Interim review of FIGO's project entitled “Beyond the numbers: implementation of new approaches for reviewing perinatal deaths in the Republic of Moldova.”

FIGO Safe Motherhood and Newborn Health Project in Moldova

BASELINE REVIEW

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June 2008
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6 Front page of newly devised birth record in final draft
7 Example of data collected and used within an audit process (Hospital no 2)
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ABBREVIATIONS

MoH Ministry of Health
MCHCRI Maternal and Child Health Care Research Institute
SDC Swiss Agency for Development and Cooperation
NICU Neonatal Intensive Care Unit
APM Association of Perinatal Medicine
SOG Society of Obstetricians and Gynaecologists
MAM Moldovan Association of Midwives
IUGR Intrauterine growth retardation

ACKNOWLEDGEMENTS

I would like to most sincerely thank the Chisinau Perinatal Audit Team leading the Confidential Enquiry into Perinatal Deaths in the Republic of Moldova for hosting my visit. Their generous hospitality in terms of the valuable time given for interviews and meetings, professional partnership discussions locally and across several site visits, in addition to the personal introduction to their country, culture and customs, has been invaluable. I extend particular thanks to Ala Curteanu for her tireless role as interpreter and accompanist to many site visits, driven by Mr Igor Slonovschi in the car most generously provided by Professor Petru Statulat. Ala has provided me with a comprehensive overview of the project progress, from which I have been able to compile this report. I also want to thank Tatiana Caraush for always locating and providing the copious documentary evidence that demonstrates the transparency and progress of this project.

At Options, I would like to thank Louise Hulton for providing me with the opportunity to undertake this evaluation and Sinead Rowen for ensuring the seamless management of the process to enable to me to undertake this work.
Executive summary

This is a highly successful project, superbly well implemented, financially managed efficiently and in balance. There is transparent record keeping and accountability at all levels.

The notion of addressing high maternal and perinatal mortality rates in Moldova has thus been recognised as a high priority health care issue for the past 10 years. To that end, the Society of Obstetricians and Gynaecology of the Republic of Moldova, the Moldovan Association of Midwives and the Association of Perinatal Medicine have introduced the perinatal mortality audit as a new approach to analysing perinatal deaths in babies with a gestation age $\geq$ 37 weeks and a birth weight $\geq$ 2500 g in the Republic of Moldova. Maternity and newborn services are divided into 3 levels in Moldova, from primary care at level 1 to highly specialised care at level 3. Care pathways and protocols are clear from levels 1 across to levels 2 and 3 services and communication is generally effective.

Comprehensive background work took place to underpin the development and success of this perinatal mortality audit. Backed by the 10 year history of a commitment to address maternal and perinatal mortality, the introduction of the Confidential Enquiry into Perinatal Mortality has been a crucial step forward in addressing the issue. Perinatal mortality audit cannot be seen in isolation because the whole process of addressing mortality rates is one of commitment, collaboration, inter agency and multi-disciplinary partnership working within a framework of standards and protocol development, systems and procedures.

Strong leadership of this project is clearly evident. There is total commitment from the Ministry of Health and the project is driven at the most senior level of strategic policy development, organisational and clinical management, to facilitate engagement with clinical practitioners of all levels - including the essential administrative and support staff. Training and education is fundamental to this project and this has been facilitated in the early stages, with on-going support through supportive contact with and delivery of seminars and conference presentations by the project co-mentor, Professor Jason Gardosi, Director of the Perinatal Institute in Birmingham, UK.

Standards and protocols have been devised and form the backdrop of improved clinical practice and provide a foundation from which to discuss and assess perinatal mortality cases. Communication is excellent between the project teams leading the Confidential Enquiries into both maternal mortality and the perinatal mortality team, which adds value to the whole system of collaborative working and professional engagement to achieve goals.

The implementation of the perinatal audit process is an invaluable and key component of reducing perinatal mortality rates and is set within an infrastructure that has successfully been built around improving antenatal care, management of labour and post-partum care.
and the care of the newborn. The efficiency of the audit process has enhanced communication between clinicians within the maternity hospitals and family doctors in primary care over recent years. This is evident as a result of the improving level of the quality of practitioners' record keeping and the subsequent scrutiny of case detail required by the Committee. Issues arising from the audit are positively affecting professional engagement, identifying training and education requirements, highlighting the need for improved equipment and its maintenance within level 2 and 3 services, in addition to raising recruitment and retention issues such as succession planning for staff replacement as staff retire.

Summary of recommendations

To the National Confidential Enquiry into Perinatal Mortality team:

1. Maintain the emphasis on training that will facilitate all practitioners at levels 1, 2 and 3 services to keep accurate records and data collection and provide prompt submissions of documentation to the audit team. This would be an opportunity to expand the project into primary care as a second phase of the audit development, whilst retaining centralised control;
2. Consider lobbying for the re-introduction of community midwifery by piloting and evaluating the role in a targeted region;
3. Ensure all women bereaved through stillbirth are included in the audit by being interviewed by a psychologist

To FIGO

1. Continue with the mentorship and twinning arrangements for supporting this project as they are highly effective;
2. The success of this project demonstrates that Moldova could be viewed as an international template for good practice in implementing perinatal mortality audit.
1.0 BACKGROUND

This baseline review assesses the progress made since the 2006 inception phase of the Confidential Enquiry into Perinatal Mortality Project in the Republic of Moldova. The project is one of ten FIGO (International Federation of Gynecology and Obstetrics) projects that are part of its Saving Mothers and Newborns Initiative. Other participating countries are Haiti, Kenya, Kosovo, Nigeria, Pakistan, Peru, Uganda, Ukraine and Uruguay.

Maternity units are referred to as 'maternities' in Moldova. Maternity and newborn services are divided into 3 levels in the Republic of Moldova (Appendices 1 and 2):

- Level 1 is at primary care provided by family doctors and nurses (not community midwives, although some nurses might also be qualified midwives);
- Level 2 services are throughout the Republic and available for women with mild to moderate complications;
- Level 3 is for complex cases.

Level 2 services are strategically located so that level 1 services can feed into them as easily as possible. They might, for example, cater for one to four level 1 service providers. Care pathways and protocols are clear from levels 1 to level 2 and 3 services and communication is generally effective.

This perinatal mortality audit is a new approach to analysing perinatal deaths in babies with a gestation age $\geq 37$ weeks and a birth weight $\geq 2500$ g within the Republic.

1.1 FIGO

FIGO brings together professional societies of obstetricians and gynecologists on a global basis to promote the well-being of women and their children and to raise standards of practice in obstetrics, gynecology and midwifery services. The Saving Mothers and Newborns Initiative is the successor to FIGO’s Save The Mothers Initiative.

The Saving Mothers and Newborns Initiative was launched in 2006 with the goal of reducing maternal and newborn morbidity and mortality and to contribute to the achievement of Millennium Development Goals (MDG) 4 and 5 (Box 2).

The Initiative aims to build and sustain the capacity of obstetric, gynaecology and midwifery societies in participating developing countries to conduct essential projects relevant to the promotion of safe motherhood and the improvement of maternal health.

Box 2: Millennium Development Goals

**MDG 4:** Between 1990 and 2015 reduce by two thirds the mortality rate among children under five.

**MDG 5:** Between 1990 and 2015 reduce by three quarters the maternal mortality ratio.
Two key features of the initiative are:

1) north-south partnerships through the establishment of twinning mechanisms between obstetric, gynaecology and midwifery societies in developed and in the implementing countries; and
2) increasing women’s access to cost-effective and evidence-based technology for the reduction of maternal and newborn mortality

1.2 The Republic of Moldova picture
Interim review of FIGO’s project entitled “Beyond the numbers: implementation of new approaches for reviewing perinatal deaths in the Republic of Moldova.”

1.3 Statistics

Total population: 3,833,000

Gross national income per capita (PPP international $): 2,880

Life expectancy at birth m/f (years): 64/72

Healthy life expectancy at birth m/f (years, 2003): 57/62

Probability of dying under five (per 1,000 live births): 19

Probability of dying between 15 and 60 years m/f (per 1,000 population): 325/151

HIV prevalence: 44.74% per 100,000

Total expenditure on health per capita (Intl $, 2005): 170

Total expenditure on health as % of GDP (2005): 7.5

Figures are for 2006 unless indicated. Source: World Health Statistics 2008

2.0 INTRODUCTION

Although Moldova is experiencing a reduction in maternal, perinatal and early neonatal mortality, babies of a normal birth weight account for approximately 50% of the perinatal deaths in the Republic of Moldova. Recognising the need to tackle this issue, the Society of Obstetricians and Gynaecology of the Republic of Moldova, the Moldovan Association of Midwives and the Association of Perinatal Medicine have introduced the perinatal mortality audit as a new approach to analysing perinatal deaths in babies with a gestation age $\geq$ 37 weeks and a birth weight $\geq$ 2500 g. The main principles of the approach to the audit are:

- anonymous case presentation
- confidentiality of discussions
- application of evidence-based medicine to apply to future case management

During the preparation stage of the project, a group of specialists from Moldova participated in a regional workshop entitled, ‘Beyond the numbers.’ A national conference, also entitled, ‘Beyond the Numbers’ was held in Chisinau in January 2005. Participants were informed about the perinatal mortality audit and the opportunities and potential for Moldova of its implementation. To support the Confidential Enquiry into Perinatal Deaths, a framework of recommendations was devised, along with with a draft of the Standards for Best Practices for assessing cases of perinatal death. Professor Jason Gardosi (co-mentor of the project for the Confidential Enquiry into Perinatal Mortality) was welcomed at the national conference where he facilitated some workshops. In November 2005, a team of specialists from Moldova visited the Perinatology Institute in Birmingham in England,
where they learned of the UK experience in conducting Confidential Enquiries in maternal and perinatal mortality.

In early 2006, the concept of the perinatal audit and logistics for implementing a Confidential Enquiry were reviewed and pilot facilities, where the project started in 2006, were selected. The 3 pilot sites were 1) 3rd level services at the Mother and Child Health Care Research Institute (MCHCRI), 2) Chisinau 2nd level Perinatal Centre and 3) Balti 2nd level Perinatal Centre, which provide care for **34% of all deliveries and where 50% cases of perinatal deaths occur.** It is of note that these are referral centres, to which moderate and the most complicated maternal and neonatal cases are referred. Only 2 institutions manage the delivery of patients with HIV and most HIV antenatal care is managed by the family doctors. HIV is increasing, but affects less than 1% of the population.

**3.0 Project Objectives**

**3.1 Project Goal**

Reduction of perinatal mortality among children with a gestation age $\geq 37$ weeks and a birth weight $\geq 2500$ g in the Republic of Moldova.

**Project outputs**

**Output 1.** To increase the capacity of the Partner Societies in the analysis of the perinatal death cases and the development of recommendations for their reduction;

**Output 2.** To increase the number of partner societies’ members that are able to apply the cost-effective interventions, recommended by WHO in the perinatal care for the improvement of the perinatal practices;

**Output 3.** To increase the role of midwives in offering antenatal and intrapartum care.

The table in Appendix 3 sets out the indicators being measured to monitor progress towards the above outputs.

**4.0 Method of evaluation visit**

The baseline evaluation took place in Moldova, between 16th - 19th June 2008. Project documentation held by FIGO and the Moldovan project team were requested and reviewed prior to travelling to Moldova.

The evaluator visited the main audit office within the MCHCRI, then undertook a series of planned site visits to each of the three pilot maternity care hospitals, meeting local obstetricians, gynaecologists, pathologists, neonatologists, midwives and various heads of staff and departments (Appendix 4). This process established a baseline from which to review progress and achievements and identify and discuss the opportunities and challenges facing the project.
The evaluator met the Project Co-ordinator and Project Manager in the first instance to discuss:

- Project activities
- Project management
- Project log frame

The evaluator concluded the visit by holding a meeting to provide feedback to Professor Petru Stratulat and Ala Curteanu on the findings, along with initial recommendations.

4.1 Evaluation schedule (Monday 16th – Thursday 19th June 2008)

Sinead, I think Lou wanted you to put this in the appendix somewhere. I'll talk to you about why I'm unclear – blame Vista and associated techno crisis!

Monday 16th  Meetings and discussions with all Perinatal Audit Team leading the Confidential Enquiry

Tuesday 17th  Site visit to Perinatal Centre, Number 1 maternity hospital, Chisinau
Audit session – 4 stillbirths. 29 participants (multi-professional)

Wednesday 18th  Site visit to Perinatal Centre, Balti (antenatal, delivery, postnatal and NICU)
Site visit to Perinatal Centre, Orhei (          ''                    ''                 )
Visit to Safe Abortion service
Visit to 'young people friendly' service

Thursday 19th  MCHCRI to summarise evaluation findings, project challenges and discuss the way forward.

The Moldovan project has been funded from 2006 – 2010 and implemented by FIGO and the Republic of Moldova Society of Obstetricians and Gynaecologists. The Twinning Association is the Royal College of Obstetricians and Gynaecologists in London and the Twinning Midwifery society is the Royal College of Midwives, London. The project's professional associations are the Society of Obstetricians and Gynaecologists, the Moldovan Association of Midwives and the Association of Perinatal Medicine.

Project organisation

Directing this project is the President of the Perinatal Medicine Association, Professor Petru Stratulat, who also Chairs the National committee for the Confidential Enquiry in into Perinatal Mortality. The committee secretaries are Mr Victor Petrov (Assistant Professor) and Scientific Researcher, Tatiana Caraush. Ala Curteanu manages the project and is responsible to the Project Director. She is key to its implementation as a visible leader who is well known to the staff in the pilot sites and to primary care providers across the regions. This is an integrated team and the successful project outcomes demonstrate clearly that the management structure is robust, effective and outcome focused. The project mentors are highly valued and important to the project's sustainability and there is regular contact with them. Professor Gardosi is due to visit Moldova again in September
with a colleague from the Royal College of Midwives in London to facilitate more training for doctors and midwives.

5.0 PROGRAMME ACHIEVEMENTS AND CHALLENGES

5.1 Achievements

Training and dissemination of information

- During 3rd - 6th June 2006, training was organised for 25 doctors and midwives from the 3 pilot sites and were conducted by Professor Jason Gardosi. During the group sessions, the participants at the training sessions developed audit tools and the methodology for analysing perinatal mortality cases within the National Confidential Enquiry. All the materials developed were approved by the Ministry of Health (MoH) on the 16.6.2006 and therefore endorsed the official implementation of perinatal audit in three pilot facilities in 2006 and at national level up to 2010.

- The 3rd International Conference of Perinatal Medicine was held on 5th -6th June 2006. During the conference 300 obstetricians, neonatologists, midwives, representatives of UNICEF, WHO Bureau, Swiss Agency for Development and Cooperation (SDC) in the country, in addition to NGOs, were informed about the FIGO’s Saving Mothers and Newborns Project in Moldova. During the session dedicated to perinatal mortality audit, conducted by the mentor of the project Professor Staffan Bergstrom, 50 delegates participated and the schedule and methodology for implementing the audit, instruments used for audit and the
responsibility of the people performing an audit were discussed.

- The results of the implementation of the audit in the 3 pilot institutions were presented in March 2007 at the Annual Scientific Conference from the Mother and Child Health Care Research Institute (MCHCRI) - jointly with the societies involved in the implementation of the project. There were 190 participants.

- A round table discussion with representatives from the Science Departments of the MCHCRI and pilot institutions took place in June 2007. Those participating were Directors of the Perinatal Centres, Chiefs of the labour wards, Heads of the NICUs, midwives and pathologists. The results of the implementation of the audit in the pilot institutions and the recommendations for the improvement of the care during the delivery and the neonatal period, were presented.

- In November 2007, a joint meeting of the Obstetrics and Gynaecology Society, Midwifery Association and Association of Perinatal Medicine took place. 3 guests attended from Romania (Professor. D. Dragomir (obstetrician), Associate Professor Maria Stamatin (neonatologist) and Associate Professor Gheorghe Iliev (obstetrical imagist, specialising in Intrauterine Growth Retardation (IUGR), which according to the perinatal auditing data, represents the major cause of stillbirths.

- The learning experience, preliminary results, achievements and barriers of near miss cases reviewed in 3 pilot facilities were presented and discussed during the Meeting of the Society of Obstetricians and Gynaecologists of Moldova on 21 December 2007.

- In 2008 the results of audit implementation were shared and discussed at 3 venues: 23rd March 2008 at the Annual Scientific Conference from the MCHCRI, then the Moldo-Romanian Conference entitled 'Newborn Days' on 30th and 31th of May 2008 and finally at the meeting organised by the Midwifery Association.

5.2 Data utilisation

Data collection started on 16. 06. 06. It is important to take into account with the numbers of perinatal deaths that, as from 1.4.08, data is collected from 22 weeks gestation up to the first week of life. Prior to this, the lower limit has been 24 weeks.

The National Committee of Confidential Enquiry on Perinatal Mortality received the first documents on the first case of perinatal death on 31.06.06. The first meeting of the Committee, once a sufficient number of cases were collected, took place on September 11, 2006. Usually, meetings are organised when 4-5 cases have accumulated.

Since official approval of the National Confidential Enquiry into Perinatal Mortality and up until May 30th 2008, the National Committee for Confidential Enquiry into Perinatal Mortality has received documentation on 198 cases of perinatal deaths. Of those, 138 cases were discussed (23 in 2006, 75 in 2007 and 40 in 2008) during 29 meetings of the Committee (5 in 2006, 16 in 2007 and 8 in 2008). Of the 138 cases discussed cases, 67
were stillbirths and 71 intra-natal and early neonatal deaths.

Dissemination of information and findings is essential for the success and sustainability of this project and the project team is a major driver in successfully facilitating this process. There is a robust, auditable trail as to how the profile and importance of the perinatal mortality audit profile is maintained and retained as a high priority:

- There have been **29 meetings** on perinatal audit (7 outside Chisinau in second level services in Balti (x2), Orhei, Hincest, Cahul, Soroca and Ungheni). 586 practitioners from the maternity hospitals and family doctors attended the meetings;
- **174** specialists have been involved in audit sessions as experts;
- **8** seminars have been run during 2006-7 (1 supported by Soros Foundation, 1 supported by UNICEF and 6 supported by FIGO);
- **200** specialists have been trained in using the audit tools and methodology of auditing (an obstetrician, neonatologist, midwife, pathologist and psychologist from **each** maternity unit of the three pilot institutions, **8** level two perinatal centres and **16** from level one services) - which comprises 22.2% of the total number of members of the Societies involved in the implementation of this project;
- From 38 maternity units in the country, **27 (71%)** have been involved in the implementation of the audit (3 – 8% in 2006 and 24 (63%) in 2007);
- **8 joint meetings** of the partner societies have taken place. At the societies’ meetings, the analyses of the auditing data and recommendations were made.

To promote dissemination of findings, the analysis of the auditing data have been published in the *Bulletin of Perinatology* journal, which is distributed free of charge to obstetricians and neonatologists and also in some publications abroad:

- 3 articles have been published in the *Bulletin of Perinatology* journal;
- The content of *The Physiology and Pathology of the Newborn* Conference in Kiev, Ukraine (March 2007);
- The content of the 5th World Congress of Critical Paediatric Medicine Geneva, Switzerland (June, 2007);
- The content of the 3rd Annual Conference of the International Stillbirth Alliance Birmingham, UK. (ISA 2001 Perinatal Loss: Improving Care and Prevention),

### 5.3 Developing audit tools and improving records

As a result of the audit process and the findings and discussions examining perinatal death cases, a partogram for stage 2 labour has been successfully devised (*Appendix 5*) and piloted in the 3 sites for the perinatal mortality audit and is now in use in all birth records. A Pathology Examination Report has been devised and tested in the 3 pilot institutions and is now under review at national level. Modernisation and standardisation of the birth record (known as an 'obstetrical file') is currently in final draft (*Appendix 6*). A patient-held pregnancy record is now routinely given to all new mothers at booking. This booklet is filled with health promotion material, as well as a record for her progress through pregnancy. It contains a 'gravidogram' which monitors growth and development and fetal activity and, crucially, sets out criteria for the mother for when she should seek medical
attention during her pregnancy. Training and workshops have been provided for staff to support the implementation of this document.

5.4 Engaging with partner organisations and developing collaborative practice

To increase the number of partner societies' members that are able to apply the cost-effective interventions in perinatal care as recommended by WHO, for the improvement of the perinatal practice within the framework of the Perinatal Programme, various activities have been undertaken which have assisted in achieving their implementation.

- During 2007, with the support of SDC, 31 seminars on antenatal care in 8 rural localities Hincesti, Dubasari, Singerei, Glodeni, Falesti, Drochia, Riscani, Floresti and Balti municipium were run. **368 family doctors** (87.8% of all family doctors in these regions) and **382 nurses** (27.5% of all nurses from targeted regions) from primary health care facilities have been trained. The use of antenatal growth charts was included;

- Through the support of specialists from USA, 3 seminars on the 'Resuscitation of the Newborn' for obstetricians, neonatologists and paediatricians were provided from 3rd - 8th December 2007. Obstetric, neonatal and paediatric services benefited from this collaborative approach and received equipment for neonatal resuscitation e.g. bags and masks, laryngoscopes, bulb syringes and stethoscopes. **87 sessions** on neonatal resuscitation were carried out from December 2007 through to May 2008. 523 specialists in obstetrics, neonatology, paediatricians, midwives and nurses from maternity units across the Republic have been trained;

- Based on audit results, during the meeting of the members of the societies, 3 clinical protocols were developed on: 1) diabetes in pregnancy, 2) instrumental methods for delivery and 3) antepartum haemorrhage;

- During the reported period, 6 clinical protocols in obstetrics and neonatology were been revised: 1) Hypertension and pregnancy, 2) Caesarian section and fetal monitoring during labour. For neonates, 1) Infection, hypothermia and hypoglycaemia;

- 10 maternity units from the republic were evaluated in August 2007 for the quality of service provision. These were MCHCRI, Calarasi, Cantemir, Edinet, Glodeni, Hincesti, Orhei, Riscani, Singerei and Straseni.

5.5 Increasing the role of the midwives

To support midwives providing antenatal and care during labour within the framework of this project, they have been included in the organised seminars, audit sessions and some practical courses at their places of work. Antenatal protocols for assessing risk were first devised in 2001. In 2006, protocols for pregnancy management within primary care were devised.
During this time 33 midwives have been instructed in 8 seminars focussed on the audit, which constitutes 6.8% from the total number of 485 members of The Moldovan Association of Midwives (MAM);

50 (10.3%) midwives participated at the professional upgrading courses dedicated to the use of Partogram and the monitoring of the fetal heart rate;

23 (4.7%) midwives have participated as experts at the auditing sessions: 2 (0.5%) in 2006, 16 (3.3%) in 2007 and 5 (1.03%) up until 30\textsuperscript{th} May 2008;

63 (13%) of midwives have participated at the auditing sessions: 10 (2%) in 2006, 43 (8.9%) in 2007 and 10 (2%) until 30\textsuperscript{th} May 2008;

15% of midwives completed the Partogram on their own (baseline data 5%) – increase of 10%.

5.6 Challenges

5.6.1 Four key challenges

1. maintenance of high quality documentation and engagement with the audit process

Central to the success of this project are logistical issues around maintaining momentum across the country to complete documentation, engage in reflective practice and shape clinical practice around evidence based medicine. The leadership of this project cannot be faulted and the collaboration and commitment in terms of ensuring effective communication, collaborative partnerships, training and education and constructive feedback are essential components and ones which were clearly visible during the evaluation visit.

Addressing perinatal and maternal mortality through audit is not an isolated, discreet process. It is a component of a much wider infrastructure where 'the sum of the parts is greater than the whole.' Data is exhaustively collected and readily shared. For example, the No 2 Perinatal Centre pilot site in Chisinau demonstrates the high quality of data readily available for sharing scrutiny (Appendix 7). Mortality rates are reducing because all parties are working together and using the evidence obtained from the audit to improve practice. Audit meetings are collaborative and carefully constructed to ensure a multi professional approach, whilst maintaining absolute confidentiality for the patients and professionals involved (Appendix 8). The record keeping process led by the audit project secretary at the MCHRCI is exemplary.
2. **improve engagement with family doctors in primary care**

Evidence reveals that the main cause of stillbirth is Intrauterine Growth Retardation (IUGR). This has implications for training needs around the provision of antenatal care and increasing engagement with family doctors in primary care. It is recognised that women, too, have a responsibility for their own care and whilst health promotion messages and education are now available through existing antenatal care and the patient-held record, in addition to a number of national advertising campaigns, it could be strengthened by further inclusion of family doctors in the audit process at local level. This could be achieved by expanding the macro-level level audit to a 2nd stage, i.e. to a micro-level audit within the 38 regions and still retain central monitoring control from MCHCRI. This would create a 'hub and spoke' audit model, where MCHCRI is the hub and the spokes are the level 1 maternities with family doctors being more actively involved in local audit and feeding back into the main hub for central co-ordination. This would improve engagement with primary care, emphasising its essential role throughout pregnancy and assist in standardising primary care input across the regions.

3. **access to (and maintenance of) hospital equipment**

Excellent work with excellent results is being undertaken with minimum resources. Funds from Japan and SDC have secured a great deal of equipment in recent years. However, there are examples of incubators and phototherapy units which remain broken because there is no maintenance of such equipment. This is a major obstacle and hinders the key professionals from attaining results. It also is not helpful for staff morale. Technical training is required, in addition to a range of essential equipment to further reduce rates of mortality, for example, in particular CTG machines and scalp electrodes. Also there is a great shortage of modern incubators, CPAP machines and there is no technical support to maintain them.

4. **raising maternal awareness of signs and symptoms of pregnancy that require rapid medical attention**

Assessments and audit data have clearly revealed that pregnant women are unaware of the importance of understanding the significance of reduced fetal movement and of the seeking help early – despite the patient-held record information. The effectiveness of this record in this case relies on a degree of compliance in women in booking early and being committed to supporting their own healthy pregnancy. This is not necessarily what happens in reality. Many cases of mortality can be traced back to late booking and the impact of other lifestyle issues such as alcohol and drug misuse, poor nutrition, low health status etc, all of which adversely affect a healthy pregnancy.

Health education and health promotion underpin the development of effective working partnerships between patient and professional to reduce the incidence of preventable mortality and morbidity. Engaging fully with primary care providers (family doctors) is already a recognised issue in the Republic and the audit team works hard - and with success - to ensure the inclusion of practitioners in training opportunities and in audit processes. However, as mentioned in challenge number 2, perhaps increasing ownership
and engagement with primary care would be facilitated if the audit were to be expanded into the regions and be monitored centrally.

There are excellent examples of health promotion activity that maximise patient involvement and provide user friendly services. One such service is within the Department of Obstetrics and Gynecology at the Perinatal Centre in Balti where there is a 'Young People Friendly' service and also a Safe Abortion service. Highly well attended, these patient focused services demonstrate how engaging more effectively with young people will empower them to seek help and information thereby taking increased responsibility in their own health care. Health care professionals can learn from patients. This is further demonstrated by another excellent, patient focused, non-judgmental, inclusive and integrated service in Neovita clinic in Chisinau. This young people's service provides a service for young people under 25 years old (as per WHO recommendation) and is a multidisciplinary, inter agency service where young people can access a comprehensive sexual health service 6 days a week. The need is clear as attendances demonstrate - in 2007, 7000 young people attended for consultations with a professional and a further 10,000 young people attended requiring health care information around sexual health - including contraception, STI management, reproductive health and pregnancy issues in addition to many other relationship and social care related issues.

Finally, midwives in Moldova are well trained and competent, although remain hospital based. Family doctors are supported by 2-3 nurses each in primary care and although some might be trained midwives, they are working in nursing roles. Supporting the infrastructure to address perinatal mortality across the country by re-introducing community midwifery would add value and support to hospital based colleagues, improve engagement with primary care and contribute to the reduction in mortality rates.

6.0 Recommendations

6.1 To the National Confidential Enquiry into Perinatal Mortality team:

1. Maintain the emphasis on training that will facilitate all practitioners at levels 1, 2 and 3 to keep accurate records and data collection and provide prompt submissions of documentation to the audit team. This would be an opportunity to expand the project into primary care as a second phase of the audit development whilst retaining centralised control;
2. Consider lobbying for the re-introduction of community midwifery by piloting and evaluating a role in a targeted region;
3. Ensure all women bereaved through stillbirth are included in the audit by being interviewed by a psychologist.

6.2 To FIGO

1. Continue with the mentorship and twinning arrangements for supporting this project as they are highly effective;
2. The success of this project demonstrates that Moldova could be viewed as an
international template for good practice in implementing perinatal mortality audit.

6.3

Way forward for Moldova in continuing to reduce perinatal mortality rates

- Expand this audit into a 2nd phase within primary care, whilst retaining centralised control from the MCHCRI;

- Support a pilot project for re-introducing community midwifery in one targeted area, based on the audit evidence and knowledge of the Republic's health needs;

- Funding is required for specialist training for technicians in maintenance of equipment;

- Certain essential machinery for supporting safe labour and delivery is rarely available. These are, above all, CTG machines, scalp electrodes and CPAP;

- Training for technical expertise to maintain and repair machinery is essential;

- Increase health education and health promotion through introducing programmes into schools, colleges and universities – with appropriate signposting to information services for young people;

- Expand 'user-friendly services' and base them on consultation with young people about what they need. Ownership of service design increases acceptability and therefore attendance.

The External Evaluator would welcome an opportunity to discuss the recommendations and the way forward for Moldova.