Abstract

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WORLD HEALTH ORGANIZATION
EUROPE

Making Pregnancy Safer/Promoting Effective Perinatal Care

Activity Report

Turkmenistan

2002–2005

Making Pregnancy Safer

WORLD HEALTH ORGANIZATION
EUROPE

Making Pregnancy Safer
Promoting Effective Perinatal Care

Turkmenistan

Activity Report

2002–2005

Training workshop for engineers/technicians on maintenance of medical equipment
Baharden, 8–12 April 2002

MPS/PEPC Orientation and planning meeting
Ashgabad, 24–26 June 2002

Training in Essential Obstetric Care
Ashgabad, 17–21 November 2003

Caesarean section – review of evidence Workshop
Ashgabad, 30–4 December 2004

Evidence-based Mother and Newborn care
Ashgabad, 17–22 January 2005

Abstract

The greatest challenges in maternal and child health care in the European region include over-medicalisation, poor health education and insufficient inter-professional and multi-disciplinary collaboration. The final step of the CARAK project in Turkmenistan was to support appropriate use of technology for perinatal care, birth and neonatal care; equipment was purchased based on the CARAK evaluation and a 2001 WHO-Europe mission to Ashgabad. A technical training programme on the operational aspects of medical equipment management and maintenance procedures, took place in April 2002. In June 2002, an Orientation and planning meeting was held to review achievements in mother and newborn health and discuss development of a plan of action for implementation Making Pregnancy Safer/Promoting Effective Perinatal Care. A training course on Essential obstetric care was held in November of 2003 for 31 participants. A course on Evidence-based mother and newborn care for 22 decision-makers was held in January of 2005. In view of the high rates of maternal and perinatal mortality and morbidity rates, a workshop was held in December 2004 to review the evidence on Caesarean section performance in Turkmenistan, with the participation of 32 obstetrician/gynaecologists.

Keywords

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Abbreviations

AFT	Assessment and follow up after training
AGREE	Appraisal of guidelines for research and evaluation
BP	Blood pressure
BTN	Beyond the Numbers
C/s	Caesarean section
EBHC	Evidence-based health care
EBM	Evidence-based medicine
EBMN	Evidence-based maternal and newborn
EAPPC	Essential antenatal, perinatal and postpartum care
ENC/BF	Essential neonatal care and promotion of breastfeeding
EOC	Essential Obstetric Care
FCH	Family and community health
IGO	Inter-governmental organization
MCH	Mother and child health
MoH	Ministry of Health
MPS	Making Pregnancy Safer
NGO	Non-governmental organization
PEPC	Promoting Effective Perinatal Care
RHL	Reproductive health library
RCT	Randomized controlled trials
TKM	Turkmenistan
ToT	Training of trainers
UNFPA	United National Population Fund
UNICEF	United Nations Children's Fund
WHO-Europe	World Health Organization, Regional Office for Europe

Contents

1 Executive Summary

Motherhood is a positive and fulfilling experience for most women; however, pregnancy and childbirth can also be associated with suffering, ill health or even death. In the European region, wide differences still exist between and within countries in mothers' and newborn babies' morbidity and mortality, as well as in access to and the quality of care. The greatest challenges in maternal and child health care include over-medicalisation, poor health education and insufficient inter-professional and multi-disciplinary collaboration. Further, primary health care is often neglected, and even uncomplicated maternal and neonatal conditions can result in long hospital stays that are not cost-effectiveness and lack patient satisfaction.

Within the framework of the Making Pregnancy Safer/Promoting Effective Perinatal Care (MPS/PEPC) initiative, training for obstetricians, midwives, neonatologists and nurses provides the opportunity for health provider teams to acquire new skills and achieve higher quality of care. Specific goals of the training course for obstetric and neonatal care are to enhance health providers' understanding, knowledge, practices and attitude in modern principles and appropriate interventions for clinical management in pregnancy, birth and postpartum period. To reinforce the skills and knowledge acquired from these courses, an *Assessment and follow-up after training* (AFT) course is help subsequent to either course.

The CARAK project, carried out from 1995 to 2000, was a joint commitment by the Ministries of Health of six countries including Turkmenistan. The results of CARAK were evaluated in September 2000 by experts from the WHO Collaborating Centre for Maternal and Child Health, Trieste, Italy[1]. Based on its recommendations, funds were received from AGFUND Eastern Mediterranean Region to support implementation and appropriate use of technology for perinatal care, birth and neonatal care. The equipment selected was based on the CARAK evaluation and on a 2001 WHO-Europe mission to Ashgabad. A technical training programme, specifically devoted to the operational aspects on medical equipment management and maintenance procedures, took place in April 2002.

An Orientation and planning meeting supported by WHO-Europe and UNICEF was held in June 2002, the first step for introducing MPS/PEPC. Following recommendations from participants for implementation of the initiative, an EAPPC training course took place in November 2003. A workshop to review the evidence on Caesarean section (C/s) was held in December 2004, based on the high rate of maternal and perinatal mortality and morbidity in the country. A workshop on Evidence-based medicine (EBM) for decision makers and guideline developers was held in January 2005.

Turkmenistan (TKM) representatives have participated in a number of inter-country activities organized by the WHO-Europe Family and Community Health Section and by MPS/PEPC. The results of the training workshop for engineers/technicians on maintenance of medical equipment in Turkmenistan, held in April 2002, was presented at the meeting of Focal points for mother and child health in Malta, October 2002.

2 Introduction to Making Pregnancy Safer

The 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. Support in pregnancy and childbirth needs to focus on adequate preparation in the household, sustain the woman and her baby, early detection and appropriate management of complications and ensuring that quality services are available and accessible close to where women live.

[1] Istituto per l'Infanzia IRCCS Burlo Garofolo, Unit for Health Services Research and International Cooperation

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 ensuring skilled care in pregnancy and childbirth and access to referral care when complications arise.

Over the past decade, WHO-Europe has implemented a number of interventions in maternal and newborn care; in particular, strategies were developed to make these applicable to the European region Member States. This regional approach, known as Promoting Effective Perinatal Care (PEPC), developed tools to update knowledge and skills of health care providers that have been extensively used in the region and has been successfully implemented in a number of countries.

In the European Region, MPS is integrated with the PEPC. The joint MPS/PEPC initiative works at health system, health care providers and community levels. 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 selected sites as a model projects and facilitate dissemination; (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 such as UN agencies, bi-lateral agencies and non-governmental organizations.

The values and principles for MPS/PEPC, agreed upon at perinatal task force meetings[2], state that care for normal pregnancy and birth should be evidence-based, de-medicalised and based on the use of appropriate technology. Care should be holistic, family centred and culturally appropriate. Care provision should involve women in decision-making and respect their privacy, dignity and confidentiality.

3 MPS/PEPC activities in Turkmenistan

3.1 National activities

MPS/PEPC activities on mother and child health (MCH) have been ongoing in TKM for the past five years and implementation is well advanced; MPS/PEPC has been part of the biennium collaborative agreement between the Ministry of Health (MoH) and WHO Regional Office for Europe (WHO-Europe) for the past two biennia (2000/2001 and 2002/2003) and continues in the present biennium of 2004/2005. The MPS/PEPC *Orientation and planning* meeting was held in June 2002 and a training course in *Essential obstetric care* in December 2003. A workshop on the evidence of caesarean section (C/s) performance was held to address the high mortality rates of mothers and newborns. A workshop on *Evidence-based mother and newborn care* (EBMN) for decision-makers and guideline developers took place in January 2005.

3.2 Inter-country activities

3.2.1 Focal points meeting for mother and child health, Malta, October 2000

This has been a biennial activity for the past several years organized by the WHO-Europe Child and Adolescent programme and the Making Pregnancy Safer initiative. The objective is to bring representatives of Member States' MoH together with WHO technical programmes in MCH and other partners to exchange experiences on implementation of interventions at national and district levels and plan for scaling up. New WHO initiatives and tools are introduced and the appropriateness of their implementation at national levels discussed.

[2] Venice in 2000 and Verona 2003

3.2.2 Family and community health focal points meeting[i], Cyprus, April 2004

The WHO-Europe Family and Community (FCH) section is made up of the following programmes: Child and Adolescent Health, Gender Mainstreaming, Making Pregnancy Safer and Reproductive Health. This focal points meeting, organized by FCH, brought together MoH counterparts and partners, including UN and bi-lateral agencies and non-governmental organizations (NGO). The objectives were to review and discuss achievements and the challenges in implementing family and community interventions that ensure optimal health status, with special focus on women, children and young people. One of the main issues was how to meet the UN Millennium Development Goals for MCH.

3.2.3 National Policies and Strategies for Family and Community Health, Turkey, April 2005

The objective of this meeting was to discuss how WHO and other partners can provide support for integrating policies and strategies on reproductive health, gender, maternal and perinatal health, and child and adolescent health into health systems at national level. Participants exchanged information on experiences in developing and implementing national policies, the problems of integration and how to overcome these. Presentations were made on examples of implementation of existing national policies and tools that illustrate current best practice.

3.2.4 Regional Workshop on "*Beyond the Numbers*", Yerevan, Armenia, June-July 2005

This was the 2nd regional workshop to introduce *Beyond the Numbers* (*BTN)* in the European Region (the 1st workshop was held in Issik Kyl, in 2004), and took place in Yerevan, Armenia, from 27 June - 1 July 2005. *BTN* is a methodology developed by WHO for reviewing maternal deaths and complications and presents five different approaches. The purpose of the workshop is to help countries select the approach or approaches most suitable for their conditions; *BTN* has the overall objective of reducing the burden of maternal and infant death and morbidity. The workshop reviewed the different approaches of investigating maternal deaths and cases of severe morbidity, and each Member State considered the approach most feasible for both the national and institution levels. Participants developed country plans of action for introducing and implementing *BTN* at pilot level, and how expansion to the regional and national levels can be effectuated.

4 Training workshop for engineers/technicians on maintenance of medical equipment, Baharden, April 2002

The CARAK project, carried out from 1995 to 2000, was a joint commitment by the Ministries of Health of six countries – Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan – and WHO-Europe and other international partners, with the main objective to improve maternal and infant health. The results of CARAK were evaluated in September 2000 by experts from the WHO Collaborating Centre for Maternal and Child Health, Trieste, Italy[3].

Based on the recommendations of this evaluation, a request was made to AGFUND Eastern Mediterranean Region for funds to support promotion and implementation of the use of appropriate technology for perinatal care, birth and neonatal care in Turkmenistan, which request was granted and an extension of CARAK initiated in September 2000. The project envisaged a holistic approach, including evidence-based care and cost-effective interventions, in line with the Safe Motherhood Initiative and the principles of breastfeeding promotion.

The equipment was selected based on results from the CARAK evaluation and on a 2001 WHO/EURO mission to Ashgabad. Purchase was carried out by WHO Geneva, following standard bidding procedures. Equipment and supplies were received in Ashgabad in the autumn of 2001. A technical training program specifically devoted to the operational aspects on medical equipment management and maintenance procedures, took place from 8 to – 12 April 2002.

[3] Istituto per l'Infanzia IRCCS Burlo Garofolo, Unit for Health Services Research and International Cooperation

4.1 Objectives

- Train participants in technical issues of appropriate installation and maintenance of the medical equipment delivered.
- Update participants on modern practices and up-to-date medical equipment, repair and maintenance services, procurement of spare parts, etc.
- Develop guidelines on medical equipment management.

4.2 Organization

The workshop was held at Bahardane Hospital from 8 to 12 April 2002, organized by the MoH, WHO-Europe, WHO Liaison Office in Ashgabad based on a technical training program specifically devoted to the operational aspects on medical equipment management and maintenance procedures. All equipment manuals were translated into Russian and made available to workshop participants.

4.3 Proceedings

All equipment was put into service and a list a short-term additional accessories, supplies and major preventive maintenance parts was given to the representative of the supplier who agreed to ship these directly without additional charges.

This workshop has once again confirmed the primary need to associate a technical training programme with medical equipment donation, as an operational support to educate and train medical doctors and nurses in the immediate use of the equipment. This is especially important in minor hospital facilities such as those from some of the CARAK pilot districts, ensuring establishment of a technical coordination between users and technicians and an adequate support from central institutions.

During the workshop, all participants showed particular appreciation and interest in this WHO-Europe and AGFUND initiative, and the immediate outcome was all equipment going into service. In order to consolidate these positive results, it is strongly recommended to set up a feedback monitoring process between user, technician and the WHO-Europe liaison office in Ashgabad, in order to promptly solve possible equipment malfunctions.

The establishment of a permanent educational program for training local technicians to service medical equipment, at least for a first level intervention, is therefore a task that should become a fundamental issue to be considered in any humanitarian intervention, especially when devoted to health care.

4.4 Programme

The five-day workshop was divided into two distinct sessions of two days' duration each:

- Session 1:
  - principles of global equipment maintenance acquisition processes;
  - technical training on medical device maintenance;
  - principles of global quality assurance and safety;
  - international medical device standards;
  - trends in new technologies and related methods in maintenance strategies; and
  - obsolescence and replacement analysis methods.

- Session 2:

- practical training "in the field" on each of the donated equipment;
- bilingual handouts (English/Russian) on technical and operational features;
- issues were discussed during the practical training:
  - preventive and corrective maintenance procedures;
  - safety issues;
  - how to read operative and service manuals and schematics; and
  - procurement strategies (spare parts replacement, accessories, refurbished equipment).

The last day was devoted to final installation of the equipment, review and calibration of working parameters, and question time hour on the topics discussed during the 5 days seminar.

4.5 List of equipment

2	Neonatal resuscitation tables
3	Electronic baby scales
4	Sphygmomanometers
2	Spare cuffs
2	Reanimation kits for adults
2	Primary care incubators
1	Neo-bil haemoglobin analyzer
4	Sets for umbilical cord ligation
4	Basic obstetric instrument sets
1	Person anaesthesia apparatus
1	Oto/opthalmoscope diagnostic set
2	Gynaecological beds

4.6 List of participants

Odekov Juma,
Turkmenmedtekhnika, Mary

Amanmuradov S. Medtekhnika
Ahal velayat

Joraev Nurmammet
Turkmenmedtekhnika

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Esenov Azat
Head of unit, Newborns, Central Maternal Hospital; Mary Regional House of Health

Artikov Kuvvat
Medical Equipment in the Hospital, District House of Health 7, Mary .

Baijaev Tachmuhammet
Doctor, Intensive Care, District House of Health, Mary

Khoudaiberdiev Rejep
Anaesthesist, Baharden Central Hospital

Markina Olga
Obstetrician, Baharden Hospital

Mammiyeva Tazegul
Neonatologist, Baharden Hospital

5 Orientation and planning meeting, June 2002

The MPS/PEPC *Orientation and planning* meeting was held at the request of the Minister of Health in Ashgabad from 24 to 26 June 2002. This activity was organized by WHO-Europe with support from UNICEF. Participants included MoH officials, representatives from regional and district health authorities, the government medical university, main partners, international governmental organizations (IGO) and NGO. The object was to review challenges, existing plans and implementation activities, and provide update on WHO tools and framework for interventions in the field of maternal and perinatal health. The working groups concluded that, for the successful introduction of MPS/PEPC in TKM, it would be necessary to refocus a number of national policies as well as revise clinical guidelines of care.

5.1 Recommendations

In a plenary session on the last day of the meeting, the following recommendations were made by participants:

- Strengthen the multidisciplinary approach.
- Continuous negotiation between neonatologists and obstetricians.
- Coordination between neonatologists and obstetricians in reaching a common goal: healthy baby and mother (subsequently: healthy population). Cooperation ongoing: antenatal period.
- Training of staff: improving psychological environment.
- Update legislation including allowing pathological deliveries at the Velayat level.
- Decrease number of examinations and analyses during pregnancy and childbirth.
- Pilot sites recommended: a policlinic in Ashgabad and Bakharden.

5.2 Objectives

Based on achievements and results of the CARAK project, the meeting had the following objectives:

- Introduce the MPS/PEPC approach to make pregnancy and birth safer.
- Provide information on operational implications of MPS/PEPC implementation.
- Identify and discuss the main needs, challenges and management options required for MPS/PEPC implementation at country level.
- Promote cross-sector discussions and increased awareness of standards of care and technical requirements (human resources, training curricula, supplies, equipment) for planning and implementing of a national MPS/PEPC strategy.
- Draft plans for implementation of MPS/PEPC at country level, based on the outcome of discussions and recommendations of meeting participants.

5.3 Proceedings

➢ **Day 1**

The meeting was opened by the Minister of Health, UNICEF and WHO-Europe. Following, Dr Viviana Mangiaterra made a brief introduction, setting out meeting objectives and expected outcome. The MoH gave a presentation on how it is handling perinatal care issues within MCH. UNICEF spoke of the achievements of the CARAK project, giving epidemiological data and lessons learnt, and the challenges in improving perinatal and neonatal care. Dr Alberta Bacci, European MPS coordinator, made a general introduction to the MPS initiative and the clinical guidelines as adapted to the European Region and their relationship to those recommended by the MPS global initiative. Dr Mangiaterra followed with an overview of the rationale and general principles of PEPC, how these relate to the needs of the European Member States and can target perinatal-related causes of maternal and infant mortality.

➢ **Day 2**

WHO-Europe specialists made a number of presentations on the strategies and activities of MPS/PEPC, including the approach to, and principles of, case management. Other topics focused on meeting physical and social needs of mothers, newborns and families, and the obstetrician/gynaecologists view of MPS/PEPC. Closing this introductory session, Dr Mangiaterra explained the rationale behind MPS/PEPC planning and how the initiative can be introduced at national level, the implementation process, phases and prerequisites.

A short introduction was made to group work: participants were divided into two groups, each of which would develop recommendations for policies of care based on MPS/PEPC clinical guidelines. Selected topics on perinatal care were discussed, with special attention to issues on maternal and child health and child protection. Before group work, there was a short 'guided tour' of the MPS/PEPC training material on neonatal care. As a "warm up" and to give participants a preliminary taste of the materials, a 'grab bag' session was held: each participant was asked to 'grab' a question from a bag, read it aloud, give her/his answer, which was then discussed by the other participants. Questions covered both clinical and organisational issues and were taken from Annex 2 of the ENC/BF manual, sections of which participants had been asked to read. This exercise was well received by the participants.

The working groups were then asked to assess, classify and manage a clinical case of mild hypertension. These tasks were completed successfully.

➢ **Case study: mild hypertension**

A case study of a pregnant woman with mild hypertension was treated and discussed among participants, a first round, and then a second round after discussion with the international experts.

- 1st opinion:
  - diagnose: relatively heavy condition, serious because of presence of oedema and protein.
  - classification (mild, medium, high): nephropathies of the first degree.
  - management: examination – blood analysis: hb, ht. biochemistry, alb., gluc. coagulation
  - USS: placenta function, fetal assessment
  - control: ophthalmologic and endocrinology function.
  - treatment: drugs – euphyline, trental, novocaine, glucose, reopoliglykin, lasix, asparkam
  - hospitalization – Psych. Prophylactics
  - neuroleptanalgesia: valerianae, dimedrol, brom
  - treatment of raised BP (blood pressure): administering (6hrl.) dibazol and papaverine.
  - continuous monitoring of BP (should not exceed 120/80).
  - diet: rich in protein, vit, limit fluid and salt intake, liver, meat.

- recommendation: in advance, prepare delivery: vit. Calc. Gluc. Phollikulin – dexametazone for baby's lungs. IOL: prostaglandine
- USS screening: condition of lungs, fetus, placenta?
- suggested risk group: kidney problems; people with lowered nervous system, young mothers, people with higher education.
- recommendation: hospitalization to control, monitor condition. Reasoning behind hospitalization: if woman's condition gets worse the doctor can be blamed if the woman had not been admitted. Also, sometimes is the distance between patient and clinic too far.
- In case of severe eclampsia, suggested action: treatment of symptmoms: spasmalythica diabazol, Epidural anesthesia, Consult reanimatologist, C/s.

- 2nd opinion:
  - very mild case of hypertension, no hospitalization, BP monitoring.
  - antenatal care: present practice: antenatal checks: 14-16, USS: 1-2, more if indicated.

➢ **Day 3**

Two working groups (mix of health administrators, obstetricians, neonatologists, midwives, representatives of partner organizers) were set up to discuss the drafting of a plan of action for introducing MPS/PEPC. The conclusions and recommendations made by the working groups were presented to the MoH in a plenary session. Based on these recommendations and the information provided during the meeting, the MoH will decide if MPS/PEPC is appropriate for TKM. If positive, official endorsement of MPS/PEPC would be made, legislation changes finalized and implementation initiated.

5.4 Working groups recommendations

➢ **Obstetric working group (Day 2)**

- Review frequency of antenatal visits and system of antenatal care.
- Improve cooperation with sanitary and epidemiological services in all medical facilities.
- Introduce delivery monitoring through use of the partogramme.
- Introduce presence of companion during labour and delivery, and separate room for each woman.
- Limit number of medical providers present during delivery.
- Reduce number of unnecessary interventions during pregnancy and delivery (demedicalization).
- Review and adapt MoH protocols to meet WHO recommendations, in line with local conditions.
- Improve system of medical care for pregnant women, with differentiation of qualified medical care by regional level.
- Strengthen motherhood advocacy with involvement of all partners (MoH, social security, public authorities).
- Enhance awareness of family, strengthening its influence in childbirth in order to increase positive outcome.
- Training/retraining of medical staff at local level.

➢ **Neonatologist group (Day 2)**

- Keep mother and baby together in all cases even in case of healthy mother–sick baby; healthy baby–sick mother (based on order №5).
- Improve quality of medical equipments (at present material is of poor technical quality).
- Establish a national working group responsible for solving problems of essential equipment and supplies for neonatal care.
- Improve coordination between gynecologists and neonatologists.

- Organize and carry out routine training courses and workshops on newborn care, with participation of all doctors, nurses, midwifes in Ashgabad and velayats.

➢ **Working group on MPS/PEPC strategy**

	Working group 1	**Working group 2**
Is MPS/PEPC strategy useful for your country	Yes, important points highlighted during the past two days: breastfeeding, making maternity safer, rooming-in, close contact, bonding. General opinion: introduction of the strategy in the country considered useful.	Yes; it would help women to be centre of attention and realize she can receive optimal care from medical staff; it will help to change strategy to and principles of delivery to decrease morbidity and mortality.
Does MPS/PEPC seem realistic? feasible? affordable? sustainable	Realistic: yes. Feasible/affordable/ sustainable: questionable, not from a financial point of view but will it be support from authorities? Other difficulties: transition from the Former Soviet Union system to new approaches.	MPS/PEPC strategy is realistic, as it solves present problems without being contrary to national tradition. With relation to funding, this cannot be solved at provider level, but we consider implementation of the program to be cost effective and would have full support of medical staff, health authority and population.
Does MPS/PEPC need to be adapted? Why? How?	Yes adaptation is needed to enhance safety and cost effectiveness. How? Given time for adaptation. Start with pilot scheme	Translation into national language of tools is required. Strategy should be adapted to current national medical reforms and consider regional specificity, such as using local drugs.
Should a working group be set up for MPS/PEPC introduction and further implementation? What do you suggest for its composition?	Yes. Composition: medical providers, midwife, neonatologist, gynaecologist, MCH representative, MoH, professor of medical institutes, specialists of future pilot sites, sanitary-epidemiological services, people from clinics at lower hierarchic level. Leader to be closely involved with clinical practice, who can work well in the group.	Yes. WG should be multi-disciplinary: midwives, neonatologists, sanitary-epidemiological service, health authorities, NGO and women's organizations and people with direct access to government. Total: no more than 6-12 people.
Which tasks should be ascribed to the working group?	Task: evaluate national situation and capacity. Adapt recommendations to local conditions. Provide materials, conduct training, assess and follow-up of local staff, coordinate monitoring activities to solve problems that occur in course of the process.	Tasks: program adaptation; work plan; training methodology; selection of pilot sites; fund raise for support with private sector; determine of detectors that would be value fulfilment of the programme; after some time, publish project results through mass media as advocacy.
Is assistance from WHO needed for this process? Why?	Yes. Technical supplies e.g.: training manuals, assessment and follow-up of specialists, train local providers to become trainers (ToT, 'cascade'), provide visual aids. Exchange of experience with other pilot sites.	Yes, organize seminars, training courses and supply of material. Assistance is needed from WHO due of its wide experience in implementing similar programmes in other countries in region.

Would it useful to begin MPS/PEPC introduction and early implementation in one or several pilot districts? Which criteria would you suggest for the choice of pilot districts?	Three pilot districts: Ashgabad central plus policlinic, two in rural areas. Implementation in distant districts will be easier. WG to be responsible for selecting pilot site. First activity, ToT, second, plan of action.	CARAK implementation in Bakharden and Mary Velayats should be complemented with MPS/PEPC activities; most participants are not familiar with CARAK results. Criteria for selecting pilot districts: level and quality of perinatal care, morbidity and mortality rates, availability of staff (doctors, nurses, midwifes), availability of drugs and equipment at each level.
Is EAPPC and ENC/BF training needed in your country? Would you like to give any suggestion to the proposed agenda?	Yes, 'cascade' training should be implemented. First, high level training, then next level, etc. Not only clinical training but also training in how to use technical equipment. Suggestion those involved: hospital deputies, perhaps main chief specialists, main specialists from districts level, gynaecologists and midwives should be included.	EAPPC and ENC/BF training is needed, involving medical staff at the second level. MPS/PEPC is acceptable in general; introduction EAPPC and ENC/BF into post-graduate curriculum should be considered.
Which kind of interventions is needed to make health system supportive of MPS/PEPC implementation? (Legislation, regionalisation of care, revision of curricula, availability of drugs, equipment and supplies…)	Financial support as it was before in FSU times throughout the process of pregnancy and childbirth. Prikaz nr. 55, 691 and 430 should be reviewed and updated.	Review legislation on childbirth and newborn care, sanitation-epidemiological service, adapting to WHO recommendations; develop inventory list for each health care level; guidelines on antenatal care, delivery management, primary resuscitation of newborns now in early stage of adaptation. Set up perinatologist association to develop guidelines based on EBM principles adapted to local conditions, removing non-evidence based practices, increasing efficiency, releasing funds for other areas of perinatal care.
Which kind of interventions are needed at family and community level to disseminate information and promote global advocacy in order to support PEPC initiative	Use existing structure. Follow the strategy used in other programme, e.g., breastfeeding which is working well.	Publicize MPS/PEPC activities through mass media (TV, radio, newspaper, journals) and results of implementation. Publish materials for MPS/PEPC advocacy with NGO and IGO.

5.5 Programme

➢ **Day 1**

13.30-14.00	Registration	
14.00-14.15	Opening address	*Minister of Health*
14.15-14.35	Welcoming address by WHO-Europe; Introduction to the orientation meeting, objectives and expected outcomes	*V Mangiaterra*
14.35-15.00	Perinatal Care Issues within MCH policies and programs	*Ministry of Health*
15.00-15.30	Making Pregnancy Safer global Initiative	*A Bacci*
16.00-17.00	Rationale and general principles of the PEPC Initiative	*V Mangiaterra*

➢ **Day 2**

09.00-09.30	Strategies and activities of the MPS/PEPC initiative. Overview of MPS/PEPC approach and principles of case management	*T Asatiani*
09.30-10.00	How to meet the physical, psychological and social needs of mother, child and families in perinatal care. Neonatologist, obstetrician/gynaecologist's point of view	*S Hadzialjevic* *T Asatiani*
10.00 -10.15	*Discussion*	
10.30 -11.00	Principles of PEPC planning and introduction of PEPC in the country: implementation process; phases; prerequisites	*V Mangiaterra*
11.00 -11.30	Discussion	
11.30 -12.00	Short introduction to group work	
12.00 -17.00	Working groups	

➢ **Day 3**

09.00-09.30	Working groups. Short introduction
09.31-12.30	Working groups
12.30-13.00	Plenary: Presentations of working groups
14.00-14.30	Plenary: Presentations of working groups; conclusions and recommendations

5.6 List of participants

Amalyyew
Neonatologist, Mary velayat

Annadyrdueva
Gynaecologist, MCH Institute Mary Velayat

Ataeva
Assistant Neonatologist, Medical Institute

Ataeva G.
Gynaecologist, MCH Institute Ashgabad

Babaewa
Gynaecologist, MCH Institute

Bayjanova A.
Neonatologist, Scientific Central Clinic

Djoraewa
Neonatologist, MCH Institute Ashgabad

Djunelow
Pediatrician, MCH Institute

Dovletova
Dept. of Prevention and Treatment, Ministry of Health

Durdieva M.
Neonatologist, Scientific Central Clinic

Dzumyazova
Assistant Neonatologist, Medical Institute

Ezizova G.
Chief, Dept. Prevention and Treatment

Farofonova
Chief Administrator, Ashgabad City Health Authority

Gariewa
Neonatologist, MCH Institute

Gairova
Dept. of Prevention and Treatment, Ministry of Health

Garyyew
Chief specialist, Mary velayat

Gharyiva
Neonatologist, MCH Institute Ashgabad

Gojaeva
Gynaecologist, MCH Institute Ashgabad

Gurbanowa
Gynaecologist, Bakharden District Hospital

Hudayberenova
Chief Administrator, Ashgabad City Health Authority

Ibragimova
Neonatologist, Ashgabad City Hospital

Jumaeva
Neonatologist, Cardiology Hospital

Kaparova
Neonatologist, MCH Institute

Khemraewa
Gynaecologist, Ashgabat City Hospital

Khodjaew
Neonatologist, Akhal Velayat

Kurbanova
Neonatologist, MCH Institute

Melebaeva
Gynaecologist, MCH Institute

Mommyyewa
Gynaecologist, Bakharden District Hospital

Nazarov
Gynaecologist, Akhal Velayat

Nazarov C.
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Osmanova
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Pawlowskaya
Professor, Medical Institute

Sakhatlieva
Neonatologist, Ashgabad City Hospital

Soyunova
Teacher, Medical Institute

Velmuradov
Chief Pediatrician, Akhal Velayat

Yarmamedova
Gynaecologist, Ashgabad city hospital

6 Essential antennal perinatal and postpartum care, November 2003

The objectives of the MPS/PEPC training courses are to enhance knowledge, skills, practices and attitudes of perinatal caregivers and train possible future course facilitators. During the training course, working groups draft plans of action in line with WHO recommendations and make a number of recommendations to improve the outcome of maternal and newborn care, including developing of clinical guidelines, updating of legislation (prikaz), and improving maternal and perinatal clinical practices. The training course on EAPPC was held from 17 to 21 November 2004.

6.1 Recommendations

- Implementation of "clean hands" policy.
- Discontinue routine shaving, enema and newborn suction.
- Free position for labour/delivering women.
- Shorter hospital stay.
- Extending role of the midwife.
- Antenatal classes for parents.

6.2 Organization

The course took place at the Scientific Clinical Centre of Mother and Child Health, Ashgabad. The auditorium was equipped with overhead projector, slide projector, multimedia projector, flipchart, video, etc. With the support provided by the WHO Liaison Office in Turkmenistan, the course ran smoothly. All WHO training materials were available on time and in the required quantity.

6.3 Participants

There was a total of 31 participants including representatives from the Faculty of the State Medical Institute of Obstetrics/Gynaecology and Paediatrics, the Scientific Clinical Centre of Mother and Child Health, including the Director of the Centre, the MPS/PEPC national coordinator, Ashgabad city authority, and chief specialists from regional (velayat) health authorities: Akhal, Balkan, Lebap, Dashogus and Mary. Although 31 participants is larger than usual for an EAPPC course (the ideal number is between 15 and 20), it was still possible to run the course as a workshop, ensuring full participation of all attendees and keeping activities interactive. Some participants were familiar with the PEPC initiative having attended previous courses, and showed a good understanding of course materials and are possible future local facilitators for training courses at district/velayat) level.

No midwives were included in the course despite WHO recommendations. It is clear that, while the course is oriented towards primary health care workers and perinatal care staffs, more attention needs to be paid to midwifery issues. At least one third of all trainees at EAPPC courses should be midwives who are key care providers in perinatal care.

6.4 Proceedings

All participants expressed great interest in the training materials and showed strong motivation and commitment for implementing WHO recommendations in their institutions. Participants agreed that WHO recommendations are acceptable but need some time to be adapted to local circumstances.

Participants identified the need for reviewing (or rewriting) some of the training material modules, mainly those dealing with pathology management: pre-eclampsia, anaemia, bleeding, reducing their length and making them based on recent evidence. They felt that one of main obstacles for implementation of WHO recommendations is the local infection control services ("sanitarno-epidemiologicheskaya sluzhba"). To solve this problem, they proposed to hold special training sessions for decision-makers. As a second step for extending evidence-based practices, it would be worthwhile to conduct a ToT so local health providers can become facilitators of future courses, although the assistance of an international facilitator will continue to be important. Participants felt consensus on a long term strategy for implementation of MPS/PEPC is crucial; as a first step, a national MPSPEPC working group should be set up.

The follow participants were identified as possible national facilitators:

- Annaatach Ulugberdyeva, Director, Ashgabad City Mother and Child Health Authority.
- Lyubov Farafonova, chief specialist, Ashgabad City Health Authority.

6.4.1 Working group recommendation

➢ **Plan of action**

- Psychosocial support (educating parents, informing relatives, training staff, partnership in labour, family centered care).
- Preferences of the patient: respect the opinion of women on place and method of birth.
- Shorten in-hospital stay – both ante- and post-partum.
- Develop reviews and standardization (guidelines).
- Implement proven methods for induction pain management and delivery (ventouse).
- Improve legislation to meet maternal needs (choices).
- Revise and restrict unnecessary routine procedures, demedicalization.
- Implement use of the partogramme.
- Strengthen family planning.
- In-service training of midwives.
- Change san-epid policies (infection control policy in maternities).

- Prepare educational leaflets, courses, etc., for health providers and patients.
- Improve outpatient services (women's consultations) and family-oriented service.
- Strengthen breastfeeding promotion activities.
- Newborn care based on WHO recommendations.
- Psychological support (rehabilitation) of women with perinatal losses.
- Demedicalized labour and free position delivery.
- Review management of pre-eclampsia, anaemia, obstetrical bleeding, and others.

➢ **Immediate action**

- "Clean hands" policy.
- Abandon routine shaving, enema and newborn suction.
- Free position for labour/delivering women.
- Shorten hospital stay.
- Extend the role of the midwife.
- Antenatal classes for parents.

➢ **Assistance requested**

- Experience exchange.
- Provide support to additional in-service training for health providers.
- Availability of consumables.
- New evidence on perinatal care.

6.5 Evaluation

Topics	Very useful	Useful	Not useful
1 Changing maternity care. Safe motherhood	16	11	-
2 Evidence-based medicine	15	6	3
3 Safe motherhood	20	6	-
4 Antenatal care	18	9	-
5 Concept of risk	13	13	-
6 Sensitivity/specificity	13	9	-
7 Education for parenthood	18	7	-
8 Anaemia in pregnancy	15	11	-
9 Referral in pregnancy with reference to bleeding	10	12	-
10 Hypertension disorders	20	7	-
11 Labour	16	9	-
12 Use of the partogramme	19	8	-

13 Risk during labour	15	8	-
14 Obstructed labour	16	8	-
15 Care and positions in 2nd stage of labour	14	12	-
16 Physiology and management of 3rd stage of labour	12	12	1
17 Induction of labour: who, why, how	16	9	1
18 Surveillance during labour	8	4	1
19 Induction of labour	14	12	-
20 Anaemia in pregnancy	10	14	-
21 Postpartum depression	4	4	-
22 Birth plan	9	8	-
23 ALPHA scale	11	8	-
24 Postpartum bleeding	19	7	-
25 Care of the newborn/resuscitation	20	6	-
26 Care of mother and baby in 1st week	16	11	-
27 Postnatal check-up	9	11	-
28 Breastfeeding	20	5	-
29 Protocols: rationale and design			
30 Audit: basic principles of clinical audit			
31 Synoptic tables			
32 Comparison of international practices			
33 Family planning	18	4	-

- **Video**

Breast is best	6	1	-
Safe labour	15	8	-
Miscarriage: crisis discarded			-
Misgav Ladach s/c			-
Vacuum extraction	21	6	-

Kinderkreigen	14	6	-

- **Timing of course**

Activity	Too short	Adequate	Too long
Presentations	1	19	2
Plenary discussions	3	10	2
Group work	3	14	-
Practical sessions	1	15	-
Exercises	4	15	-
Role play	2	20	-
Entire course	1	22	1

6.6 Programme

- **Day 1**

09:00 – 0930 Welcome, introduction, overview of workshop and of materials, self-introduction of the participants

09:30 – 10:00 Pre-test

10:00 – 10:30 Understanding the need for changing Maternity Care

10:30 – 11:00 Safe Motherhood

11:30 – 12:15 Practicing evidence based medicine

12:15 – 13:00 Antenatal care

14:00 – 15:00 Practical session using Birth Plan

15:00 – 16:00 Assessing psychosocial risk in pregnancy: using the ALPHA scale

16:30 – 17:30 Parent education

17:30 – 18:00 Practical exercise: planning of parent education course

- **Day 2**

09:00 – 10:00 Assessing obstetric risk in pregnancy

10:00 – 11:00 Sensitivity and Specificity of tests

11:30 – 12:30 Anaemia in pregnancy

12:30 – 13:00 Referral in pregnancy (bleeding)

14:00 – 16:00 Hypertensive disorders in pregnancy

16:30 – 17:00 First stage of labour

17:00 – 18:00 Second stage of labour

- **Day 3**

09:00 – 10:30	The Partogramme: practical exercise
10:30 – 11:00	Using oxytocin in labour
11:30 – 12:30	Obstructed labour
12:30 – 13:00	Third stage of labour
14:00 – 16:00	Role-play of admission, labour and delivery
16:30 – 18:00	Video: Safe delivery, Use of the Ventouse

- **Day 4**

09:00 – 10:30	Post-partum haemorrhage
10:30 – 11:00	Induction of labour
11:30 – 12:30	Immediate care of the newborn after delivery
12:30 – 13:00	Reanimation of the newborn
14:00 – 14:30	Infant feeding
14:30 – 15:00	Post-partum depression
15:00 – 16:00	Family planning
16:30 – 17:00	Loss and abnormality
17:00 – 17:30	Care of the mother in the first week
17:30 – 18:00	Evaluation forms

- **Day 5**

09:00 – 10:30	Synoptic tables
10:00 – 10:30	Protocols
10:30 – 11:00	Audit
11:30 – 12:00	Comparison of international practices
12:00 – 13:00	Plan of action
14:00 – 15:00	Presentation of plans of action
15:00 – 15:15	Post-test
15:15 – 15:30	Presentation of evaluation forms
15:30 – 16:00	Conclusion

6.7 List of participants

- **Participants**

Tyazegul Ahmedova
Head, Delivery Department, Scientific Clinical Centre of Physiology

Aysona Annayeva
Chief Specialist, Health Authority of Lebap velayat

Ejegyl Atayeva
Obstetrician-Gynaecologist, Mother and Child Health Authority of Dashoguz velayat

Gulya Atayeva
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Jeren Atayeva
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Akjemal Ismailova
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Shirin Muratova
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Chary Nazarov
Director, Scientific Clinical Centre of Mother and Child Health

Olga Nazarova
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Jahan Saparova
Chief Specialist, Health Authority of Dashoguz velayat

Shageldy Shyaherdurdiyev
Head, Sub-faculty Hospital Paediatrics, Turkmen State Medical Institute

Annatach Ulugberdiyeva
Director, Ashgabad City Health Authority

Penji Yazhanov
Chief Specialist, Health Authority of Lebap velayat

- **Facilitators**

Dalia Jeckaite, Panevezys Hospital, Lithuania

Tengiz Asatiani, Tbilisi, Georgia

7 Caesarean section – review of evidence workshop, December 2004

At the request of the MoH, a five-day workshop on C/s for obstetricians/gynaecologists was held in Ashgabad on 30-4 December 2004, based on concerns regarding the low rate of C/s (3,7%) in a country where perinatal and maternal mortality rates are high. The objective was to provide local health providers with technical assistance in conducting C/s training. A basic component was the evaluation of knowledge of participants pre- and post-training.

The day before the workshop, a meeting was held between Dr Dovletova Nabat, the chief MOH specialist, Dr Tengiz Asatiani, a long time WHO expert on obstetric/gynaecology, Dr Gozel Hojayeva, UNFPA National Project Coordinator in Reproductive Health, and Dr Bahtygul Karrieyeva, WHO Liaison Officer in TKM. The objective was to review programme and requirements for the workshop. A meeting was also held with staff at the maternity where the demonstration C/s would take place to discuss, among other matters, analgesia methods and technical surgery details.

At a meeting following the workshop, Dr Asatiani suggested that the next step to be considered could be creation of a working group for drafting up-to-date clinical guidelines on C/s. This idea was fully supported by the MoH and other participants. It was agreed that the UNFPA team would ensure that workshop proceedings, and particularly presentations and video materials, are disseminated to participants.

7.1 Participants

Participants were selected by the MoH with a view of building capacity of key persons able to implement the WHO-recommended C/s methodology at the national level. There were 32 obstetrician/gynaecologists present, mainly heads of delivery units with practical experience of not less than 10 years. As all participants were high level professionals, question and discussion sessions had enthusiastic participation.

7.2 Organization

Dr Asatiani had prepared a five-day workshop combining lectures, role-play, practical exercises and demonstrative C/s surgery to increase participants' familiarity with this area. In order to successfully complete the programme, participants needed to pass a 'phantom course' that included topics such as shoulder distocia, forceps, ventouse and breech delivery. The workshop took place at the Rairoad Maternity. During the visit to the maternity, it became apparent that much needs to be done to actively promote MPS/PEPC perinatal care principles in that institution.

7.3 Proceedings

The workshop followed the agreed-to programme. Instead of the two planned demonstration C/s, it was only possible to perform one because there was not a second patient requiring the procedure. The C/s was performed by one of the participants under direct supervision and assistance of the course director; only 10 participants were able to observe the procedure because of the small size of operating room. The surgery was also followed by local staff. Dr Stark, who had been invited to run the workshop, brought his personal assistant and two nurses for post-operative care. An especially successful part of the workshop was the 'phantom course', considered by participants as essential for acquiring practical skills. Each participant was able to view and perform independently the following interventions on a mannequin: shoulder distocia, forceps and ventouse application, assisted breech delivery.

A questionnaire distributed at the end of the course asked for participants' overall assessment of the course, applicability of skills and knowledge acquired, what sessions were most interesting, what areas required further clarification and other improvements to make the programme more effective**.** In general, the evaluation was positive, and participants showed a strong motivation and commitment for extending and implementing the C/s recommendations in their institutions.

Participants were given certificates of completion; the workshop was closed by representatives of the MoH, UNFPA and WHO-Europe.

7.4 Evaluation by participants

Please assess the course on a scale 1 - 5, with 1 being the lowest and 5 being the highest mark on the scale. Please feel free to be as critical as you wish. Your anonymous reply is very valuable to us, as it will be considered when future similar workshops are organised.

1. Course aims and objectives	Very poor	Poor	Satisfactory	Good	Very good	Comments
1.1. Were aims and objectives of workshop clearly described?					32	
1.2. Were aims and objectives achieved by end of course?				6	26	
1.3. Did aims and objectives of workshop meet your own?			1	6	25	

2. Course content	Very poor	Poor	Satisfactory	Good	Very good	Comments
2.1. My former knowledge about topics of course before workshop	1	2	6	22	1	

2.2. My knowledge about topics of course after workshop				3	29	
2.3. Workshop programme was…					32	
2.4. Overall quality of workshop lectures were…				1	31	
2.5. Lectures were easy to understand and follow				1	31	
2.6. Overall, small group sessions were…				2	30	
2.7. Skills obtained can be used in my own practice			3		29	
3. Organization of course	Very poor	Poor	Satisfactory	Good	Very good	Comments
3.1. Overall quality of materials				2	30	
3.2. Quality of organisation at workshop venue				3	29	
3.3. Quality of venue		1	11	20	1	
3.4 Overall rating of the course				1	31	
What were the main strengths of the course?						
Timely provision of course	30					
Well given theoretical and practical topics replies	29					
Demonstrative surgery (cesarean section)	25					
EBM approach	18					
Phantom course	32					
Small group work	17					
What were the main weaknesses of the course?						
Too many participants for such practical course	30					
Small operating room	26					
What would you change in the course						
Number of participants	30					
Would you recommend the course to any of your colleagues						

No doubt	32

7.5 Programme

- **Day 1, Tuesday, 30 November 2004**

09:30 – 09:45	Registration of participants	
09:45 – 10:00	Welcome	*Ministry of Health, WHO, UNFPA*
10:00 – 10:30	General introduction to the course MPS initiative; Why this course is needed	*T. Asatiani*
10:30 – 11:00	Pre-course assessment: Caesarean section and operative delivery – self assessment Multiple Choice Questions	
11:30 – 12.00	Introduction to evidence-based medicine: what is evidence; how to find it (Cochrane library, WHO RH Library; grade of recommendations; how evidence will be used in workshop	*T. Asatiani*
12.30 – 12:45	Operative delivery – situation analysis in Turkmenistan	*MoH, UNFPA*
12:45 – 13.00	C/s – a brief history	*T. Asatiani*
14:00 – 14:30	Indication and contraindication to c/s (small group work)	
14.30 – 14.45	Plenary session (presentation of small group)	
14.45 – 15:00	Indication for C/s	*T. Asatiani*
15:20 – 16:30	Counselling women about choice: Informed consent and C/s; patient choice of C/s – is this a case?	
16:30 – 17:00	Review of programme; setting tasks for next day – review of possible cases for C/s	*T. Asatiani, Head of Maternity*

- **Day 2, Wednesday, 1 December 2004**

09:00 – 09:30	Surgical Techniques for Caesarean delivery – what are the best practices (small group work)	
09.30 – 10.00	Video demonstration – Misgav Ladach technique; questions; discussion	*CD ROM: WHO RHL,*
10.00 – 11.00	Plenary cession (presentations of small group work)	
11:30 – 13:00	Operating room: demonstrative C/s	*Maternity rep, T. Asatiani*
14:00 – 15:00	Case review – what are pros and cons; indication; technique	
15:20 – 16:30	Phantom course – shoulder distocia	
16:30 – 17:00	Review of programme; setting tasks for next day - review of possible cases for C/s	*T. Asatiani*

- **Day 3, Thursday, 2 December 2004**

09:00 – 09:45	General and regional anaesthesia (pros and cons) small group work	
09:45 –10:30	Plenary session (presentation of small group)	
10:30 –11:00	C/s from the anaesthesiologist point of view	*T. Asatiani*
11:30 – 13:00	Operating room – demonstrative C/s	*Maternity rep, T Asatiani*
14.00 – 15:00	Case review – what are pros and cons: indication technique	*T. Asatiani*
15:00 – 16:30	Phantom course – forceps, ventouse	
16:30 – 17:00	Review of programme; setting tasks for next day	*T. Asatiani,*

- **Day 4, Friday, 3 December 2004**

09:00 – 09:45	How to avoid haemorrhage after c/s: small group work	
09:45 –10:30	Plenary session (presentation of small group)	
10:30 – 11:00	Haemorrhage after C/s	*T. Asatiani*
11:30 – 12:00	Breech presentation – latest evidence	*T. Asatiani*
12:00 – 13:00	*Video* Prophylactic cephalic version	
14:00 – 14:30	VBAC- how to choose the right patient: small group work	
14:30 – 14:45	Plenary session (presentations of small group)	
15:20 – 16:30	Phantom course – assisted vaginal delivery	
16:30 – 17:00	Review of programme; setting tasks for next day	*T. Asatiani*

- **Day 5, Saturday, 4 December 2004**

09:00 – 09:45	Consequences of C/s for mother and neonate: small group work	
09:45 – 10:00	Latest evidence	*T. Asatiani*
10:00 – 10:30	C/s audit	*T. Asatiani*
10:30 – 11:00	Audit topic: small group work	
11:30 – 13:00	Changing clinical practice: evidence-based implementation: group work	
14:00 – 15:00	Phantom course assessment for each participant – forceps	
15:20 – 16:30	Post-course assessment: C/s and operative delivery; self-assessment multiply choice questions	
16:30 – 17:00	Closing of the meeting. Certificates	*T. Asatiani*

7.6 List of participants

- **Course director**

Tengiz Asatiani
President of Georgian Association of Obstetricians and Gynaecologists

- **Participants**

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Plyuhina Anna Aleksandrovna
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Soyunov Seydaly Tangiyevich
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Tashliyev Salyhberdi
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8 Evidence-based Mother and Newborn Care, January 2005

The *Evidence-based mother and newborn* (EBMN) *care* training course is targeted at top-level clinicians, providing them with the basic concept of evidence-based medicine (EBM) and guiding them through active participation and exercises on specific examples. This enables participants to use evidence to develop clinical guidelines and improve clinical practices.

The EBMN course considers the principles of guideline development and the scientific background to different approaches for changing professional and organisational practices. Once sources have been identified, the course will consider their strengths and weaknesses. Critical appraisal sessions cover a range of study designs: randomised controlled trials, systematic reviews and diagnostic studies. The general sessions introduce participants to key concepts in EBM: confidence intervals, numbers-needed-to-treat. Rather than attempting to carry out a full literature search, the course focuses on a limited range of useful sources of evidence, i.e. PubMed, Cochrane and the WHO Reproductive Health Library (RHL).

The EBMN course in Turkmenistan was held in Ashgabad from 17 to 22 January 2005.

8.1 Recommendations

- Include EBM course in medical schools and postgraduate training curriculum.
- Disseminate knowledge of EBM to healthcare providers.
- Political support to EBM implementation.
- Set up an IT centre for evidence-based information distribution.
- Implementation of EBM in pilot region.
- Set up a task force to develop clinical guidelines.
- Ensure support from IGO and NGO to EBM

8.2 Objectives

- Introduce key concepts of EBM, with special emphasis on mother and newborn care, as well as tools such as confidence intervals, numbers-needed-to-treat, challenging and discussing the premise of EBM.
- Focus on a limited range of evidence sources, i.e. PubMed, Cochrane, WHO RHL, structuring questions precisely before initiating a search for evidence, to improve chances of locating the correct evidence (study type).
- Understand research papers and locate and appraise papers reflecting participants' own interests.
- Principles and practices of guideline development and how to appraise published guidelines.
- Barriers to EBMN health care; scientific background for different approaches to changing professional and organisational practices.
- Principles and practices of maternal and perinatal case reviews, building on experience from clinical reviews elsewhere.

8.3 Participants

A total of 22 participants successfully completed the training. As many were high level professionals, question and discussion sessions were both participatory and enthusiastic.

8.4 Organization

The EBMN course took place at the Hotel President in Ashgabad. The meeting room was equipped with LCD projector and flip chart. Each participant received a full set of EBM training materials in Russian. The training course included both presentation sessions and interactive group discussions. Although a number of participants were unfamiliar with group learning methods, most adapted quickly and enthusiastically. Some participants initially showed frustration with course lectures, especially following group work; others expressed a wish to learn more about theoretical issues before proceeding to group work.

8.5 Proceedings

Overall, the reaction to the course was extremely positive; many comments from participants dealt with their commitment to change methods in assessment of existing papers and clinical guidelines, as well as when developing guidelines themselves. All participants expressed interest in the materials handed out and showed both motivation and commitment to extend and implement EBM recommendations in their places of work.

Day 1 covered the topics "what is evidence-based medicine", "which study design answers my question" and "simplified statistics".

Day 2 began with a presentation on *randomized controlled trials* (RTC), with special focus on critical appraisal of RTC, followed by interactive group work on the case study *Neonatal resuscitation of newborn: use of 100% oxygen or room air*? Other presentations covered systematic reviews, how to find the correct sort of evidence and sources of evidence (Cochrane Library, WHO RHL, etc.).

Day 3 focused on how to find the correct type of evidence and sources of evidence (Cochrane Library, WHO RHL, etc.). Other areas included diagnostic study, critical appraisal of diagnostic study, evidence of clinical guidelines and clinical case reviews. Presentations were followed by interactive work group on *Trans-vaginal ultrasonography of the endometrium in women with postmenopausal bleeding; is it always necessary to perform an endometrial biopsy*.

Day 4 focused mainly on clinical guidelines and their increasing use for planning and provision of health care. To have any positive impact, guidelines need to be carefully developed and adapted to local needs and circumstances. The main challenge for participants was the absence of a unified format for developing clinical guidelines and standards. Participants were introduced to the instrument *Appraisal of guidelines for research and evaluation* (AGREE). During group work, participants made a critical appraisal of the C/s guidelines produced by the MoH. Participants agreed that clinical guideline formats should be based on EBM principles, with special emphasize on implementation of any clinical guideline or standard.

It was also agreed that the barriers to evidence-based care and different approaches that require changing professional and organizational practices and attitudes need local solutions. Plans of action were drafted for implementation of EBM. Participants made presentations based on papers from the course pack, research papers of their own choice or other EBM topics. At the closing ceremony, certificates were awarded to participants.

8.6 Evaluation by participants

Participants completed both pre- and post-course questionnaires and evaluations. Pre-course, familiarity scores were low (under 3) in all areas except journal editorial, clinical trial and clinical audit. Post-course, familiarity scores improved, with the greatest improvements in mean score of >1.5 (in italics) for systematic review, meta-analysis, odds ratios, confidence intervals, diagnostic tests, specificity, likelihood ratio, case control study, literature search, Cochrane and WHO RHL.

Clinical effectiveness term or source	Familiarity (scale of 1 to 5)		
	Mean pre-course (n=15)	**Mean post-course (n=12)**	**Change in mean score**
Journal editorial	52 (3.4)	55 (4.5)	1.1
Clinical trial	53 (3.5)	53 (4.4)	0.9
Systematic review	40 (2.6)	50 (4.1)	*1.5*
Meta-analysis	26 (1.7)	46 (3.8)	*2.1*
Odds ratios	20 (1.3)	51 (4.2)	*2.9*
Statistical significance	49 (3.2)	55 (4.5)	1.3
Confidence intervals	26 (1.7)	53. (4.1)	*2.4*
Sensitivity	42 (2.8)	51 (4.2)	1.4
Diagnostic test	40 (2.6)	51 (4.2)	*1.6*
Specificity	32 (2.1)	51 (4.2)	*2.1*
Likelihood ratio	35 (2.3)	52 (4.3)	*2.0*
Cohort study	36 (2.4)	44 (3.6)	1.2
Case control study*	28 (1.8)	52 (4.3)	*2.5*
Literature search	36 (2.4)	51 (4.2)	*1.8*
Publication bias	52 (3.4)	50 (4.1)	0.7
Cochrane Collaboration	28 (1.8)	45 (3.7)	*1.9*
WHO RHL	30 (2)	50 (4.1)	*2.1*
Clinical audit	46 (3.0)	51 (4.2)	1.2
Clinical guidelines	47 (3.1)	53 (4.4)	1.3

8.7 Programme

- **Day 1, 17 January 2005**

08:30-09:00 Registration

09:00-09:15 Welcome and general introduction (goals and objectives)

09:15-09:45 Introduction of participants

09:45-10:15 Pre-course assessment
10: 15-11:00 What is EBM?
11:30-12:00 Which study design answers my question?
12:00-13:00 Study design workshop (interactive session in small groups)
13.30-14.00 Simplified statistics
14:00-14:30 Interactive group session
14:30-15:00 Introduction to randomized control trial
15.30-17.00 Plenary session

- **Day 2, 18 January 2005**

09:00-11:00 Group work: Critical appraisal workshop Randomized controlled trials
11:30-12:00 Introduction: Systematic reviews
12:00-13:00 Plenary session
14:00-14:30 Introduction: How to search the literature
14:30-15:00 Group works (Cochran, PubMed, WHO RHL)
15.30-17.00 Small group works (Cochran, PubMed, WHO RHL)

- **Day 3, 19 January 2005**

09:00-10:00 Introduction: Evidence based guidelines
10:30-11:00 Group work: Critical appraisal workshop (AGREE)
11:30-12:30 Caesarean Section – critical appraisal
12:30-13:00 Plenary discussion
13.30-14.00 Introduction: Diagnostic articles
14:00-15: 00 Group work: Critical appraisal workshop Diagnostic articles
15.30-17.00 Plenary discussion

- **Day 4, 20 January 2005**

09:00-09:30 Introduction: Evidence based audit
09:30-11:00 Group work: Audit selection
12:30-13:00 Group work: Barriers to implementation of EBHC in local contexts
14:00-15:00 Plenary discussion: Local solutions to implementation of EBHC
15:30-17:00 Post test; Ways forward and conclusions

8.8 List of participants

- **Facilitators**

  - Tengiz Asatiani, Georgia, Course director
  - Valentina Baltag, Republic of Moldova, Facilitator

- **Participants**

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Annatach Ulugberdiyeva

[i] Family and Community Health Focal Points Meeting, Report. Ayia Napa, Cyprus, 18-22 April 2004. WHO Regional Office for Europe. Copenhagen, Denmark, September 2004