Essential newborn care training activities: 8 years of experience in Eastern European, Caucasian and Central Asian countries

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Summary There is still an alarming gap in neonatal healthcare and outcome between Western and Eastern European countries and the former USSR countries in particular. Most of the causes of neonatal mortality and morbidity can be prevented or managed by simple cost-effective interventions aimed at improving quality of healthcare, health system organisation and family and community participation. Training of health professionals and health policy-makers in the field of essential neonatal care and breastfeeding promotion is one of the cornerstones of the World Health Organization (WHO) initiatives Making Pregnancy Safer (MPS) and Promoting Effective Perinatal Care (PEPC) — the latter specifically tailored to the European Region — aimed at ensuring safe pregnancy and childbirth through ensuring the availability, access and use of quality skilled care. After 8 years of experience of training in essential neonatal care, positive changes in planning for and delivering neonatal care are taking place, even in challenging contexts, and this model of intervention should be further implemented in the region.

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Introduction
Despite overall improvements, children’s health in the European region shows large differences both within and between countries. This is seen in particular between the Western and the Eastern countries with newborn mortality...
and morbidity. Within the European region of the World Health Organization (WHO), which includes continental Europe, all the former USSR new independent states, Turkey and Israel, an increasing gap in neonatal healthcare and outcome affects in particular the Commonwealth of Independent States (12 of the 15 former USSR countries, excluding the three Baltic states). These countries are still facing high perinatal and neonatal mortalities, which are reported up to be five times higher in the five Central Asian republics than in Western Europe.1

Neonatal mortality accounts for 38% of the mortality in children under 5 years worldwide, and three fourths of neonatal deaths are concentrated in the first week of life.2–4 Although there is a paucity of information about the causes of neonatal deaths in developing and ‘transition’ countries, it has been estimated that more than 90% of neonatal deaths are caused by birth asphyxia, infections and complications of prematurity.2–4,6 Most of these causes are preventable by means of low-cost evidence-based health interventions, which should be made available at any level of neonatal healthcare.5–9 Nevertheless, often insufficient priority is given to improve neonatal healthcare as a key intervention in reducing infant mortality.7,8 This occurs because of an underestimation of the problem and the potential savings obtainable through a better neonatal outcome, and because of the misconception that improving neonatal healthcare always requires highly sophisticated technologies. It has been demonstrated that improving perinatal and neonatal health outcomes by promoting the use of simple, effective, low-cost, appropriate technologies is a major investment for any health system.2,7–9 Therefore, the WHO has designed initiatives to assist member states to provide effective antenatal, perinatal and neonatal care to be developed in each country and at each level of care, even where only limited resources are available.10,11 Appropriate interventions in these sectors, however, are only effective when they are framed in a global strategy of improvement of general conditions of life (especially for women), literacy, health awareness and access to healthcare.

The WHO Making Pregnancy Safer (MPS) global initiative was launched in 2000 and was built on over a decade’s experience of the Safe Motherhood movement. Interventions that can prevent maternal and newborn mortality from major causes are known and can be made available even in resource-poor settings. The mission of MPS is to ensure that governments and partner agencies receive guidance and technical support so that safe motherhood is prioritized within national policies and budgets, and that evidence-based norms and standards of care are applied. Among the main health activities of MPS are: (a) skilled care in pregnancy and childbirth; and (b) access to referral care when complications arise.

In the European region, MPS is integrated with the Promoting Effective Perinatal Care (PEPC),11 specifically tailored to the European region to increase the efficacy and acceptability of interventions in the region. The MPS/PEPC joint initiative works at three levels: health system, healthcare providers and community. Its main strategic directions are to: (a) support assessment and planning at national and regional levels; (b) provide essential packages of training, monitoring and impact evaluation; (c) support implementation of quality standards of care in pilot sites as a model projects; (d) promote the rational use of essential drugs, equipment and supplies, and evidence-based guidelines at the health system level; and (e) support the participation of the community, women and family. A key element for the success of MPS/PEPC is building partnerships with key stakeholders, United Nations (UN) agencies, bi-lateral agencies and non-governmental organizations. MPS/PEPC focuses on pregnancy, birth and the perinatal period, and on the role that primary healthcare can play. To do this, MPS/PEPC works through country and inter-country interventions, piloting approaches and the provision of essential packages of training, monitoring and impact evaluation. MPS/PEPC is aimed at promoting improvements in three areas: quality of care, health service development, and family and community involvement. To target these goals, training is a key intervention. Training experiences in essential newborn care and breastfeeding (ENC-BF) within the MPS/PEPC framework in most of the former USSR and other Eastern European countries in the years 1997–2004 are reported in this paper.

Specific challenges and advantages in perinatal and neonatal healthcare

The main challenge is still in a disparity between Western and Eastern Member States of the European Region regarding health, with perinatal and neonatal mortalities up to five times higher (according to official data from Ministries of Health) in Central Asian republics.1 Moreover, this disparity is observed within almost each country, particularly with respect to vulnerable groups (such as the poor, adolescent mothers, refugees, internally displaced persons), which are increasing in most of the countries because of social and economical instability.

The greatest challenges in maternal and child healthcare in the European region include over-medicalisation, usually brought about by outdated mandatory protocols of care (‘’edicts’’); barriers to access to available services, including lack of information and health awareness, poor health education and insufficient inter-professional and multi-disciplinary collaboration. The number of human immunodeficiency virus (HIV)-infected women is steadily increasing, as is the risk of transmitting the infection to their newborns. Further, the primary healthcare (PHC) level is often neglected, and there are long hospital stays even for uncomplicated maternal and neonatal conditions that result in poor cost-effectiveness and lack of patient satisfaction. Care is often provided by different teams of healthcare professionals, many highly specialized, which results in a lack of continuity of care for women and their infants before, during and after delivery, and there is an urgent need for PHC providers (nurses, midwives and family practitioners) appropriately trained in ante- and postnatal care (Fig. 1).

Moreover, due to insufficient dissemination of principles and practice of evidence-based medicine and legislative constraints, international definitions of perinatal and neonatal conditions are still not fully adopted everywhere, thus making epidemiological data difficult to evaluate for
Encouraging maternal and infant health is one of the key priorities worldwide. Promoting early and exclusive breastfeeding is one of the strategies to achieve this, and it is often seen as a measure to improve maternal and child health. In Europe, the PEPC (Programme of Excellence in Breastfeeding and Care) initiative aimed to improve maternal and newborn care through a comprehensive training package. This initiative was part of the global MPS initiative and PEPC, the latter representing one of the major European initiatives.

Many parallel training initiatives were also addressing antenatal, perinatal and postpartum care. Training was incorporated into the framework of the aforementioned WHO initiatives Safe Motherhood, MPS/PEPC, the latter representing, in Europe, one of the major components of the global MPS initiative.

Materials and methods of ENC-BF training

In-service training provided consists of a 5-day (40 h) course in essential newborn care and breastfeeding promotion, offering both theoretical and practical training to all health professionals involved in delivering/planning for the care of newborns, i.e., neonatologists, midwives, nurses, breastfeeding consultants, paediatricians, obstetricians, gynaecologists, public health specialists, health policymakers, with special attention to involve key-persons for decision-making. The total number of participants is suggested not to exceed 25. Trainers, who should introduce themselves more as facilitators than teachers, are usually two consultants: one for neonatal care and one for breastfeeding, all of them being acknowledged experts in the field, with wide experience of evidence-based medicine principles and practices and an in-depth knowledge of the region.

Activities include exercises in self-evaluation and group work; interactive presentations; case studies; sessions of

Implementing neonatal healthcare through essential newborn care training

Facing the specific challenges of the European region, since 1997 the WHO Regional Office for Europe has carried out, in most of the Commonwealth of Independent States and in selected Eastern European countries, training activities on essential newborn care and breastfeeding promotion (ENC-BF), delivered to local health professionals by a team of international (F.U. and G.P.C. among them, V.M. advisor for Child and Adolescent Health and Development at WHO-Europe at that time) and national temporary advisers; parallel training initiatives were also addressing antenatal, perinatal and postpartum care. The training courses in maternal and newborn care are designed to help health providers at district level acquire new skills to improve women and children’s health, among which is an integrated package for obstetric and newborn care and breastfeeding promotion.

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ENC-BF training delivered through MPS/PEPC is aimed at improving knowledge and skills of health professionals involved in the care of newborns, promoting the use of evidence-based policies of care (4). The target is to provide any health facility delivering care for childbirth with a training package in essential newborn care, whose priorities are:

1. Providing clean delivery and birth care
2. Preventing neonatal hypothermia
3. Promoting early and exclusive breastfeeding
4. Ensuring appropriate neonatal resuscitation, when needed
5. Providing neonatal prophylaxis (eye, vitamin K) and immunizations
6. Providing ability to assess, classify and manage the most common neonatal problems: preterm birth, low birth weight, asphyxia, infection, jaundice, trauma
7. Planning for referral to higher level of care
neonatal resuscitation; visits to maternity wards, delivery rooms and neonatal wards; role-playing sessions focused on communication and counselling skills; group-working; exercises in autonomous planning for implementation; evaluation by participants; and suggestions for improvement (Fig. 2).

The main areas of training include: disseminating the use of international definitions of perinatal and neonatal conditions; introducing the concepts of efficacy, cost-effectiveness, risk factors, case management, holistic single patient approach; promoting evidence-based policies of care and cost-effective interventions, multidisciplinary collaboration, communication and counselling; improving clinical data recording and epidemiological data collection and evaluation; discussing public health issues relevant to perinatal and neonatal care and how to strengthen the health system, and family and community practices.

The contents of training include the main clinical and organizational problems of newborn care that should be managed at primary and secondary levels of care, and the indications for referral to tertiary care centres. Contents are continuously tested and updated to ensure that they are addressing real needs and are based on scientific evidence provided from randomised control trials. Box 1 lists how the main topics have been modified over time (years 1997–2004) after participants’ and trainers’ suggestions. Manuals and tools are available in English and Russian. The ‘Essential newborn care/breastfeeding promotion’ manual (ENC/BF) aims to increase understanding and knowledge of the principles and practices of essential newborn care, including breastfeeding management, and to develop the corresponding skills and attitudes among health professionals in charge of delivery and neonatal care. The final section aims to lead the participants to action at their own health facility level through the preparation of a plan of action, and deals with all the clinical and organizational problems of newborn care, including breastfeeding, that should be managed at primary and secondary levels of care, and also provides indications for referral to tertiary care centres (Part 1). Part 2 includes figures, tables and exercises and a selection of papers, and Part 3 is specifically addressed at training of trainers.

Additional tools for training are: handouts of the presentations; videos on breastfeeding; neonatal resuscitation manikin, suction catheters and devices for aspiration, Ambu bags and masks.

Training is delivered in a participatory way: the methodology of training is based on the principles of adult learning and quality development, promoting active involvement and motivation of participants, multidisciplinary collaboration and group-working. A clear strategy of ‘training of trainers’ and of programme extension was adopted to promote cascade training and reinforce local capacity, and involved schools and institutes.

Since the beginning, pilot-district approach was adopted: training activities were developed in one or two pilot districts in each country, where Ministries of Health, International Agencies, NGOs and private donors started to collaborate to implement perinatal and neonatal healthcare and where significant changes were made. Training activities were followed-up by regular supervision in order to provide immediate and later reinforcement of knowledge and competence, with positive feedback.


Since 1997, training courses on ENC-BF, as well as the other activities related to MPS-PEPC initiatives, have been carried out in most of the former USSR states and in select...
Eastern European countries at national, sub-national and local levels. In each country, model sites for the implementation of both initiatives have been identified and supported by the governments.

To date, in each of the following countries at least two or three ENC-BF courses (as many as five to 10 in some countries) have been developed: Kazakhstan, Kyrgyzstan, Uzbekistan, Tajikistan, Turkmenistan, Azerbaijan, Russian Federation, Belarus, Republic of Moldova, Armenia, Albania, autonomous region of Kosovo. Participants from other countries (Georgia, Ukraine) were also attending some of these events. In most of the countries course have been autonomously replicated by national trainers who had previously attended ENC-BF courses and training for trainers workshops.

The evaluation of ENC-BF training made by participants showed a high degree of satisfaction with choice of contents and methodology. Meanwhile, suggestions from participants (Box 2) were encouraged and used to further improvement of training.

The skills and performance of trained health providers have been shown to have improved substantially. Locally trained health providers are now disseminating knowledge and skills through cascade training events.

Changes are taking place not only in attitudes and practice but also in health systems and legislation. To give just a few examples, early contact between mother and newborn (Fig. 3), rooming-in (Fig. 4) and exclusive breastfeeding upon discharge from the hospital are now largely widespread; appropriate resuscitation of the asphyxiated newborn is replacing outdated non-evidence-based protocols; most of the traditional non-evidence-based procedures and treatments were withdrawn; the international definition of live birth has been incorporated into the health legislation of different countries.

In some countries (Kyrgyzstan, the Republic of Moldova, Armenia, and autonomous region of Kosovo) ENC-BF training activities have already been fully incorporated into national programs of perinatal and neonatal care implementation.

Box 2. Participants’ suggestions to improve training

- Avoid too intensive schedule, give more time for comprehension and discussions
- Involve more national trainers
- Expand coverage of topics, practical sessions and discussions of clinical cases
- Expand geographical coverage with training events
- Obtain a clear commitment from politicians and health authorities to make changes possible
- Obtain a clear commitment from obstetrician-gynaecologists to promote better practices in perinatal care (e.g., in utero referral for high-risk pregnancies, prenatal steroids to prevent respiratory distress syndrome (RDS), etc.)
- Empower nurses and midwives
- Expand sessions on data collection and evaluation, audit, elaboration of protocols of care

Figure 3 Skin-to skin in Chisinau, Rep.Moldova (F.Uxa).

Lessons learned

During the 8 years of ENC-BF training in over 10 former USSR countries, experience has grown of health systems, delivery of training, quality of care, and family and community area, resulting in improving continuous planning and delivery of training.

Health system

Commitment from Ministries of Health to endorse the initiatives, support the necessary legislative changes, make available necessary human resources and to release the necessary funds are prerequisites for success, as well as commitment from academic institutions to promote health professionals’ training. These goals have been targeted through national and sub-national orientation meetings aimed at introducing and discussing the whole MPS/PEPC initiative.

The establishment of a national working group for perinatal and neonatal care implementation was shown to be crucial to strengthen the links with political and health authorities, to orient the choice of priorities in planning for implementing healthcare, to adapt training materials, to promote autonomous research and to reinforce advocacy.

Figure 4 Photo 4: Rooming-in in Perm, Russian Federation.
The regionalisation of obstetric and neonatal care and the functional integration between the different levels of care have been demonstrated to be of great importance to reinforce the effectiveness of ENC-BF training.

Delivery of training and quality of care
Flexibility and adaptation of contents and methodology to local needs while maintaining consistency have been demonstrated to be a guarantee of compliance and sustainability over time. Taking into account that the interactive training methodology is new in some contexts, participants should be invited to participate in discussions — with special attention to help midwives and nurses to overcome hierarchical barriers — and multidisciplinary group-working should be encouraged. Participants should also be assisted in identifying priorities to achieve in their own health facilities and to draw a plan of action to improve quality and organization of care.

As access to medical international literature is still restricted to high-level health professionals, mainly because of linguistic barriers, training should include sessions devoted to presentation and discussion of selected leading papers of perinatal and neonatal care. Although the provision of essential supplies, drugs and equipment is not under the responsibility of ENC-BF training, selected interventions to make them available where and when needed greatly increased acceptance and success of training initiatives. Regular supervision and monitoring of activities after training has been shown to be a key element for success.

Family and community area
Some of the innovations can initially meet resistance from health authorities, because in some contexts, they are in strong contrast with traditional policies of care: this has happened in particular with the recommendations to implement rooming-in. Participation and support from the family and community has been demonstrated to be very helpful to make changes acceptable even in the most reluctant contexts and has to be regarded as a key factor for success in the process of building national and local capacity for effective perinatal and neonatal care.

Therefore, information and awareness have to be disseminated with the message that promoting women’s and infants’ health is a way of promoting the fundamental human rights to life, dignity, health, liberty, equity, solidarity, and family life. Strong support must be obtained from opinion leaders, women’s associations and other stakeholders through wide coverage of issues related to maternal and neonatal health promotion in the mass media and other initiatives aimed at promoting advocacy.

Traditional policies of care, even if they are not included into ENC-BF training contents and provided they are not harmful, should be accepted and regarded as a way of increasing family and community compliance with health staff recommendations and of reinforcing parental satisfaction and ability to care for the newborn.

Conclusions
Improving neonatal outcome has to be regarded a key objective in the achievement of the fourth Millennium Development Goal (to reduce the mortality in 5-year-olds by two thirds by 2015 taking 1990 level as the base). Therefore, increasing the attention paid to newborn health has to be considered a main target for each country. Training is an essential, though not the only, activity to promote knowledge and changes in policies of neonatal care, health professionals’ motivation and ability to enhance family and community participation.

Experiences gained within the European region show that positive changes in planning for and delivering perinatal and neonatal care are taking place even in challenging contexts. Therefore, this model of intervention should be further implemented in the region, planning for its inclusion in national and local training plans. To enable the expansion of good perinatal and neonatal care, the need to increase coverage and the need to maintain quality and effective management must be carefully balanced. Building local capacity, incorporating principles of effective perinatal and neonatal care in ongoing health sector reforms, and demonstrating cost-effectiveness of these initiatives are the targets to be achieved.

Changing attitudes of health professionals towards mothers, newborns and families is a key result produced by developing these initiatives, as important as expanding knowledge and the use of appropriate technologies. Health professionals whose responsibility has increased allowing them to put into practice what they have learned, have the knowledge that significant improvements can be obtained even in challenging contexts with limited financial investments. They are a precious resource for their communities and represent an example of professional value that deserves to be reported.

References