used as the basis for action (1).

The results of these 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. The lessons derived will enable health care practitioners and health planners to learn from the errors of the past. They will provide evidence of where the problems are and highlight the areas requiring recommendations for health sector and community action as well as clinical guidelines. The results can form a baseline against which the success of changing practice can be monitored. Therefore, there should be an objective method built into the system to monitor how the recommendations are being implemented. This has two benefits; it provides a stimulus for health sector action and it reminds the study team to be sure that their recommendations are based on firm evidence (1).



All of the approaches described in BTN will result in recommendations for change. It is important that the recommendations should, particularly in poorer countries, be simple, affordable, effective, and widely disseminated. They should also be evidence-based (1).

3.2 BTN – in the WHO European region

The introduction of BTN in the European region started with two WHO regional workshops, with the objectives to introduce the concepts of BTN and demonstrate how they can be used as tools for improving clinical management and outcome of care. Furthermore to support countries in selecting and implementing BTN approaches tailored to local conditions in line with their specific needs and available resources.

The 1st regional workshop to introduce BTN in the European Region was held in Issyk Kul, Kyrgyzstan, in 2004, with the participation of 5 countries: Kazakhstan, Kyrgyzstan, the Republic of Moldova, Tajikistan and Uzbekistan.

The 2nd BTN regional workshop was held in Yerevan, Armenia, in 2005, with the participation of 7 countries: Albania, Armenia, the Former Yugoslav Republic of Macedonia, Romania, the Russian Federation, Turkey and Turkmenistan.

Based on the success of these regional workshops, each participating Member State considered which of the BTN approaches was most feasible at national and facility level, and worked on developing a plan of action for introducing and implementing BTN in their respective countries.

Upon subsequent requests from MoHs, with contribution from different development partners, WHO provided technical support to BTN introduction, implementation, follow-up and review. During the following years, several of these countries started implementation of the selected BTN approaches.

Steps for implementation were similar, but time lines different in each country, depending on pre-requisites (for example the existence of updated clinical guidelines) and local situation (for example commitment of key stakeholders).

To review the implementation in the region, and to provide a forum to share lessons learned, the WHO Regional Office for Europe in 2010, organized the “Multi-Country review meeting on maternal mortality and morbidity audit - Beyond the Numbers”, in Charvak, Uzbekistan. Teams from countries which started implementation of BTN were invited to share lessons learned and experience, in order to further improve and enhance the positive effect on the quality of care for mothers and babies.

This meeting was attended by 80 participants from 14 countries (Albania, Armenia, Azerbaijan, Georgia, Kyrgyzstan, Kazakhstan, the Republic of Moldova, Russian Federation, Romania, Tajikistan, Turkmenistan, Turkey, Ukraine and Uzbekistan). Participants included health professionals involved in the BTN implementation, as well as Ministry of Health and partners representatives.

Most countries choose one or two BTN approaches (out of five). The review thus gathered delegates from countries where a series of capacity building activities at regional and national level on the main selected BTN approaches - Near Miss Case Review (NMCR) at facility level and Confidential Enquiries into Maternal Deaths (CEMD) at national level – were carried out over the previous 6 years (9).



Since the introduction to 2010, BTN was successfully implemented in 5 countries, and was in early phase of introduction in other 7 of those countries who requested to be involved. Good progress was achieved in the region overall, with some countries (Moldova, Uzbekistan, Kazakhstan) showing impressive progress, and some other lagging behind for various reasons, but willing to and committed for the implementation. The progress varied depending of the methodology implemented - NMCR and/or CEMD – with champions ready and willing to become a knowledge hub for neighbour countries and to those that for various reasons had little or no progress. The workshop provided an opportunity for the latter group to identify barriers and ways of overcoming them, and for the former group to identify strategies for scaling up. To date, the intensity and quality of implementation depends on WHO' and partners' experts providing tutorial supervision (9).

Outcomes of BTN implementation include: improvement of quality of emergency care, strengthened use of standards and facility based protocols, better teamwork around childbirth, improved care for mothers as well as babies, enhanced role of midwives, and consideration of women's opinion. Among lessons learned it was clear that the implementation of Making Pregnancy Safer and of principles and practice of WHO Europe Effective Perinatal Care are essential as a basis for successful BTN introduction. Many of the recommendation springing from the case reviews are related to organizational issues. (9)

A second review of implementation of BTN in countries was carried out during the WHO Regional Office for Europe "Meeting on the impact of BTN in improving maternal and perinatal health" held on 29–30 April 2014 in Bishkek, Kyrgyzstan. This meeting was co-facilitated by the UNFPA Eastern Europe and Central Asia Regional Office (EECARO) and brought together representatives from 12 European Region Member States, United Nations Population Fund, United Nations Children's Fund, Deutsche Gesellschaft für Internationale Zusammenarbeit, United States Agency for International Development and international experts to share their experiences of implementing these reviews.

Two BTN approaches were introduced to varying extents in the WHO European Region: confidential enquiries into maternal deaths at national level and near-miss case reviews at facility level. The United Kingdom has more than 60 years of experience with such reviews, while a number of Eastern European countries started implementation of one or both approaches in 2004. Other Member States, including Latvia, recently joined this group. The implementation process is established with assistance of WHO and aid development partners, including UNFPA.

Recent reports on the impact of these approaches have made it possible to summarize the impact and examine the role of BTN in improving the quality of services at facility and national levels.

The meeting in Bishkek provided a forum for exchanging experience, clarifying many questions and developing recommendations that are useful for all countries in the European Region and beyond that have initiated implementation of BTN. In the frames of cooperation between UNFPA Eastern Europe and Central Asia Regional Office (EECARO) and WHO Regional Office for Europe, the meeting also provided opportunity for expansion of the initiative to other countries under the UNFPA EECARO mandate willing to introduce the BTN approaches to maternal mortality and morbidity reviews as well as to sustain the achievements already observed in piloting countries.

Participants agreed to publish their experiences and confirmed that the biggest challenge is to maintain the quality of the audits. This requires the understanding and support of policy makers and an all-government approach, as many BTN recommendations reach beyond the health sector.

This multi-sectorial approach is in line with the WHO European strategic framework Health 2020. It is hoped that BTN will be implemented in all countries of the Region to ensure that everything possible is done to save lives and improve the health of women and children (10).

Definitions / approaches

Near-miss case reviews at facility level

- Regular (e.g. monthly) staff meetings to discuss the management of individual cases, **comparing actual management with evidence based guidelines**, preferably explicit ones
- Depend on **interaction, accountability**
- Based on **respect, confidentiality, avoidance of blame & punishment**
- Simple (no statistics), but .. **facilitation** of meetings can be challenging
- Review of **small number** of informative cases; essentially a **qualitative approach**
- **Views of women** are included
- Low cost; typically focuses on improvements with **available resources**
- Enable maternity staff to **develop specific recommendations** at facility level and **monitor their implementation**

Definition of near-miss case:

Any pregnant or recently delivered woman in whom immediate survival is threatened and who survives by chance or because of the hospital care she receives

Confidential enquiries into maternal deaths

A systematic multi-disciplinary anonymous investigation of all or a representative sample of maternal deaths occurring at an area, regional (state) or at national level, which identifies the numbers, causes and avoidable or remediable factors associated with them

3.4 BTN - Steps for preparation, introduction, pilot, review, dissemination.

Experience of several years in implementation of BTN approaches in the WHO European region (8, 9, 10) shows that several steps, and sustained technical support, including international expertise, are needed to achieve successful implementation of BTN and avoid turning back to past traditional punishment and concealing attitudes.

An indicative list of steps is provided below, based on previous experience of implementation: it requires adaptation to specific sub-regional and countries' situations, needs and requests.

These indicative steps are based on the hypothesis that the main BTN approaches which will be selected by countries, will confirmed the two identified, chosen and implemented over the previous 10 years, in the other countries in the European region: Near Miss Case Review (NMCR) at facility level and Confidential Enquiries into Maternal Deaths (CEMD) at national level.

Prerequisites, steps A and H are related to regional level, whereas Steps B-G to country level.

Pre-requisites

Experience in introduction, implementation and results from review of BTN in countries, indicate that pre-requisites for success are:

- Existence and dissemination of updated national clinical guidelines on key obstetric complications
- Knowledge and implementation of effective perinatal care principles

- Existence and engagement of driving forces at national/district and institutional level
- Support from MoH and other key institutions/organizations (professional societies, QI departments and programmes, among others)
- Commitment for coordinated, sustained and long term support by UN/development partners

A. Sub Regional workshop

Objectives:

1. To introduce principles of maternal mortality and morbidity case reviews using Beyond The Numbers approaches
 1. To review the different methods of investigating maternal deaths and/or complications;
 2. To discuss which approach is most feasible for each country
 3. To start development of country specific action plans to introduce and implement maternal mortality and morbidity case reviews for systemic improvements and strengthening of maternal care

Participants profile:

- Health professionals (obstetricians/gynaecologists, midwives, neonatologists) responsible for quality of care, decrease of maternal mortality and helping improve the maternal and perinatal outcomes
- Health care planners and managers working in the area of maternal and newborn health who are striving to improve the quality of care provided and are in the position to take remedial actions based on the findings of the review
- Representatives of MoH
- UNFPA Country office staff
- Development partners, UN organizations

B. National workshop: introduction of BTN

Objectives:

1. To introduce principles of maternal mortality and morbidity case reviews using Beyond The Numbers approaches to relevant national stakeholders.
 1. To review the different methods of investigating maternal deaths and/or complications;
 2. To finalise decisions on which approach(es) is/are most feasible for each level and/or institution;
 3. To finalise national action plan to introduce and implement maternal mortality and morbidity case reviews for systemic improvements and strengthening of maternal and perinatal health care.
 4. To set up national working group(s) for BTN implementation

Participants profile:

- Health professionals (obstetricians/gynaecologists, midwives, neonatologists) responsible for provision and quality of care, decrease of maternal mortality and helping improve the maternal and perinatal outcomes
- Health care planners and managers working in the area of maternal and newborn health who are striving to improve the quality of care provided and are in the position to take remedial actions based on the findings of the review
- Representatives of MoH, professional societies, and other key stakeholders
- UNFPA Country office staff
- UN and other development partners

C. Technical BTN workshop

Objectives:



1. To provide technical support for practical implementation of the selected methods of investigating maternal deaths and/or complications;
 1. To develop/adapt specific tools and capacities
 2. To finalise specific action plan for pilot and review of the selected BTN approaches.
 3. To set up national working group(s) to prepare pilot implementation.

Participants profile:

Health care professionals and managers from relevant institutions, which will be involved in pilot implementation, depending on BTN methods selected

D. Pilot implementation

Usually 6-8 months: NMCR selected (3) maternity hospitals – CEMD national

Includes monitoring (UNFPA staff)

E. Review of pilot BTN implementation

International expertise involved; activities will depend on previous steps, approach(es) selected, among other issues.

Includes:

- visit to facilities and institutions involved: findings and recommendations to be presented and discussed at a national workshop
- national workshop to review pilot BTN approaches implementation

F Dissemination

Plan will be developed for scaling up to other sites, depending on previous steps

G Review of implementation

Follows 2-3 years of BTN implementation at country level

H Regional review

Follows (5) years of BTN implementation in different countries

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