

INTEGRATING NEAR MISS IN MATERNAL AND PERINATAL DEATH SURVEILLANCE AND RESPONSE

Regional Approaches from Europe, Latin America and the Caribbean

Tuesday, 25 April 2023 8am New York , 2pm Geneva, 5.30pm New Delhi

Register: bit.ly/MPDSR25April



Quality, Equity, Dignity A Network for Improving Quality of Care for Maternal, Newborn and Child Health



Welcome and introduction

• Francesca Palestra, Technical Officer, Department of Maternal, Newborn, Child and Adolescent Health and Ageing, World Health Organization Geneva

Part 1: Near Miss Tools and Guidance in the European Region

 Oleg Kuzmenko, Maternal and Newborn Health Regional Advisor, WHO Regional Office for Europe

Part 2: Recommendations for establishing a National Surveillance System for Extremely Severe Maternal Morbidity in Latin America and the Caribbean

• Bremen de Mucio, Maternal Health Regional Advisor, Latin American Center for Perinatology, The Pan American Health Organization

Part 3: Sharing insights and lessons learned from the practical implementation of MPDSR system in Colombia

• Greace Alejandra Avila Mellizo, Coordinator, Noncommunicable Diseases Surveillance Group, National Institute of Health, Colombia

Questions & Answers

Closing remarks: Francesca Palestra, WHO Geneva



EURO experience in implementing Near-Miss Case Review

Dr Oleg Kuzmenko Technical Officer on Sexual and Reproductive Health WHO Regional Office for Europe



Near-Miss Case Review in WHO European Region

- BTN principles and approaches firstly introduced in EURO in Kyrgyzstan in 2004
- Two approaches were selected by countries representatives: CEMD at national level and NMCR at hospital level
- NMCR implementation started in 2006
- First NMCR manual developed in 2006, revised and updated in 2009 and in 2016
- Series of assessment and reinforcement of the quality of the NMCR
- Currently implemented in many countries
 - Is more acceptable for health workers than mortality audits
 - NMCR quality is heterogenic in different countries



Examples of activities during country implementation (Uzbekistan): Activities organized by WHO

- First WHO European regional workshop on "Beyond the numbers", Kyrgyzstan (May–June 2004)
- Development of guidelines for emergency obstetric and pregnancy-induced hypertension (January 2005)
- Workshop on "Beyond the numbers" (March 2005)
- Technical workshop on "Beyond the numbers": near-miss case review (June 2007)
- Pilot-testing near-miss case reviews: international consultancy (November 2007)
- Near-miss case reviews in pilot sites: follow-up (January 2008)
- Near-miss case reviews: workshop on interviews with women (17–18 April 2008)
- "Beyond the numbers" review and scaling up (May 2008)
- "Beyond the numbers". WHO European Region review, (14–17 June 2010)
- Impact of implementation of "Beyond the numbers" approach in improving maternal and perinatal health.
 WHO European Region review, Kyrgyzstan (April 2014)
- Assessment and reinforcement of the quality of the NMCR (November 2015, October 2019).



Examples of activities during country implementation (Uzbekistan): Activities organized by national institutions and experts

- Order of the Ministry of Health on pilot-testing of NMCR in maternity hospitals (2007)
- Pilot-testing of NMCR in four hospitals (2007)
- Follow-up and monitoring (2007–2008)
- Quality assessment and plans for scaling-up, with international and national experts (2009)
- Scaling-up, including pilot-testing in 18 new hospitals (started in 2009)
- Two waves (2009–2013 and 2014–2015) of workshops conducted by national experts to train staff of maternity hospitals and prepare for scaling up
- Training in 90% of maternity hospitals (by 2015)
- The Ministry of Health approved the NMCR method, including the revised operational definitions of nearmiss cases and updated standards of care, templates for reporting and methods for interviewing women (translated into Uzbek) (2015)



Main achievements in NMCR implementation (Uzbekistan)

- Local guidance material, including standards, fully developed
- Local staff informed about purpose, principles and method
- Interviewers selected and trained
- Principles and methods of the NMCR cycle endorsed by local health authority orders
- Staff of >90% maternity hospitals trained and implementing an NMCR cycle by the end of 2019
- Regular, monthly NMCR meetings organized in most facilities
- NMCR supported by the local administration in most facilities
- Method respected in the vast majority of facilities
- Effective solutions and recommendations to improve local practices and organization of care developed and implemented
- Regular NMCR quality assessment visits by international experts and national coordinators are in place



World Healt Organizatio

Improving the quality of maternal and perinatal health care

Conducting a maternal near-miss case review cycle at hospital level

Manual with practical tools

Improving the quality of maternal and perinatal health care

Conducting a maternal nearmiss case review cycle at hospital level

Manual with practical tools

3rd edition, 2016

Manual with practical tools

- Explains how to implement NMCR cycle.
- Designed for hospital staff involved in maternal and newborn health care, programme managers and policy-makers who are responsible for the quality of perinatal health care at ministries of health or in facilities supporting improvement of maternal and perinatal health.
- Includes:
 - Section 1. Introduction
 - Section 2. Introducing the near-miss case review cycle in a country
 - Section 3. Near-miss case review at hospital level
 - Section 4. Ensuring the quality of the near-miss case review cycle
 - Annexes



Challenges on the way of NMCR implementation

- Insufficient support from local administrations
- Absence of local leaders to introduce NMCR audits in some institutions
- Lack of understanding and commitment to NMCR among staff
- Insufficient knowledge of standards for managing severe obstetric complications
- Overall understaffing and lack of staff trained on NMCR
- Irregular NMCR meetings
- Non-compliance with the method; limited role of midwives
- Lack of control over implementation of recommendations of NMCR audits
- Presence of "blame culture"
- Different organizations propose "their own" approaches and forms



Conclusions

- Facility-based NMCR cycle effective strategy for reducing maternal mortality and improving quality of maternal care in LMIC
- NMCR is also used in high-income countries (UK, Italy)
- NMCR inexpensive and simple intervention, requiring little technology
- Even one person reviewing near-miss may increase feasibility
- Always interview women and their families and use their inputs for improving care
- No need to explore whether near-miss audit is effective, more interesting which characteristics make it effective and sustainable
- NMCR at hospital level should be part of the country MPDSR system



Thank you









Recommendations for establishing a National Surveillance System for Extremely Severe Maternal Morbidity in Latin America and the Caribbean

> Bremen De Mucio PAHO/WHO Regional advisor on maternal health April 2023

 51st PAHO's Directing Council approved resolution DC51.R12 (2011) "Plan of Action for Accelerating the Reduction of Maternal Mortality and Severe Maternal Morbidity"

Three main objectives:

- Contribute to accelerating the reduction of maternal mortality.
- To prevent severe maternal morbidity
- Strengthen surveillance of maternal morbidity and mortality.







Plan of Action to Accelerate the Reduction of Maternal Mortality and Severe Maternal Morbidity

MONITORING AND EVALUATION STRATEGY







CLAP/WR Scientific Publication 1593





Final Report to Governing Bodies

		2010	2011	2012	2013	2014	2015
Argentina	Nº Nacidos Vivos	756176	758042	738318	754603	777012	
	Nº total casos morbilidad maternas grave	6049					
	Razon Morbilidad Materna Grave x 100000	800					
Canada*	Nº Nacidos Vivos	282438	284296	285406	283431	286281	
	Nº total casos morbilidad maternas grave	4336	4484	4680	4577	4058	
	Razon Morbilidad Materna Grave x 100000	1535	1577	1640	1615	1417	
Colombia	Nº Nacidos Vivos	654627	665499	676835	658835	669137	658178
	Nº total casos morbilidad maternas grave			4689	8478	11720	15067
	Razon Morbilidad Materna Grave x 100000			693	1287	1752	2289
El Salvador	Nº Nacidos Vivos	115815	115216	110843	114451	114025	113590
	Nº total casos morbilidad maternas grave	2363	2949	2662	2666	2566	2985
	Razon Morbilidad Materna Grave x 100000	2040	2560	2402	2329	2250	2628
Guyana	Nº Nacidos Vivos	14528	15051	15152	15285	15817	15208
	Nº total casos morbilidad maternas grave	2218	2143	2481	3043	2692	2993
	Razon Morbilidad Materna Grave x 100000	15267	14238	16374	19908	17020	19680
Haiti*	Nº Nacidos Vivos			69255	71301	69620	65354
	Nº total casos morbilidad maternas grave			3313	3929	3723	3947
	Razon Morbilidad Materna Grave x 100000			4784	5510	5348	6039
Honduras	Nº Nacidos Vivos	218349	224409	220060	195217	195343	195131
	Nº total casos morbilidad maternas grave	60346	64597	70667	73114	81999	90849
	Razon Morbilidad Materna Grave x 100000	27637	28785	32113	37453	41977	46558
México	Nº Nacidos Vivos	2251731	2256287	2269128	2254008	2239268	2249057
	Nº total casos morbilidad maternas grave	86252	89011	91990	91707	100510	100126
	Razon Morbilidad Materna Grave × 100000	3830	3945	4054	4069	4489	4452
Panama	Nº Nacidos Vivos	67955	73392	75486	73804	75183	75884
	Nº total casos morbilidad maternas grave	42595	49822	48437	41624	42138	36958
	Razon Morbilidad Materna Grave × 100000	62681	67885	64167	56398	56047	48703
Peru	Nº Nacidos Vivos	697902	796199	698954	670189	672424	657030
	Nº total casos morbilidad maternas grave	13799	12853	13392	13696	13392	13344
	Razon Morbilidad Materna Grave × 100000	1977	1614	1916	2044	1992	2031
Uruguay	Nº Nacidos Vivos	47420	46712	48059	48681	48368	48926
	Nº total casos morbilidad maternas grave			232	263	280	293
	Razon Morbilidad Materna Grave x 100000			483	540	579	599

فالمناسم مسام ...!

Intra-country variations

^{*} Denominator is not the same as for maternal mortality.

Inter-country variation





Based on what we have just seen, the governments of the member states of the Americas commissioned PAHO

- To design a system to standardize Maternal Near Miss surveillance.
- Provide guidance on the development of systems for national surveillance of MNM.
- Consult countries regularly every May about their MNM data.
- And prepare biannual reports.



How to define the standardization criteria

- Core group of experts
- Conference calls
- Face-to-face meeting in Panama City (July 2019)
- Agreements





• WHO Definition (2008)

- WHO NM approach framework
- Document approved to be circulated among member states

Affected system	Clinical	Laboratory	Interventions
Cardiovascular	Shock Cardiac arrest	Severe hypoperfusion (lactate > 5 mmol/l or > 45 mg/dl) Severe acidosis (pH < 7.1)	Use of continuous vasoactive drugs Cardiopulmonary resucitation
Respiratory	Acute cyanosis Gasping Severe tachypnea (respiratory rate > 40 bpm) Severe bradypnea (respiratory rate < 6 bpm)	Severe hypoxemia (O2 saturation < 90% for \ge 60 minutes or PaO2/FiO2 < 200)	Intubation and ventilation not related to anesthesia
Renal	Oliguria non responsive to fluids or diuretics	Severe acute azotemia (creatinine \geq 300 μ mol/l or \geq 3.5 mg/dl)	Dialysis for acute renal failure
Hematological / Coagulation	Failure to form clots	Severe acute thrombocytope- nia (< 50.000 platelets/ml)	Massive transfusion of blood or red cells (\geq 3 units)
Hepatic	Jaundice in the presence of pre-eclampsia	Severe acute hyperbilirubine- mia (bilirubin > 100 μ mol/l ó > 6.0 mg/dl)	
Neurological	Prolonged unconsciousness (lasting > 12 hours)/Coma Stroke Uncontrollable fits/status epileptics, total paralysis		
Uterine			Uterine hemorrhage or infec- tion leading to hysterectomy





Recomendaciones para establecer un sistema nacional de vigilancia de la morbilidad materna extremadamente grave (NMM) en América Latina y el Caribe



Recommendations for Establishing a National Surveillance System for Maternal Near-Miss in Latin America and the Caribbean



Recomendações para estabelecer um Sistema Nacional de Vigilância da Morbidade Materna Extremamente Grave (NM) na América Latina e no Caribe



Recommandations pour l'établissement d'un système national de surveillance de la morbidité maternelle extrêmement grave en Amérique latine et aux Caraïbes



OPS S Promotication de la Santé



Institutional data collection scenarios







Figure 4: Maternal and perinatal morbidity and mortality review committee applied to maternal near-miss









Technical Guidelines for Maternal Near Miss Case Review and Response



OPS (S) Organización Mandal de Usabel | 2022







THANK YOU











MINISTERIO DE SALUD Y PROTECCIÓN SOCIAL

Integrated public health surveillance of extreme maternal morbidity, maternal mortality, late perinatal and neonatal mortality, and birth defects, Colombia

Greace Alejandra Avila Mellizo

Public Health Risk Surveillance and Analysis Directorate

National Institute of Health





Regulatory framework

Public health surveillance system



Ten-year Public health plan

Decree 3518 of 2006

Decree 780 de 2016

The public health surveillance system is created and regulated to provide systematic and timely information on the dynamics of events that affect or may affect the health of the population. Comprehensive route of maternal and perinatal health care



INS



Analizar









SINS Timeline of the evolution of the safe maternity surveillance



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Public Health Surveillance Objectives



Describe in terms of variables: person, time and place the behavior of the reported cases.

Follow up on the established indicators to achieve the prevention and control of events.

Identify the conditions and situations that cause serious complications during pregnancy, childbirth or the puerperium and make up the cases of Extreme Maternal Morbidity, in order to guide policies against safe motherhood

Extreme maternal morbidity

Generate timely information on cases of extreme maternal morbidity through immediate notification that will serve as an input for the EAPB to activate immediate response mechanisms in their network of providers and prevent fatal outcomes and avoidable disabilities.





Surveillance of extreme maternal morbidity



Periodicity of reporting Transition of surveillance of extreme maternal morbidity in Colombia

INS







Data collection, source and flow of information





SISTEMA NACIONAL DE VIGILANCIA EN SALUD PÚBLICA - Subsistema de información Sivigila Ficha de notificación individual - Datos complementarios

Cod INS 549. Morbilidad materna extrema

Immediate notification

Super-immediate notification



• Eclampsia severe

- Pre eclampsia
- Severe Obstetric
 Hemorrhage

✓ The notification must be immediate at the time the clinically confirmed MME case is identified from the UPGD (low, medium or high complexity)

At the time of the surviving woman's hospital discharge, adjustment 7 of the notification must be made to complete variables: date of discharge, type of discharge, among others.

Special monitoring of EISP No Transmittable : extreme maternal morbidity



SINS Communication and dissemination of surveillance results



Behavior of the notification of MME, Colombia to SE 08 of 2023

SINS



(1 273 casos con tres o más criterios / 7 570 casos de MME)



INS

Behavior of the notification of MME, Colombia, to EW 08 of 2023

Morbilidad Materna Extrema por grupo de edad, Colombia, periodo epidemiológico II de 2023

Grupo de edad	Casos	Porcentaje	Razón de MME
10 a 14 años	55	<mark>0,7</mark>	55,8
15 a 19 años	1154	15,2	47,2
20 a 24 años	1777	23,5	43,5
25 a 29 años	1733	22,9	49,2
30 a 34 años	1495	19,7	63,7
35 a 39 años	<mark>985</mark>	13,0	79,0
40 y más años	371	4,9	101,5

Causas agrupadas de morbilidad materna extrema, Colombia, periodo epidemiológico II de 2023

Causas agrupadas	casos	Porcentaje	Razón de MME
Trastornos hipertensivos	5459	72,1	38,6
Complicaciones hemorrágicas	1045	13,8	7,4
Complicaciones del aborto	194	2,6	1,4
Sepsis de origen obstétrico	341	4,5	2,4
Sepsis de origen no obstétrico	98	1,3	0,7
Sepsis de origen pulmonar	31	0,4	0,2
Enfermedad preexistente que se complica	165	2,2	1,2
Otra causa	237	3,1	1,7



Conclusions and factors contributing to success Case study

- Integration of other safe maternity events to strengthen surveillance processes. Starting from the surveillance of extreme maternal morbidity, to strengthen the timely detection of conditions that lead to death, emphasis of this surveillance, perinatal and congenital defects, as well as some infectious events, classification of cases and recognition of the problems to intervene
- Public health surveillance in Colombia is supported by a broad regulatory framework, which has made it mandatory and broad coverage in the comprehensive development of the processes established in the national guidelines and protocols.
- SIVIGILA application integrates the notification from different sources of information and in which more than 15,000 notifiers throughout the country actively report in a standardized manner, which allows internal comparability and decision-making in almost real time.

Capacita

Produce

Observa

Vigila

Coordina

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Investiga

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Questions and

Answers



- Panel 1 <u>Strengthening the Quality of Practice of</u> <u>Maternal and Perinatal Death Surveillance and</u> <u>Response (MPDSR)</u>
- Panel 2 <u>Implementing Maternal and Perinatal</u> <u>Death Surveillance and Response (MPDSR):</u> <u>New Solutions and Opportunities</u>
- How to Deliver Quality Maternal and Newborn
 <u>Care: Capacity-Building for Implementers</u>
- Launch of the MPDSR Global Report



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