Република Србија
МИНИСТАРСТВО ЗДРАВЉА

SOUTH-EASTERN EUROPE
HEALTH NETWORK

АГЕНЦИЈА ЗА АКРЕДИТАЦИЈУ
ЗДРАВСТВЕНИХ УСТАНОВА СРБИЈЕ

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Maternal and newborn care in Moldova: achievements, challenges, lessons learnt, ways forward

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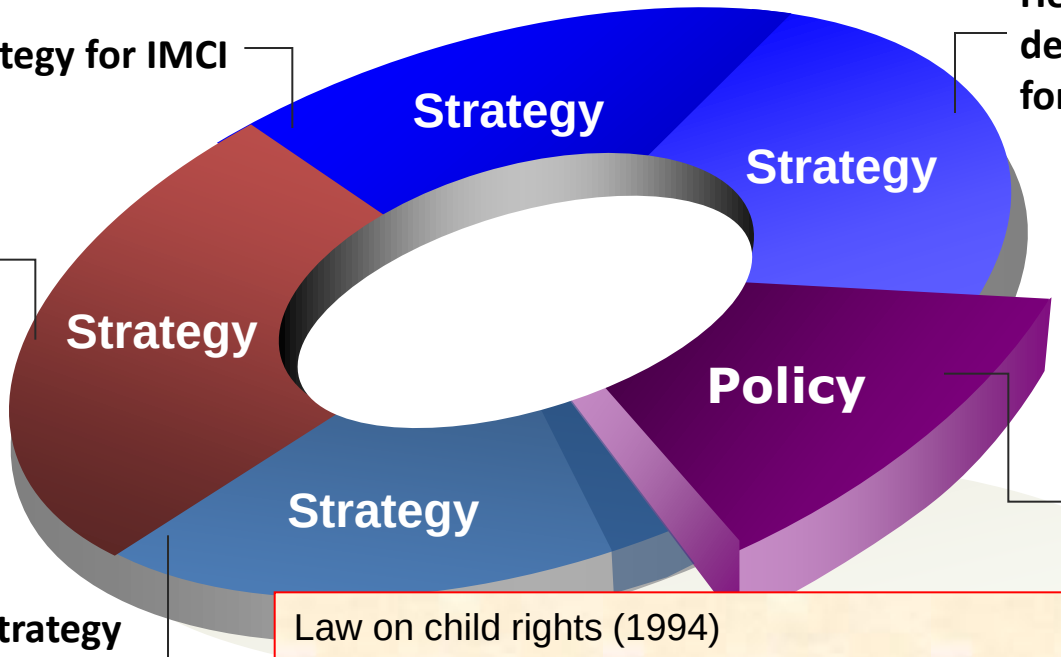
Mother&Child Institute
Chisinau, R. of Moldova

Multi-country Workshop on
Developement of Accrediation Standards for Maternity Wards and Neonatal Departments
15 – 16 September 2014, Belgrade

I. Overall context of MNH in Moldova. Key indicators. Information on HC organisation, policies that support this area

ON-GOING REFORMS: IMPROVED POLICIES IN HEALTH SECTOR.

Policies and Strategies in health care area



Law on child rights (1994)
Law on healthcare (1995)
Law on mandatory health insurance (1998)
Law on the protection of reproductive health and family planning (2001)
Law on youth (1999)
Law on reproductive health and family planning (2001)
Regulation on the mechanism of cross-sectorial cooperation for preventing and reducing the rates of infant and under 5 mortality at home (2010)

Phases of reform of Perinatal Health System

- 3 major phases:
  - creation and strengthening (1998-2002)
  - optimization (2003-2007)
  - modernization (2006-2014)
- having prominently contributed to the reduction of IM on account of ENM (by 50%).

The first phase of the system reform - *Creation and strengthening, 1998-2002*

- Regionalized perinatal service in 3 levels was created,
- Maternities of level III and II were equipped,
- National policies in perinatal care were elaborated and implemented,
- Monitoring and evaluation system of MNH was implemented,
- Evidence-based cost-effective interventions for mothers and newborns started to be implemented.
  - All these interventions have contributed to **decreasing by 18% PM and by 26% - NM** at a **coverage with cost-effective interventions of 51%** due to the **reduction of *asphyxia, infections and obstetric trauma* share**.

The second phase of the system reforming process – *optimization, 2003-07*

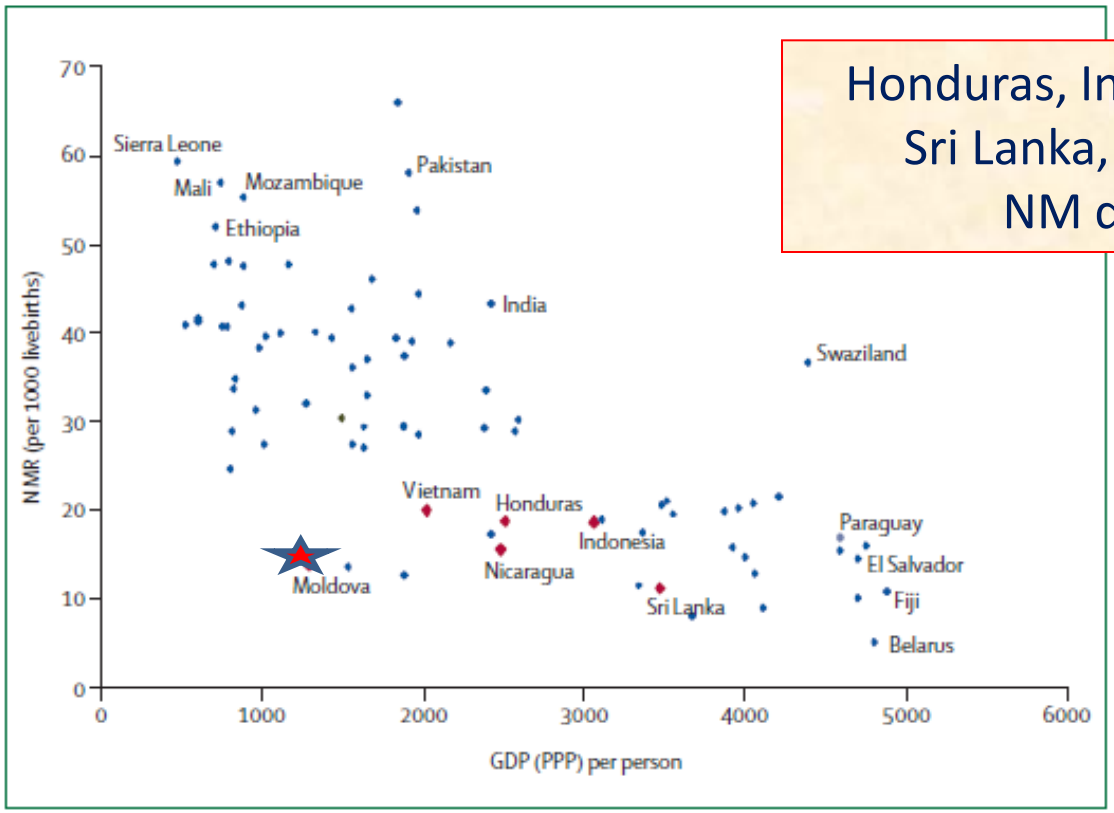
- First clinical protocols in obstetrics and neonatology have been elaborated and implemented in practice,
- Cost-effective interventions in PHC facilities started to be implemented,
- Families were trained and communities were mobilized to change their practices related to pregnancy and the period of the first year of life,
- CE on maternal and perinatal deaths started to be implemented, as well as audit on maternal near miss in pilot institutions.
- Extensive training of medical staff from maternities and PHC facilities in cost-effective interventions in MNHC was conducted.
  - **PM have decreased by 25% and NM – by 18%** at a **78,4% coverage with effective interventions**.

2004 - pilot country in implementation WHO MPS Initiative in the European region

Neonatal Survival 4

Neonatal survival: a call for action 2005

*Jose Martines, Vinod K Paul, Zulfiqar A Bhutta, Marjorie Koblinsky, Agnes Soucat, Neff Walker, Rajiv Bahl, Helga Fogstad, Anthony Costello, for the Lancet Neonatal Survival Steering Team**



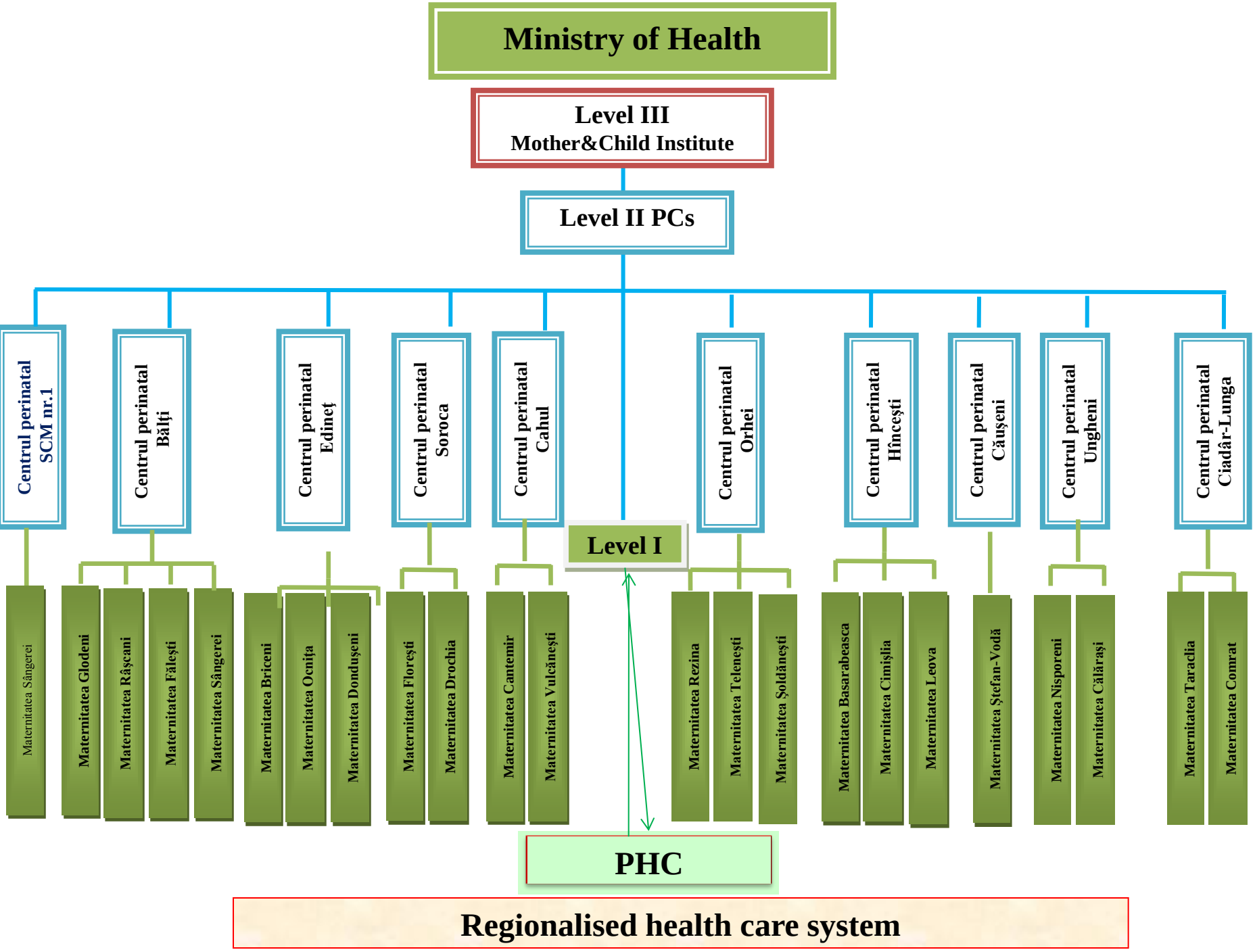
Honduras, Indonesia, Moldova, Nicaragua, Sri Lanka, and Vietnam have reduced NM despite having low GDP

Figure 1: **Correlation between GDP (PPP) per person and NMR in countries with GDP (PPP) per person up to US$5000**

GDP data from World Bank database for 2000 (http://www.worldbank.org/data/wdi2000).

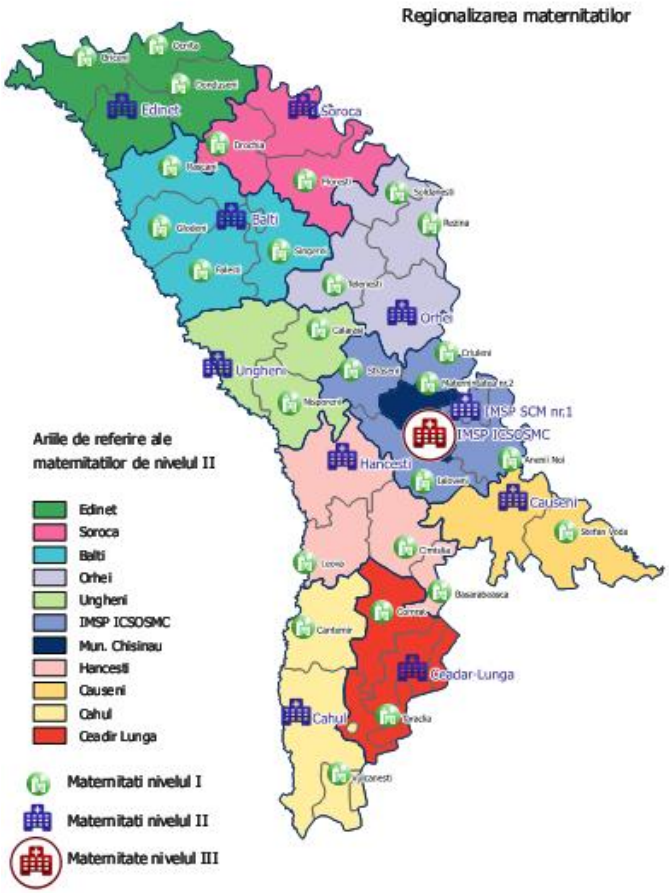
The third phase of the reform – *the system modernization, 2006-2014*

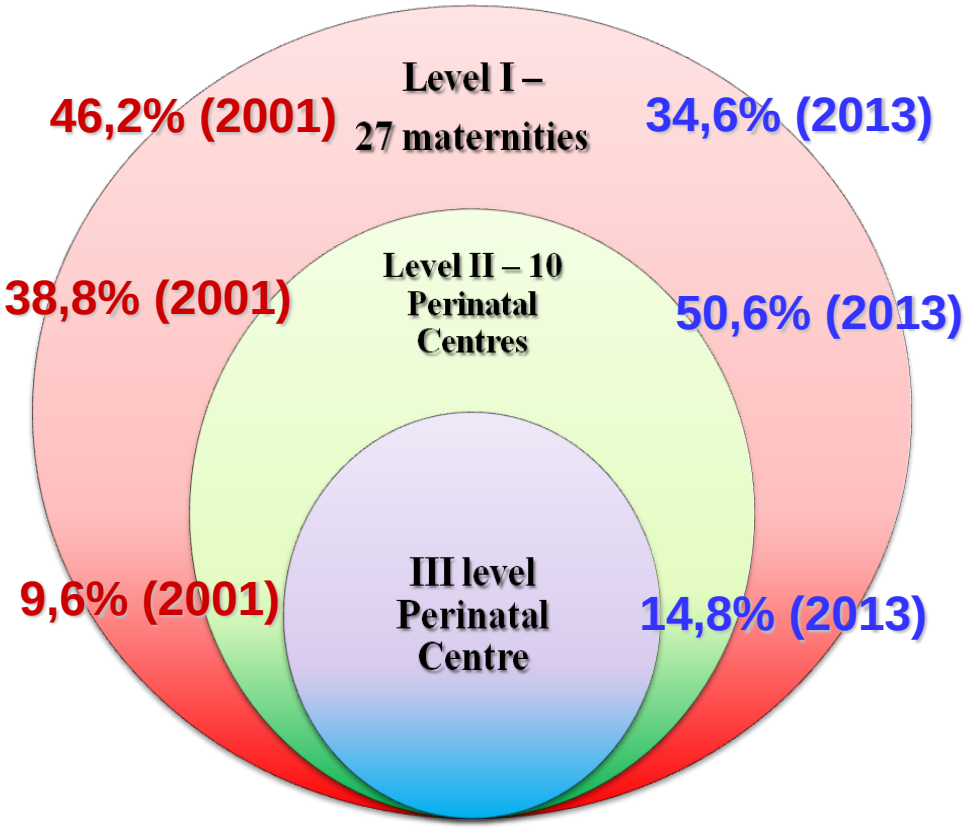
- High-tech interventions were implemented, especially for the care of ELBW babies,
- Institutional capacities were strengthened with the help of modern equipment,
- New QA\QM tools such as clinical audit, benchmarking, clinical protocols, Health Technology Management were implemented at level II and III PCs,
- The quality of care training portfolio within the postgraduate education programme was embedded by simulation courses in Obs.&Neon. EmCare,
- Measures to mobilize communities to make higher utilisation of MNH care services have continued in 4 pilot communities,
- *Post-NICU neonatal Follow-up* service was created,
- The training of medical staff on application of modern technologies in MNH has been carried out intensively.
  - The evolution of perinatal health indicators decline is slower: **PM was reduced by 11% and NM – by 17%,** the **remaining problems being *prematurity* and *congenital malformations*.**


Ministry of Health
Level III
Mother&Child Institute
Level II PCs
Centrul perinatal SCM nr.1
Centrul perinatal Bălți
Centrul perinatal Edineț
Centrul perinatal Soroca
Centrul perinatal Cahul
Centrul perinatal Orhei
Centrul perinatal Hîncești
Centrul perinatal Căușeni
Centrul perinatal Ungheni
Centrul perinatal Ciadîr-Lunga
Level I
Maternitatea Sîngerei
Maternitatea Glodeni
Maternitatea Râșcani
Maternitatea Fălești
Maternitatea Sîngerei
Maternitatea Briceni
Maternitatea Ocnița
Maternitatea Dondușeni
Maternitatea Florești
Maternitatea Drochia
Maternitatea Cantemir
Maternitatea Vulcănești
Maternitatea Rezina
Maternitatea Telenești
Maternitatea Șoldănești
Maternitatea Basarabeasca
Maternitatea Cimișlia
Maternitatea Leova
Maternitatea Ștefan-Vodă
Maternitatea Nisporeni
Maternitatea Călărași
Maternitatea Taraclia
Maternitatea Comrat
PHC
Regionalised health care system

Regionalized Perinatal Service

Trend in deliveries per level of care (2001 vs 2013 data)





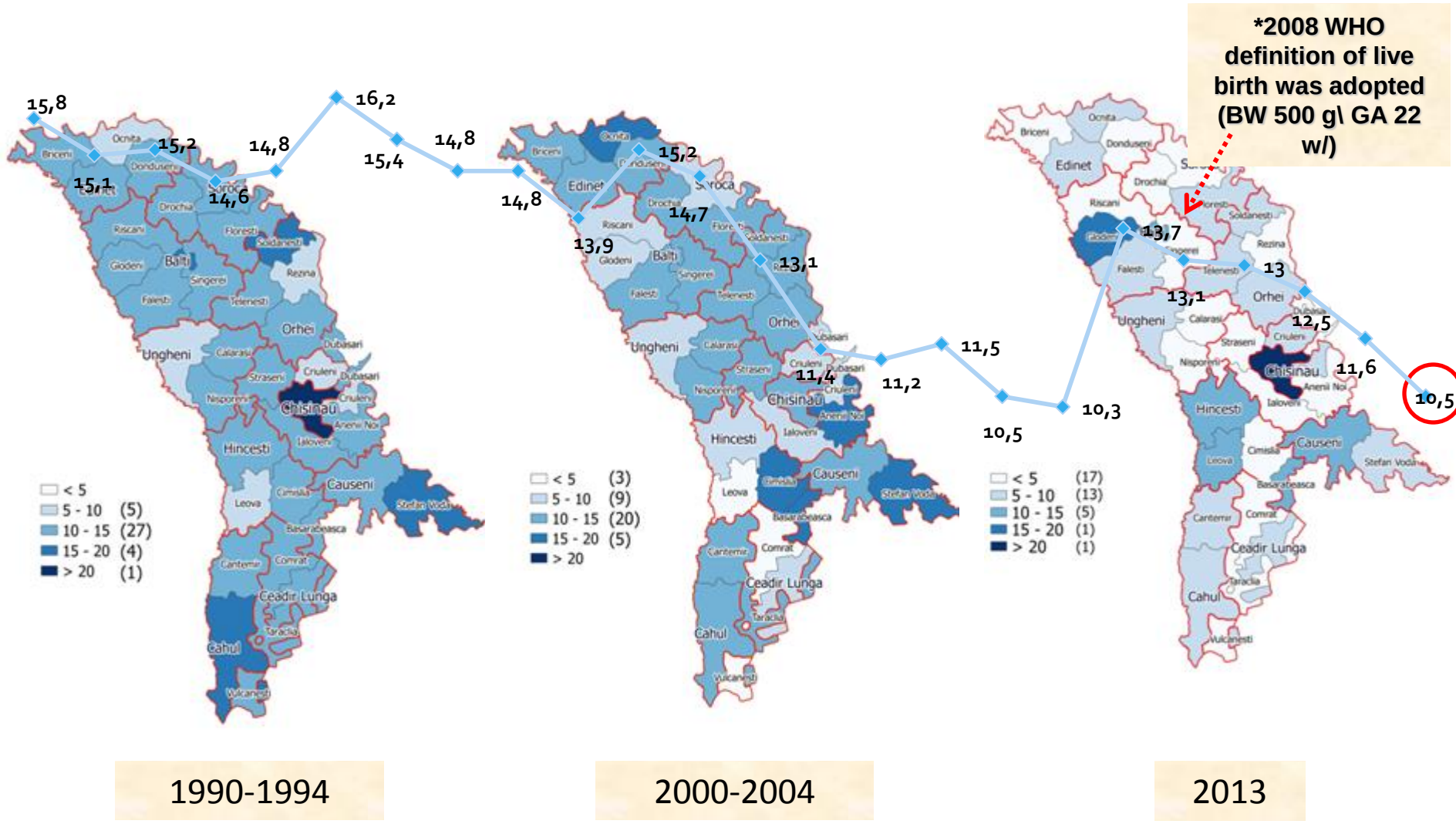
Total and Live Birthweight rates, Moldova, 2001-2012

Area	Total Births			Low Birthweight Rates					
				LBWR / LB			LBWR / TB		
	2001	2012	Difference	2001	2012	Difference	2001	2012	Difference
Country	36654	40322	**10,0%**	5,4	5,1	-5,6%	6,1	5,5	-9,8%
MCI (Level III)	3597	6045	**68,1%**	7,9	11,4	**44,3%**	9,8	12,1	23,5%
Level II Accelerated	8253	13426	62,7%	6,7	5,3	**-20,9%**	7,6	5,7	-25,0%
Primary in Level II accelerated	4901	4162	-15,1%	3,4	2,1	**-38,2%**	3,9	2,5	-35,9%
Level II designated	6937	6837	-1,4%	5,5	3,9	**-29,1%**	6,3	4	-36,5%
Primary in Level II designated	10250	6963	-32,1%	4,6	3,1	**-32,6%**	4,9	3,3	-32,7%
Private		408		0	0		0	0	
ICM + Region I	6313	8536	35,2%	6,4	8,9	39,1%	7,7	9,5	23,4%
Region I	2716	2491	-8,3%	4,4	3	-31,8%	4,9	3,2	-34,7%
Remaining	33786	31786	-5,9%	5,2	4	-23,1%	5,8	4,4	-24,1%

While the number of TBs in Moldova increased by 10%, both the LBWR/LB and the LBWR/TB for the country decreased from 5.4/1000 to 5.1/1000. For the one Level III hospital the TBs increased by 68%, and its LBWR/LB increased from 7.9 to 11.4%, a difference of 3.5%, 44% increase.

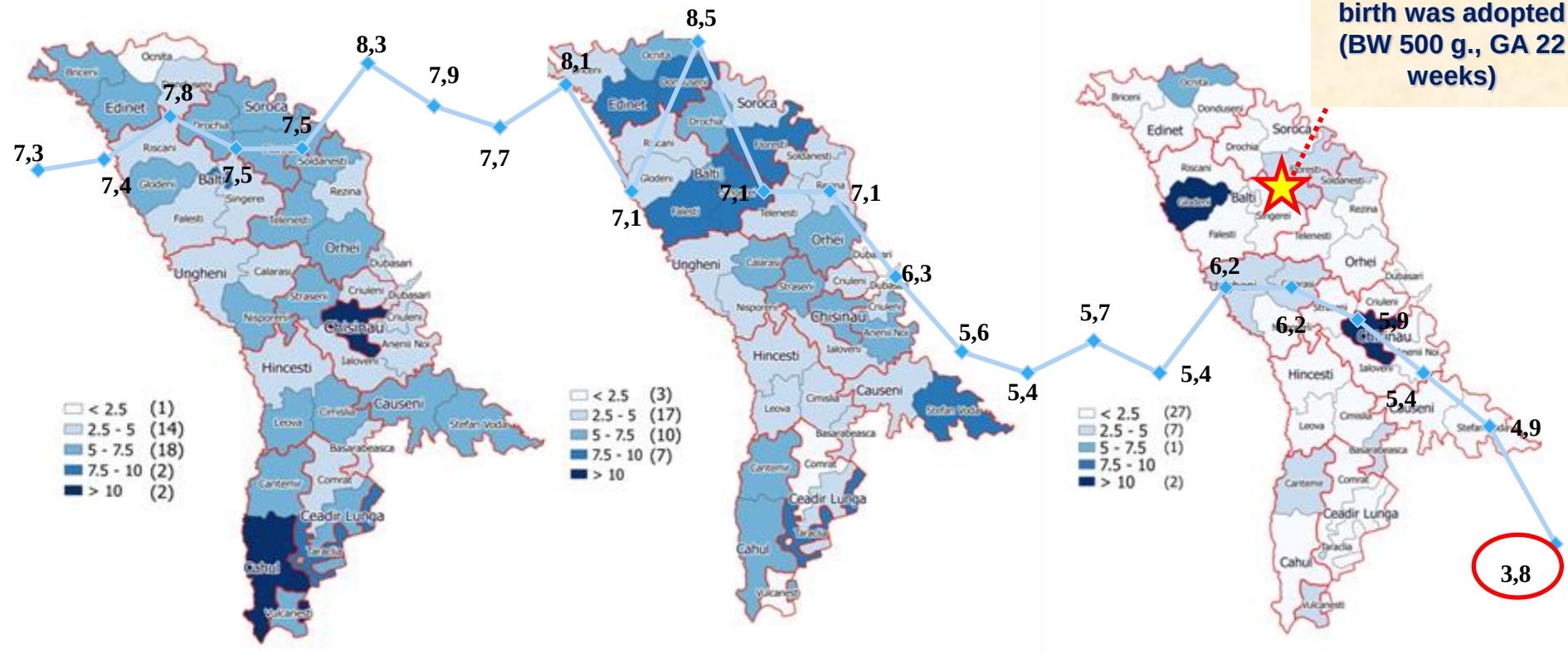
The desired increase in the effort to concentrate LBW births in the Level III hospital was successful.

Trend of Perinatal mortality rate, 1990-2013



Trend of Early neonatal mortality rate, 1990-2013

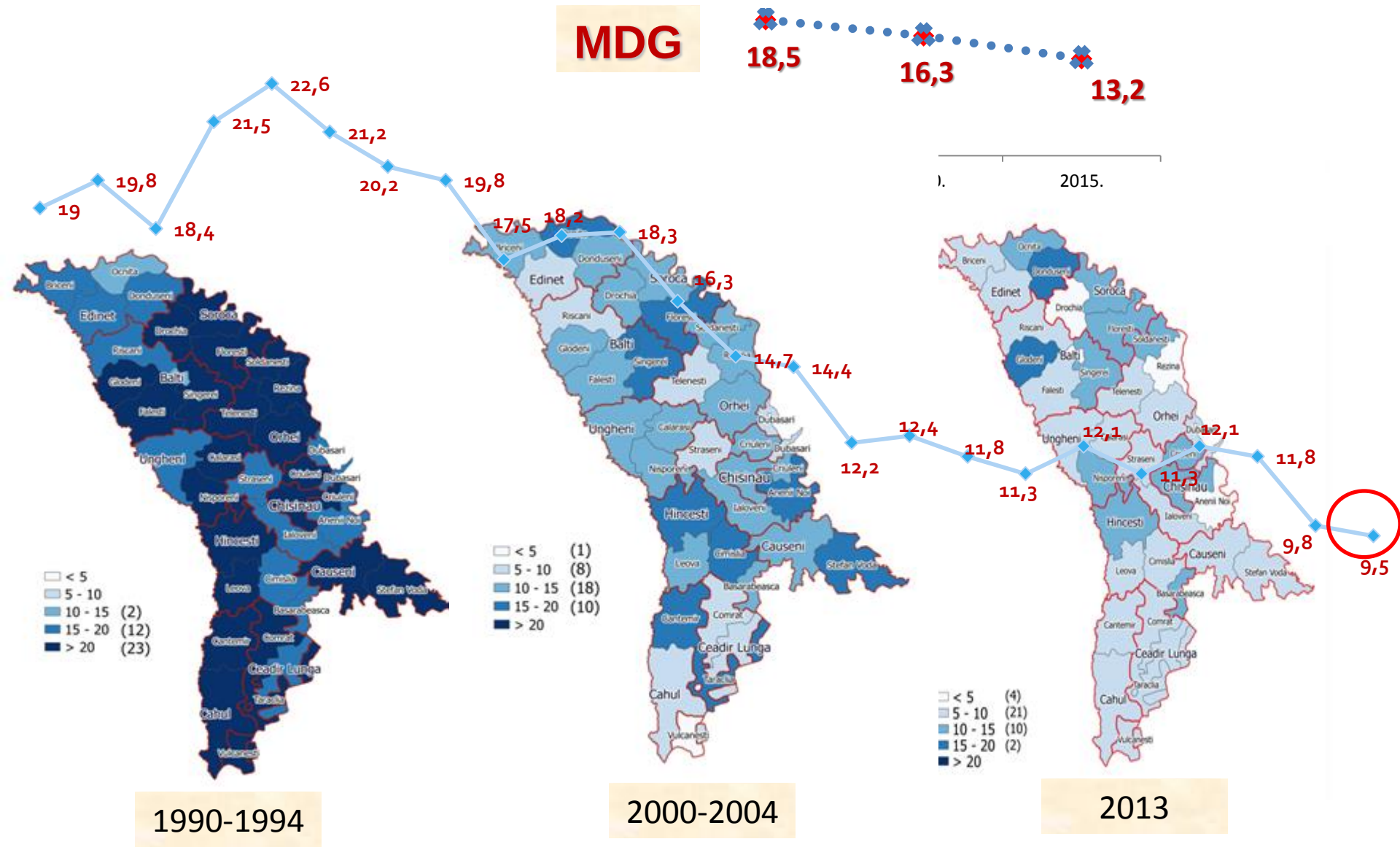
*2008 WHO definition of live birth was adopted (BW 500 g., GA 22 weeks)



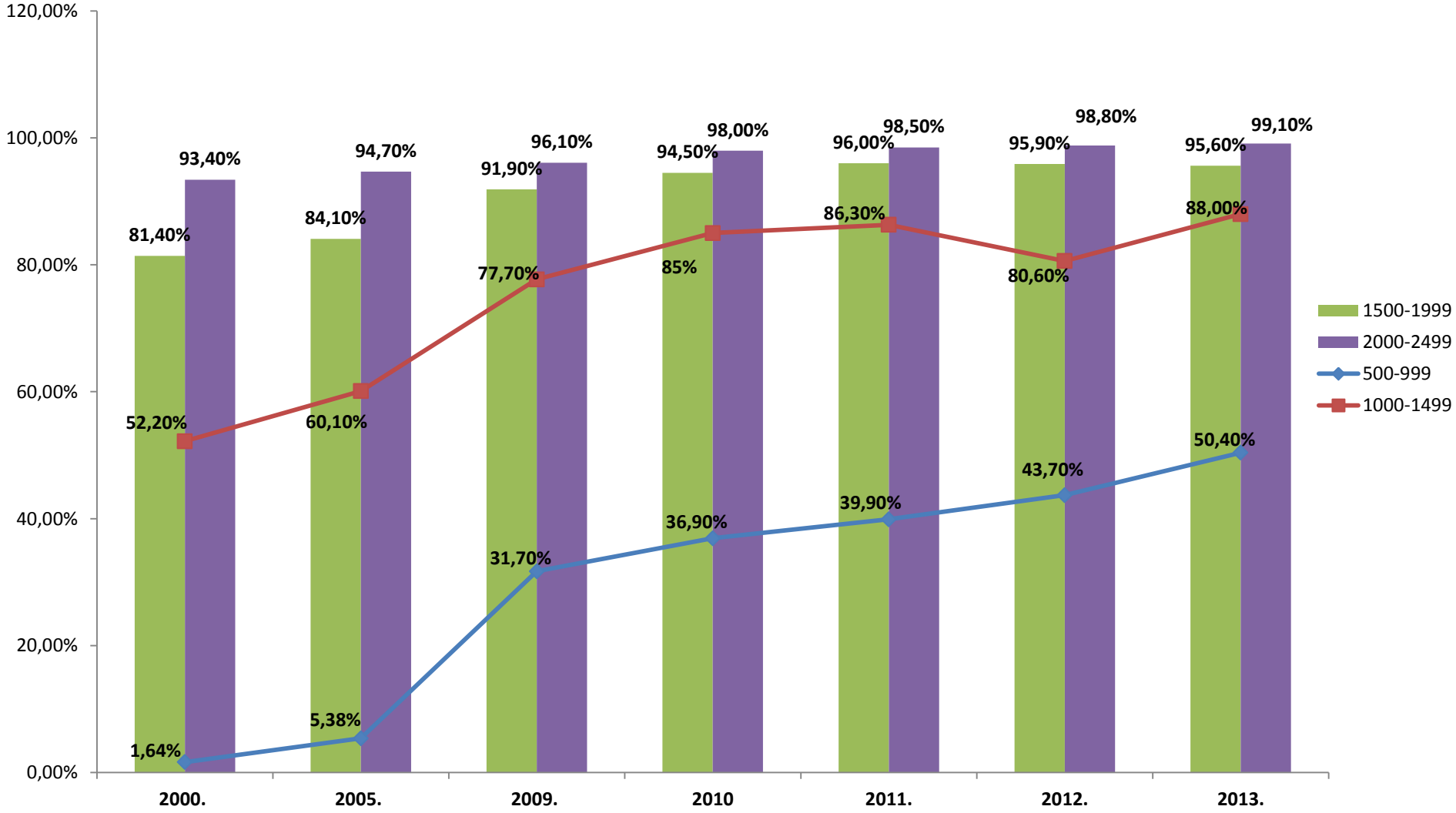
1990-1994 | 2000-2004 | 2013

1990. 1991. 1992. 1993. 1994. 1995. 1996. 1997. 1998. 1999. 2000. 2001. 2002. 2003 2004. 2005. 2006. 2007. 2008. 2009. 2010. 2011. 2012. 2013.

Trend of Infant mortality rate, 1990-2013

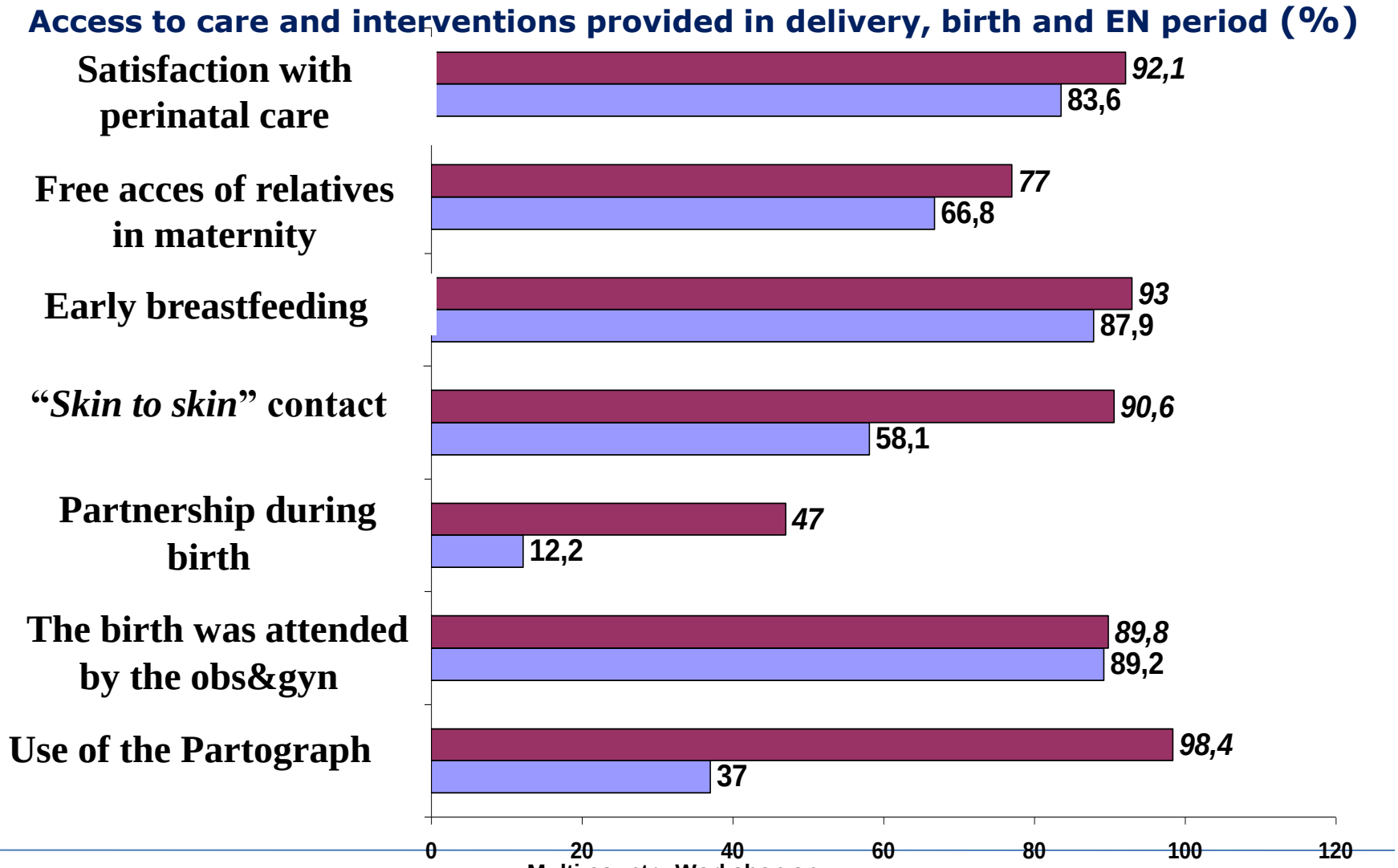


Survival of neonates according to the birth weight: 2000 vs. 2013



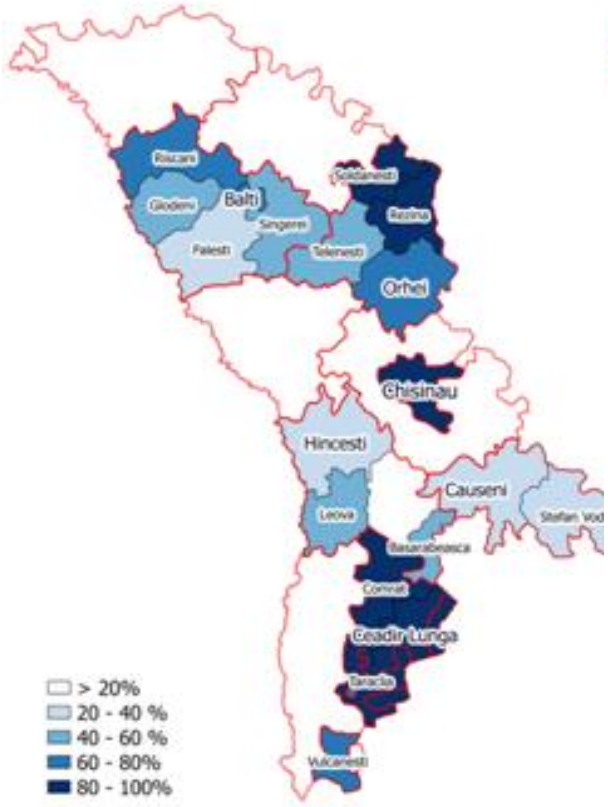
II. Main achievements in assuring quality of MNC

Implementation of cost-effective interventions in delivery wards and neonatal departments, 2001 vs 2008

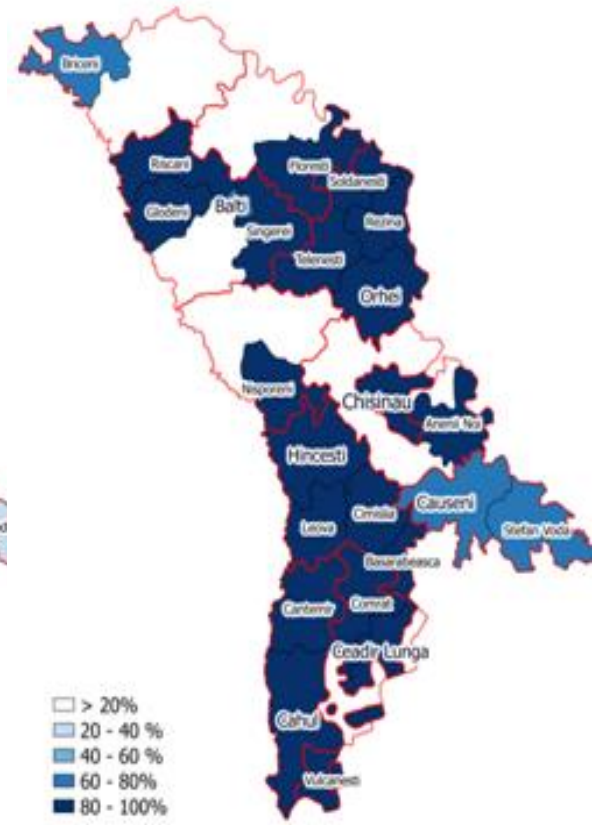


Assessment Studies, 2001 and 2008

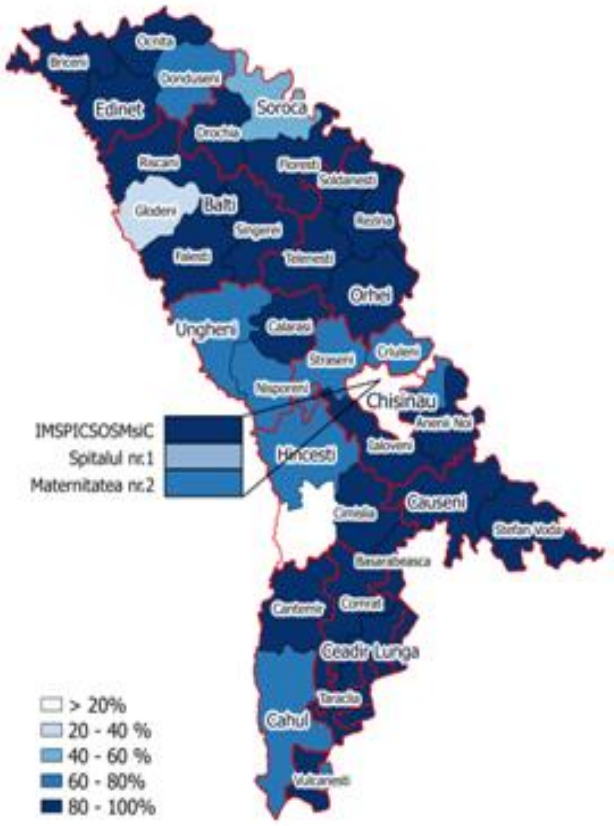
“Skin to skin” contact 2001, 2008 and 2011



58,1%



90,6%

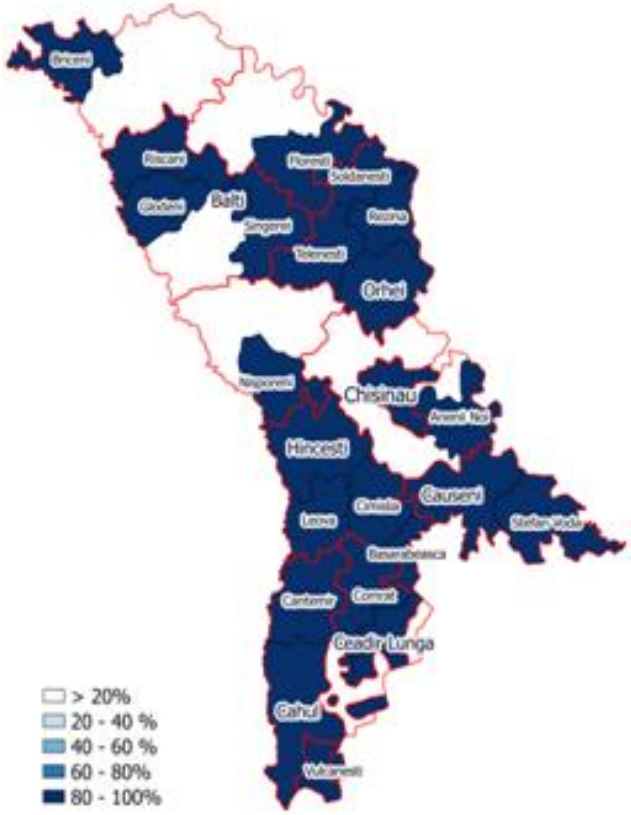


89,2%

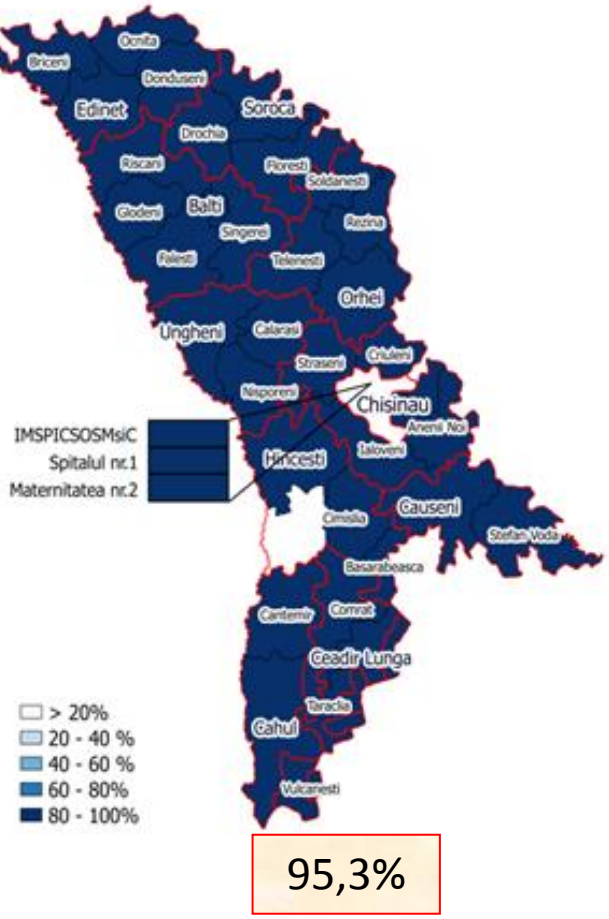
- localities that have not been subject to the assessment

Early breastfeeding, 2001, 2008 and 2011

87,9%



93,0%



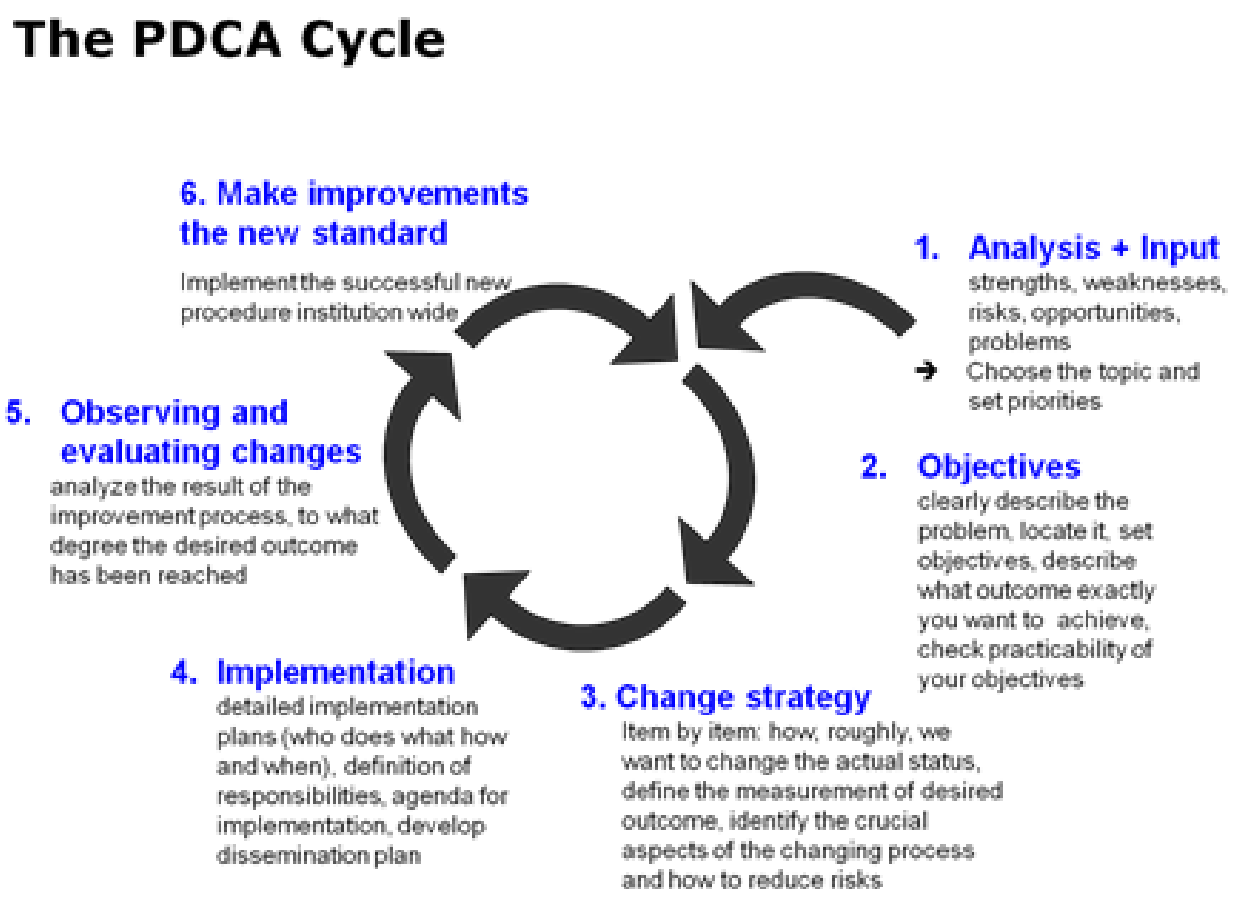
95,3%

- localities that have not been subject to the assessment

QM / QA approach since 2008 in the framework of MMPS project

- Capacity building for institutional QM teams
- Developing and conducting local improvement projects
- Implementing national CPG through their translation into locally adapted procedures
- Developing a benchmarking system for level II facilities

Local quality improvement projects



- 26 projects where locally implemented
- Projects dealt with the prevention of nosocomial infections, improving diagnostic procedures, interface issues between obstetrical and neonatal services, improving diagnostic procedures and others.

Prophylaxis of nosocomial infections, Balti Perinatal Centre quality team

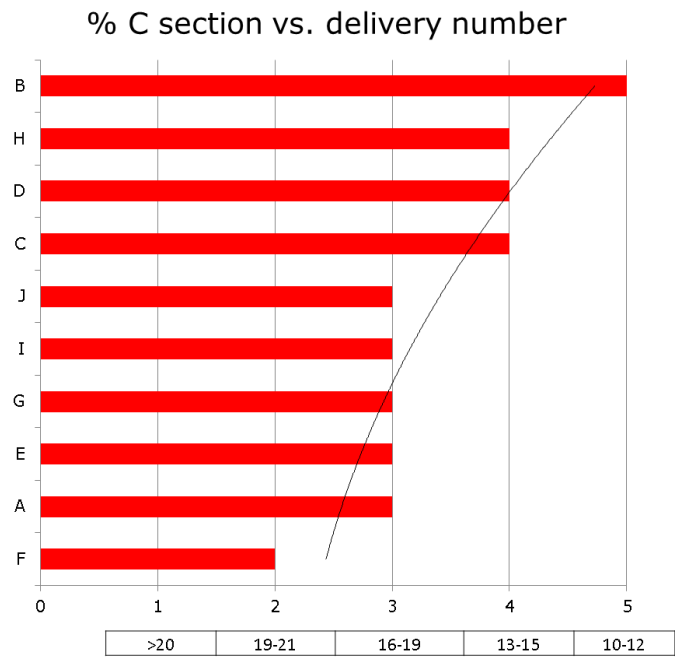
- **Activities:**
  - Five courses (theory and practice) for medical staff (2 for doctors and 3 for nurses and midwives) where conducted on nosocomial infections.
  - Infrastructure was upgraded at delivery rooms, new-born units and operational theatre: 5 electric boilers and 17 new taps;
  - Posters on hand-washing procedures and use of desinfection solution;
  - Protocol including staff responsibilities and flow of materials and supplies;
  - Assure single use consumables and cleaning materials;
- **Results:**
  - Nosocomial infections rate decrease from 9 cases in 2009 to 2 cases in 2013.

Translation of national CPG into locally adapted procedures

- 270 institutional protocols/procedures – for obstetricians, neonatologists and nurses/midwives.
- The protocols facilitate the collaboration of physician/nurse teams, the introduction and application of new diagnostic tools and medical procedures at the local facility level and improved quality of care.

Benchmarking

- Benchmarking system compares performance on selected indicators between peers – to identify champions and potential for mutual learning. Indicators where developed based on the criteria of quality in health care: structural, process and outcome criteria.
  - Clinical indicators;
  - Indicators for patient safety;
  - Motivation/ability for improvement;
  - Structural quality;
  - Preventive care;
  - Patient satisfaction;
  - Purchasing;
  - Planning & programming.



Health Technology Management

- 10 technical workshops were build-up
- Professional skills and standard practice procedures for HTM were developed
- National medical devices information system “openMEDIS” was launched
- It is used as a national tool by all health facilities for planning and management
- HTM policies and structures were developed
- A comprehensive 5-year plan with clear objective and steps has drafted.

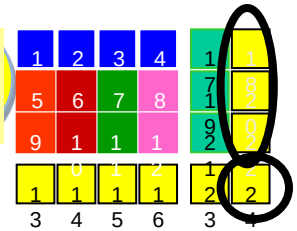
Quality Management Conceptual Model

Crearea şi formalizarea echipei/ (subcomitet) perinatale de calitate, la nivel de instituţie

Menţinerea rezultatelor pozitive

Analiza situaţiei la nivel instituţie

CICLUL MANAGEMENTULUI CALITĂȚII



Monitorizare / evaluare

Identificarea problemei prioritare

Elaborarea / implementarea măsurilor de creştere a calităţii

HTM

Improvement local projects

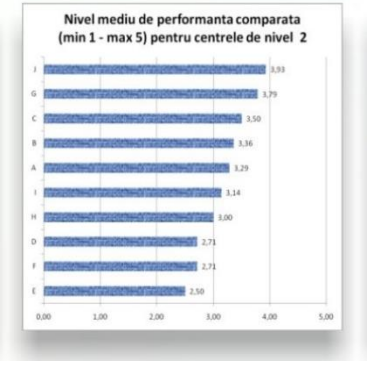
Institutional protocols

CE on maternal, perinatal deats, near miss

INDICATORS

Internal assesment

Benchmarking



III. Main challenges and lesson learnt

Main challenges

- Performance measurements outside of clinical indicators are still very new for the quality teams and many project participants found it difficult to build non-clinical indicators for performance control.
- Declining birth rates, the free choice of services is a challenge for many small to medium size facilities outside of capital.
- Continuous quality improvement measures for services, stronger client orientation and better consideration of stakeholder expectations may be a way to increase facility attractiveness to future clients, which in turn can stabilise income and facilitate survival of facilities at least at the intermediate level of care.

Lesson learnt

- Good accountability of every pregnancy using Babies
- Well functioning regionalized system
- Capacity building measures and the practical work on QA and conducting quality improvement projects have led to a better ability to deal with local problems locally. Building institutional quality teams and making them operational has improved interdisciplinary communication and collaboration.
- Coaching activities of the experts and the identification of very practical approaches has frequently led to a better understanding of the stakeholder environment of level II centres, which have improved interaction between clients, stakeholders and service providers.
- The utilisation of electronic media for professional exchange during the development of quality improvement projects increased significantly and was highly valued.
- HTM – is a highly cost-efficient intervention taking into account the savings through better and longer functioning equipment.

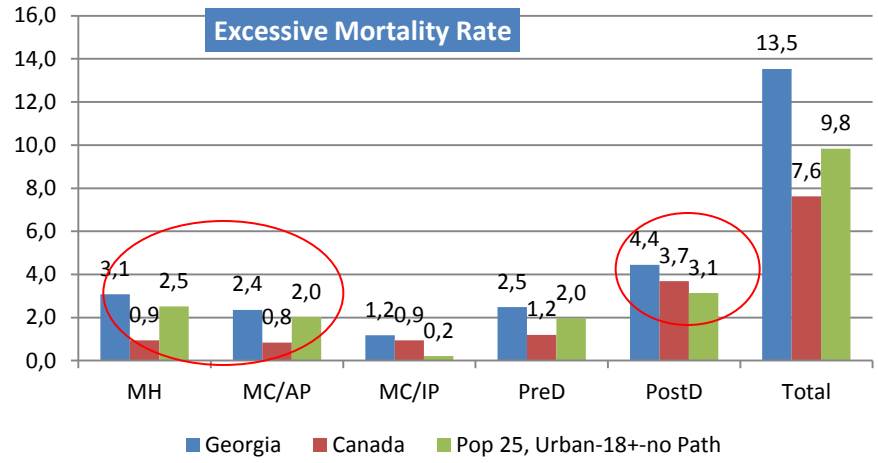
III. Existing gaps

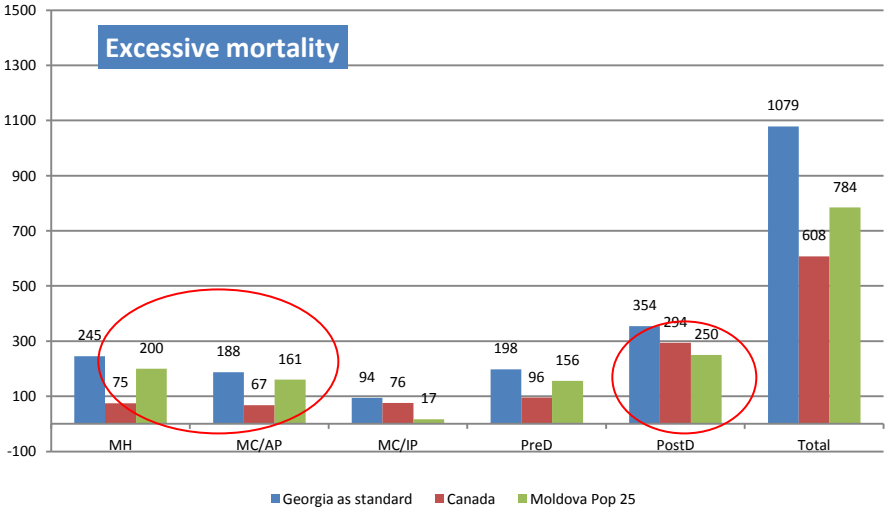
Reducing BWPMRs in Intervention Packages, 2001-02 vs 2011-12

Intervention Package	2001-2001	2011-2012	Diference between 2001-02 and 2011-12	
MH	8,9	5,2	3,7	**41%**
MC in AP	3,4	3,1	0,3	**10%**
MC in IP	2,4	1,2	1,2	**51%**
PreD	5,5	2,7	2,8	**51%**
PostD	8,3	4,4	3,9	**47%**
Total	**28,9**	**17,1**	**11,8**	**41%**

Excessive Mortality Rate (EMR)

Comparisons by intervention package,
Moldova, 2011-12





- Excessive mortality rate (EMR) is calculated by subtracting a observed rate from an achieved rate.
- Excessive deaths are calculated by multiplying the EMR by the total number in the population.
- When calculated by EMR for the individual BABIES intervention packages it provides an estimate of the number of deaths that might be prevented by better implementation of a specific intervention package.
- The EMR for Moldova when the moldovan population of urban, 18 + yrs of age, and no pathology is used 9.8/1000
- The total number of death that would be prevented in a 2 year period of time would be 784, with 250 in the Postdischarge package, and 200 in the maternal health package.

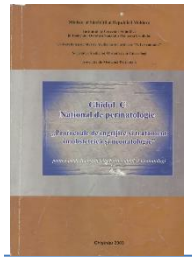
IV. Existing QA \ QM mechanism in the country and their effectiveness

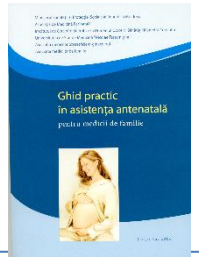
Tools to increase QoC at national level

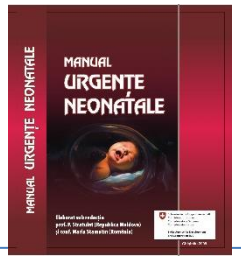
- National Council for Accreditation and Evaluation of medical institutions, since 2002
- National Company for Medical Insurance, since 2004
- Medical & Financing standards
- Maternal and neonatal near-miss case reporting, Babies matrix
- National assessment studies of quality of MNHC: 2001, 2008 and 2011
- Annual assessment of some maternities using WHO questionnaires, 2003-2007
- CE of perinatal deaths, since 2006 – FIGO project
- CE of MM deaths, WHO Initiative
- Visits by MoH experts in maternity wards

Tools to increase QoC at institutional level

- Clinical Guidelines / protocols / algorithms
- Regulations / ToRs for medical staff, units / departments
- Package of services at institutional level
- BABIES Matrix
- Maternal near miss case reporting
- Annual auto-assessing reports from facilities, since 2005 using WHO tools
- Discussion of mortality (MM, PM, NM) cases



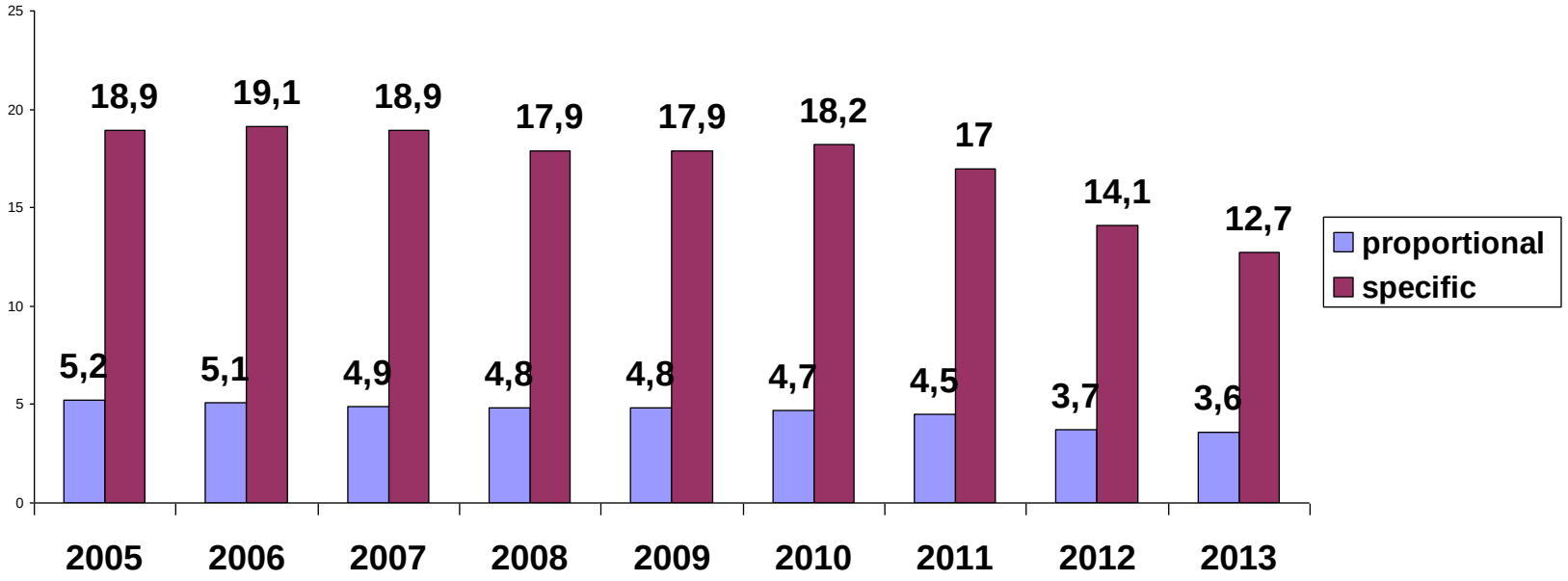





The Beyond the Numbers (BTN): implementation of new approaches for reviewing perinatal deaths in Moldova, FIGO project, 2006-10

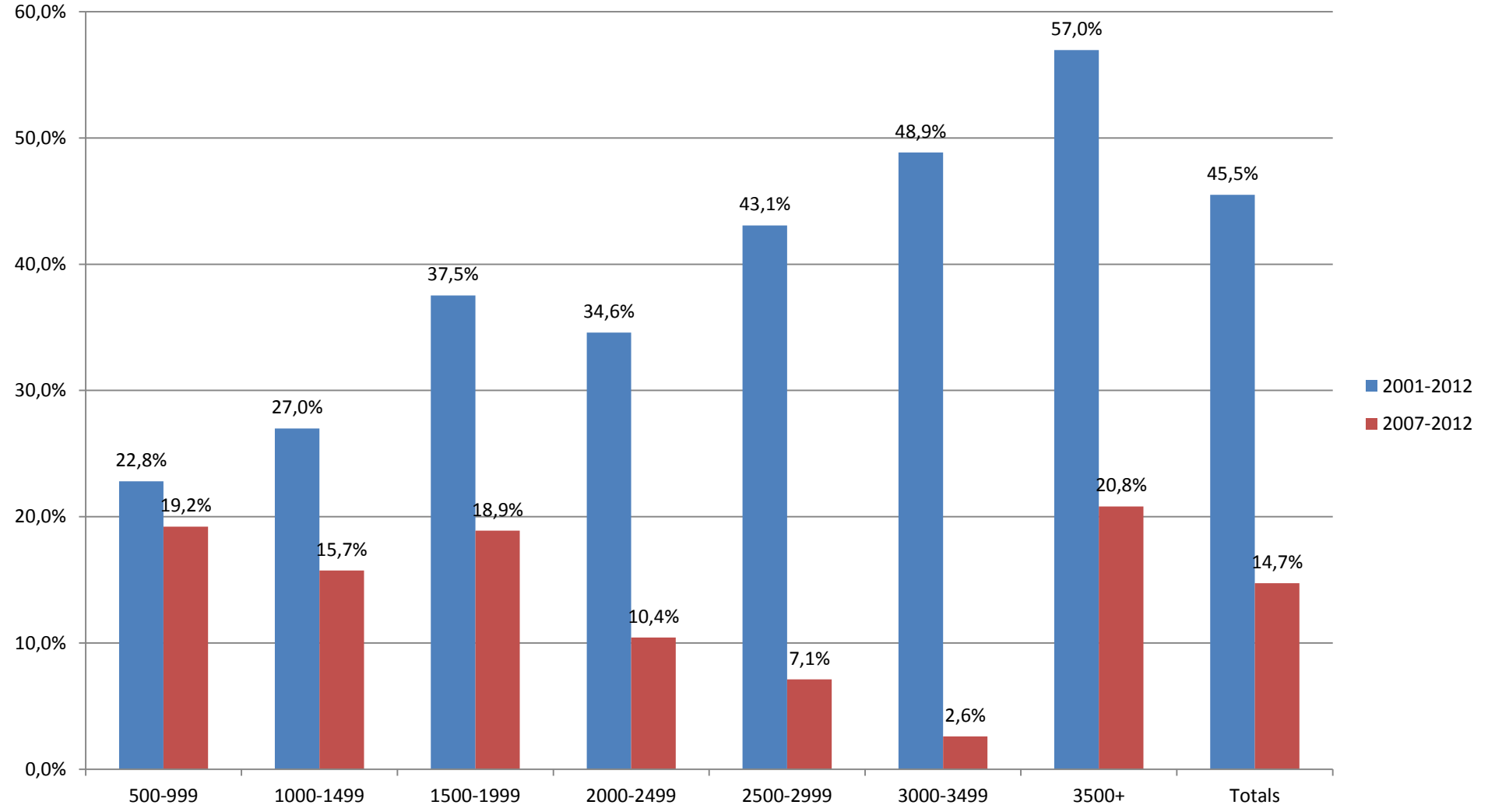
- **Project goal:** reduce mortality amongst fetuses / newborns with a g.a. of more than 37 weeks and with a BW of 2500 g or more.
- **Key activities:**
  - the training of 350 specialists in audit,
  - the establishment of audit committees,
  - review of 257 cases and dissemination of information.

The specific and proportional mortality rates among fetuses / newborns with a g.a. of >37 weeks and with a BW of ≥ 2500 g for the years 2005 to 2013



The proportional mortality rate has decreased from 5.1/1000 in 2006 to 3.6/1000 in 2013 (with 1.5/1000 or 29,4% reduction, 95% CI 0.6-2.4; z-value 3.2; p=0.0015) and the specific rate - from 19.1/1000 in 2006 to 12.7/1000 in 2013 (with 6.45/1000 or 33.5% reduction, 95% CI 4.6-8.2; z-value 6.9, p<0.0001).

Percent Reduction in Birthweight Specific Perinatal Mortality Rates, Moldova, 2001-2012, 2007-12



Conclusion

A healthier Moldova, …..
but there is more work to be done.

V. Expected ways forward

Ways forward

- To revise the structure of the regionalized system by reducing the number of small maternities e.g. <500 deliveries/year
- To design and implement projects focused specifically on strengthening PHC (MH, MC/AC, PostD)
- To strengthen multiprofessional collaboration
- To maintain at the high level already existed QA/QM activities
- To strengthen the role of level II PCs in their cathcment area
- To apply internationally acknowledged instruments such as QM guidelines, cost studies and training programs.

Thank you for your attention!