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# Training, guidelines and supportive supervision as key factors in maternal and newborn care: a cross-sectional study of healthcare professionals from 13 European countries

**Ilaria Mariani, MSc, research midwife and biostatistician,**
**on behalf of Prof. Marzia Lazzerini (PI) & the IMAgiNE Research Network**
WHO Collaborating Centre for Maternal and Child Health,
Institute for Maternal and Child Health IRCCS Burlo Garofolo Trieste (Italy)

30th GIMBE 1996-2026 EVIDENCE FOR HEALTH

WHO Collaborating Center for Maternal And Child Health Trieste Italy

IMAGINE Improving MAternal Newborn carE

# The IMAgiNE Research Network: objective & key results

**Objectives: Document the quality of maternal and newborn health care in the WHO European Region and beyond from 2 perspectives: women & health workers (HW)**

## Global Collaboration

**40** participating countries

## Validated questionnaires

**34** languages for mothers' survey

**17** languages for health worker's survey

## WHO Standards

**85** Quality Measures based on WHO Standards

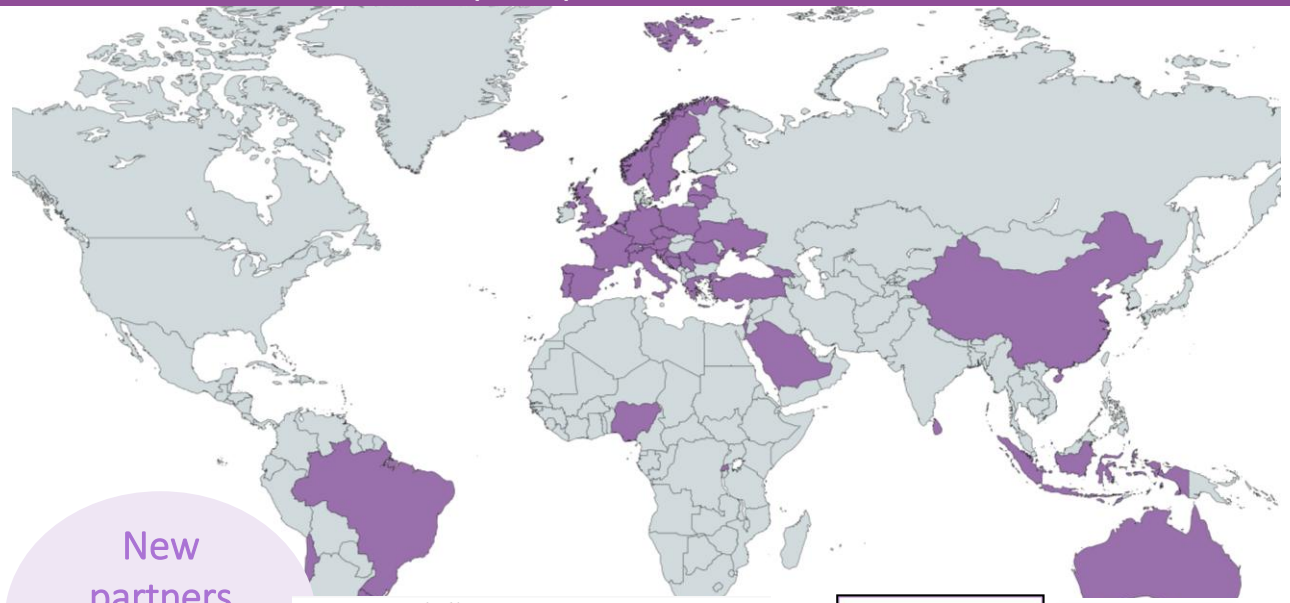
**> 130.000** Mothers and **4000** HW participating

## Progress & Achievements

**33** papers published or accepted

**32** paper ongoing

**>150** dissemination events (congresses, webinar, newsletters…)



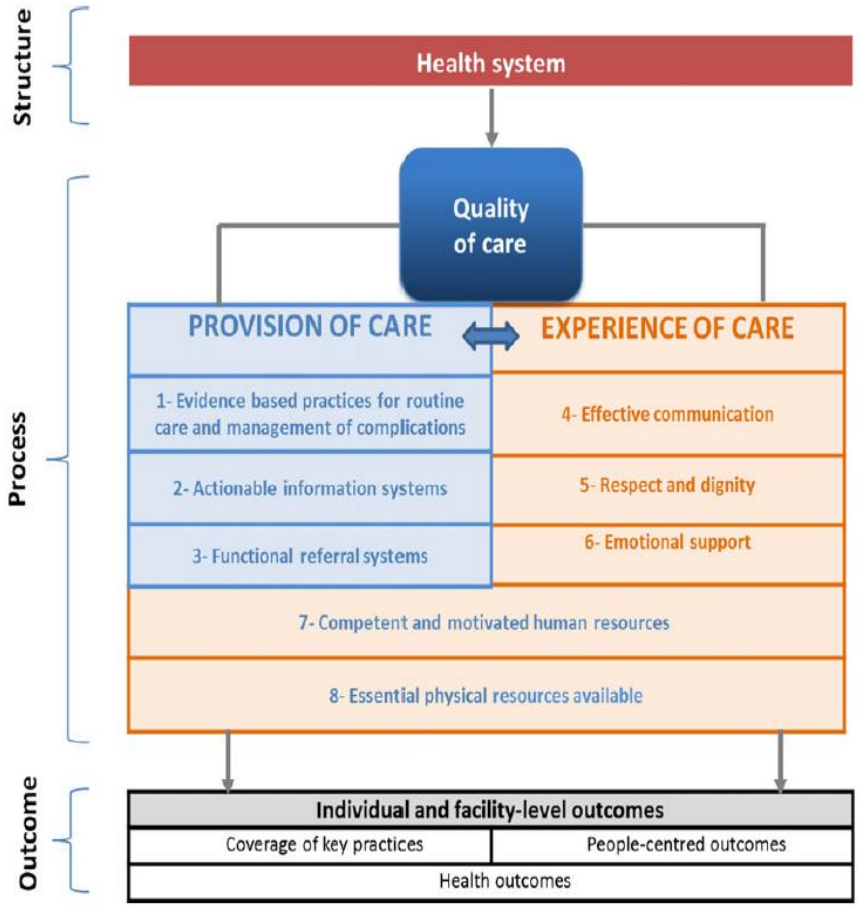
New partners are always welcome!




https://www.burlo.trieste.it/ricerca/imagine-euro-improving-maternal-newborn-care-euro-region

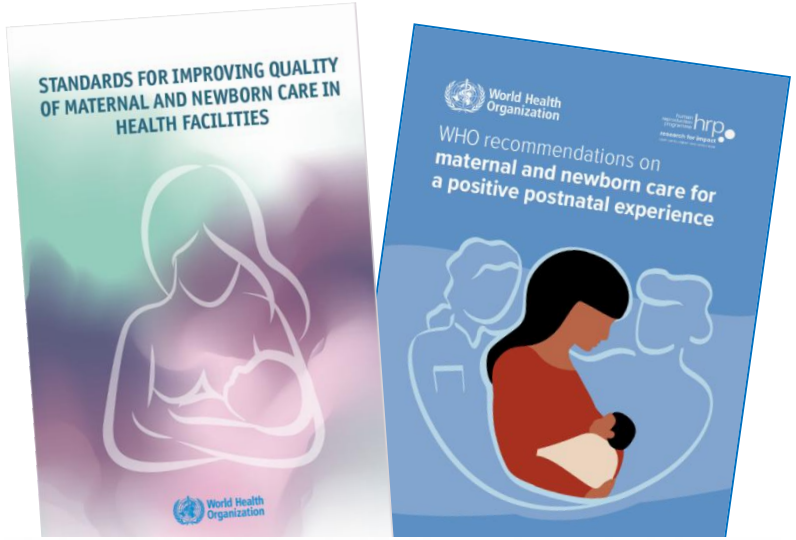
## WHO framework

(2015)




## WHO standards

(2016 & 2022)




**8**
STANDARDS

**318**
QUALITY MEASURES

**STANDARDS RELEVANT TO MENTAL HEALTH**

## Two questionnaires

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**85** QUALITY MEASURES

selected with multiple rounds of Delphi among

- INTERNAZIONAL EXPERTS
- HEALTH PROFESSIONALS
- MOTHERS

The IMAgiNE project addresses the shortcomings in healthcare quality monitoring systems by collecting the experiences of women and healthcare professionals

# Training, guidelines and supportive supervision as key factors in maternal and newborn care

IMAGINE GLOBAL Improving MAternal Newborn carE

## Background

- The World Health Organization (WHO) advocates for the involvement of qualified health workers (HW) during childbirth to guarantee safe, effective, high-quality maternal/neonatal care.
- Recent studies have identified significant deficiencies in health staff competencies, underscoring the need for continuous capacity development to improve quality.

# Training, guidelines and supportive supervision as key factors in maternal and newborn care

## Background



- The World Health Organization (WHO) advocates for the involvement of qualified health workers (HW) during childbirth to guarantee safe, effective, high-quality maternal/neonatal care.
- Recent studies have identified significant deficiencies in health staff competencies, underscoring the need for continuous capacity development to improve quality.

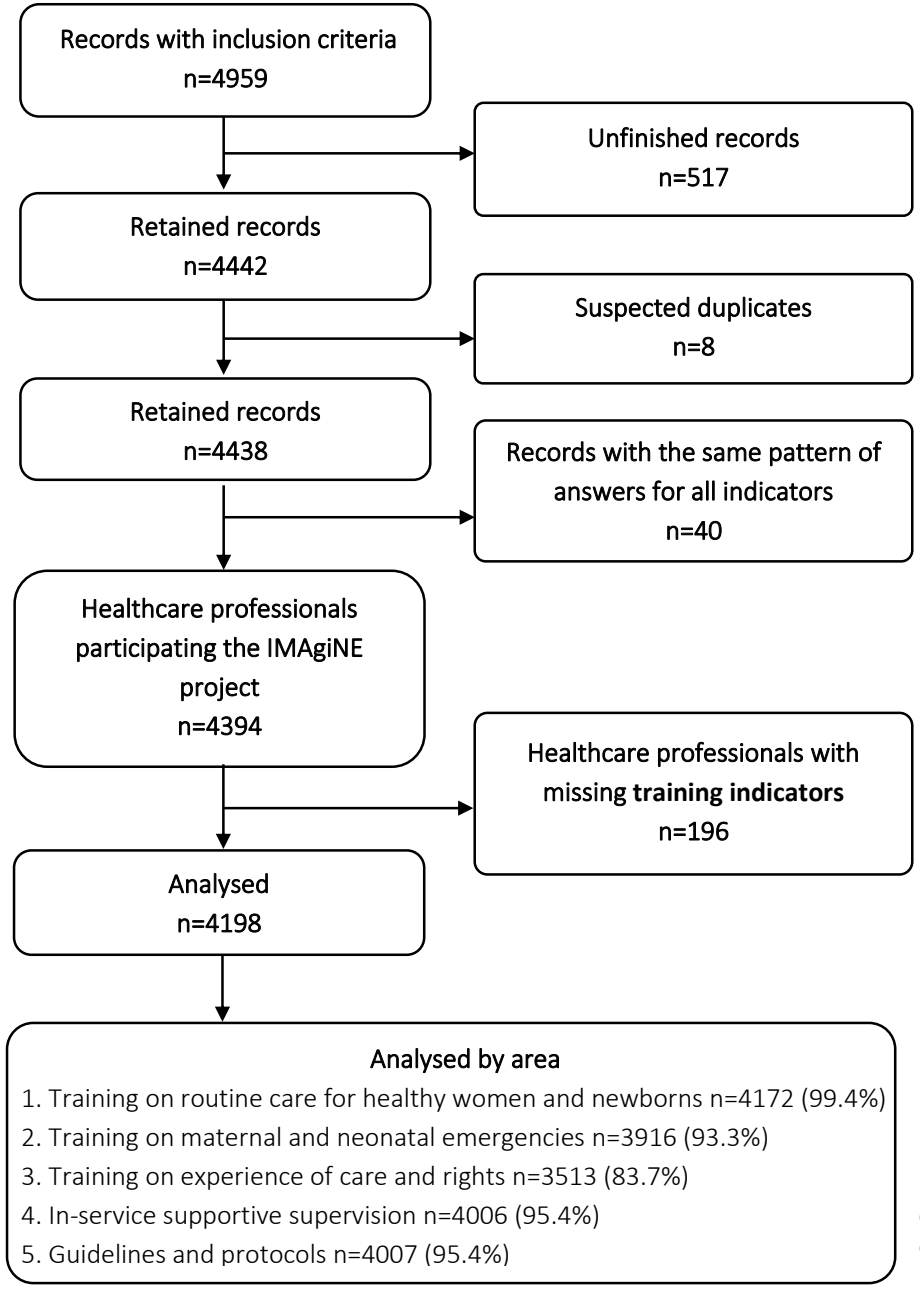
## Objective



This study aims to explore HW perceived gaps and needs across 13 European countries focusing on 5 key areas:

1. Effective **training** on routine care for **healthy women and newborns**
2. Effective **training** on maternal and neonatal **emergencies**
3. Effective **training** on **experience of care and rights**
4. Effective in-service supportive **supervision**
5. Up-to-date written **guidelines and protocols**

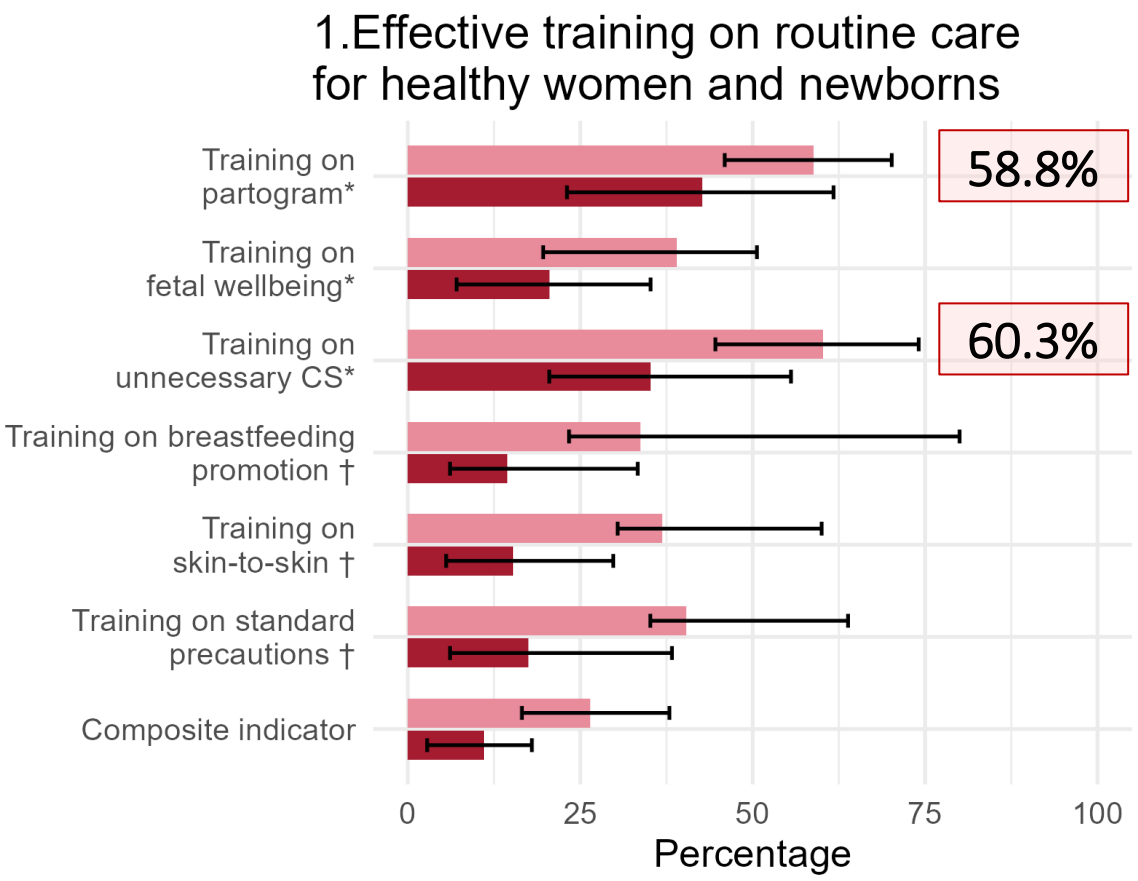
# HW perspective (13 countries N =4198)

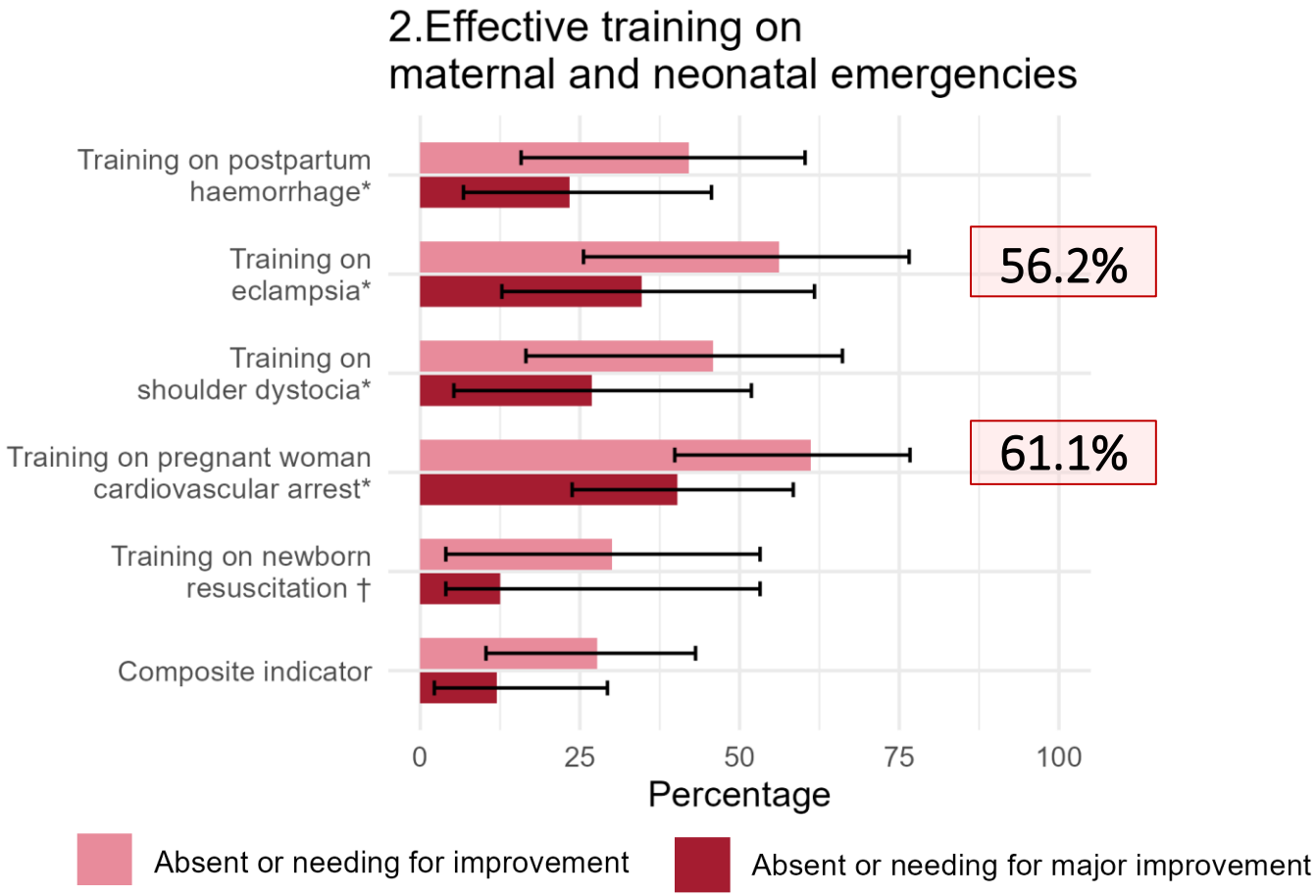



Note: * Unfinished records are defined as records with missing data for 36 out of 40 Quality Measures (≥90% questions)



# Training absent/needing improvement



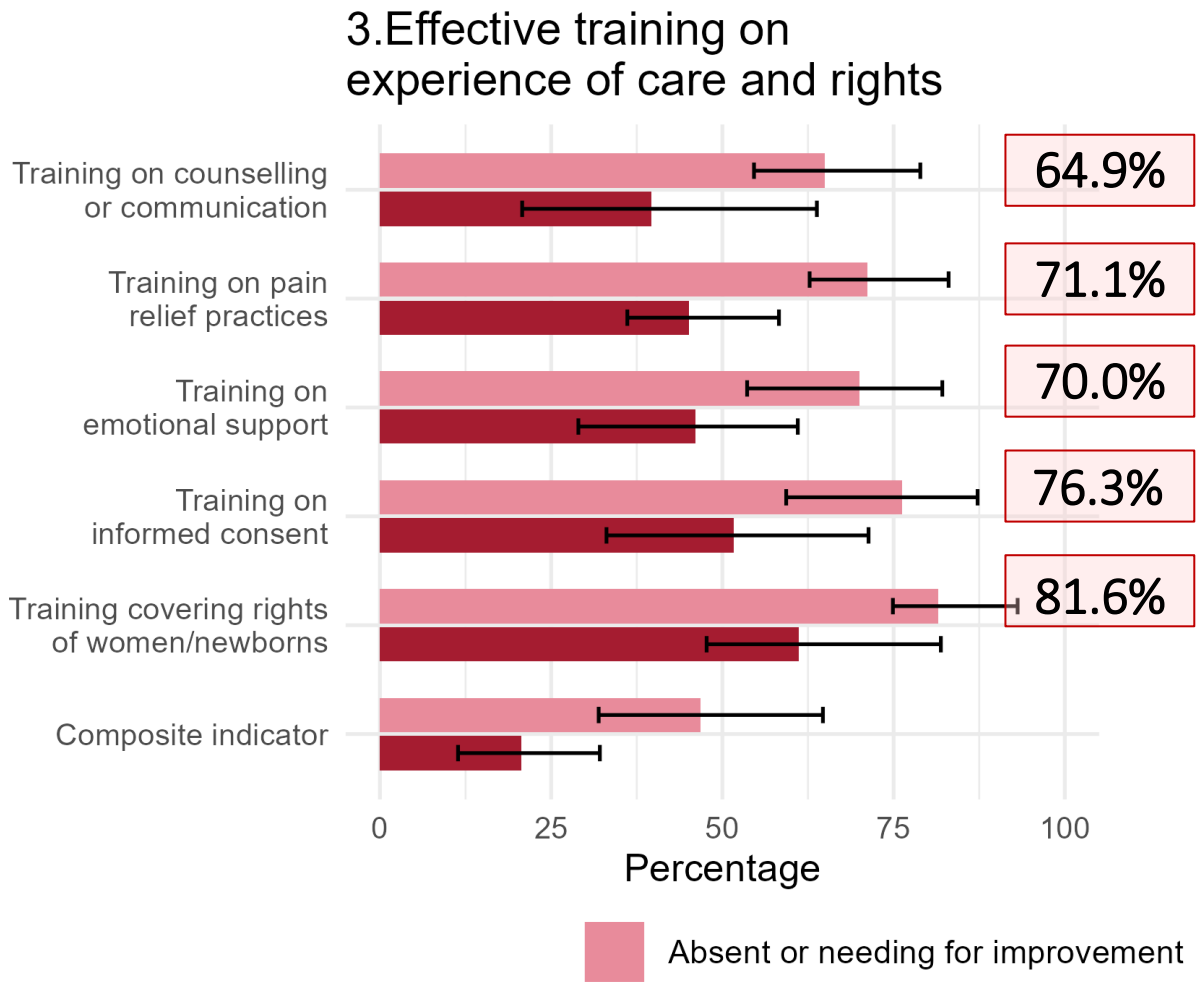



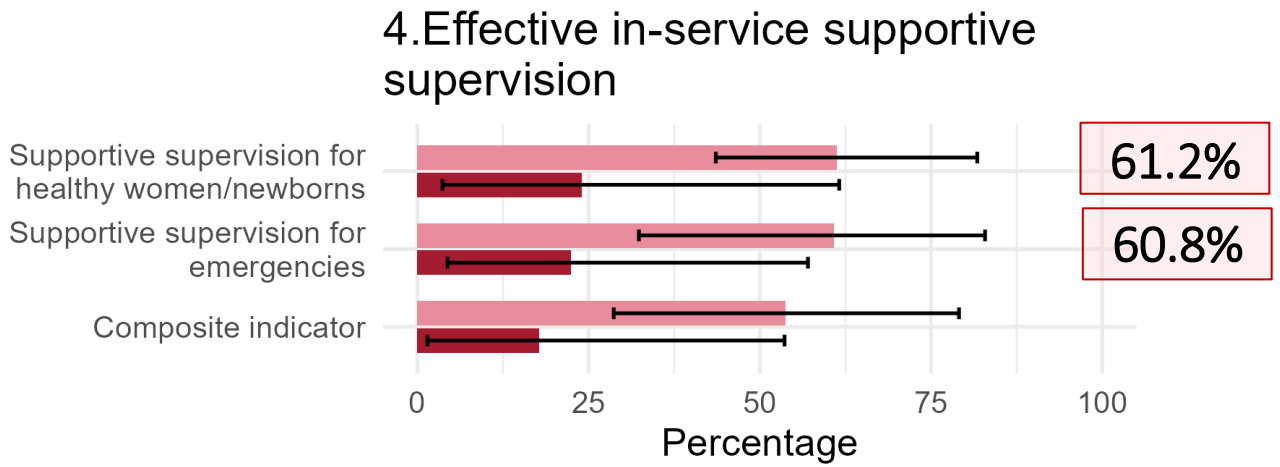

HW reported high frequencies of “training absent/needing improvement”

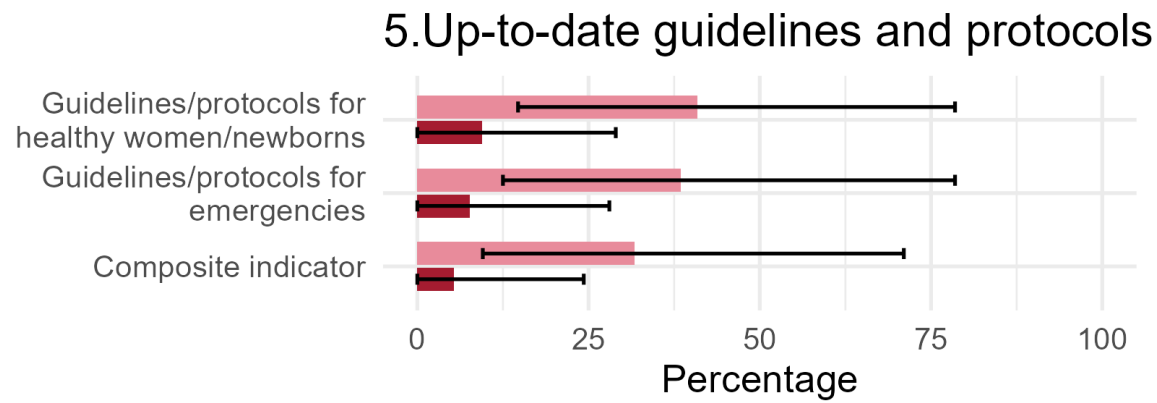
Significant variability across countries

*The figure shows the overall percentages, the black horizontal lines represent the variation between countries (from the minimum to the maximum country percentage)*

# Training, supportive supervision, guidelines/protocols



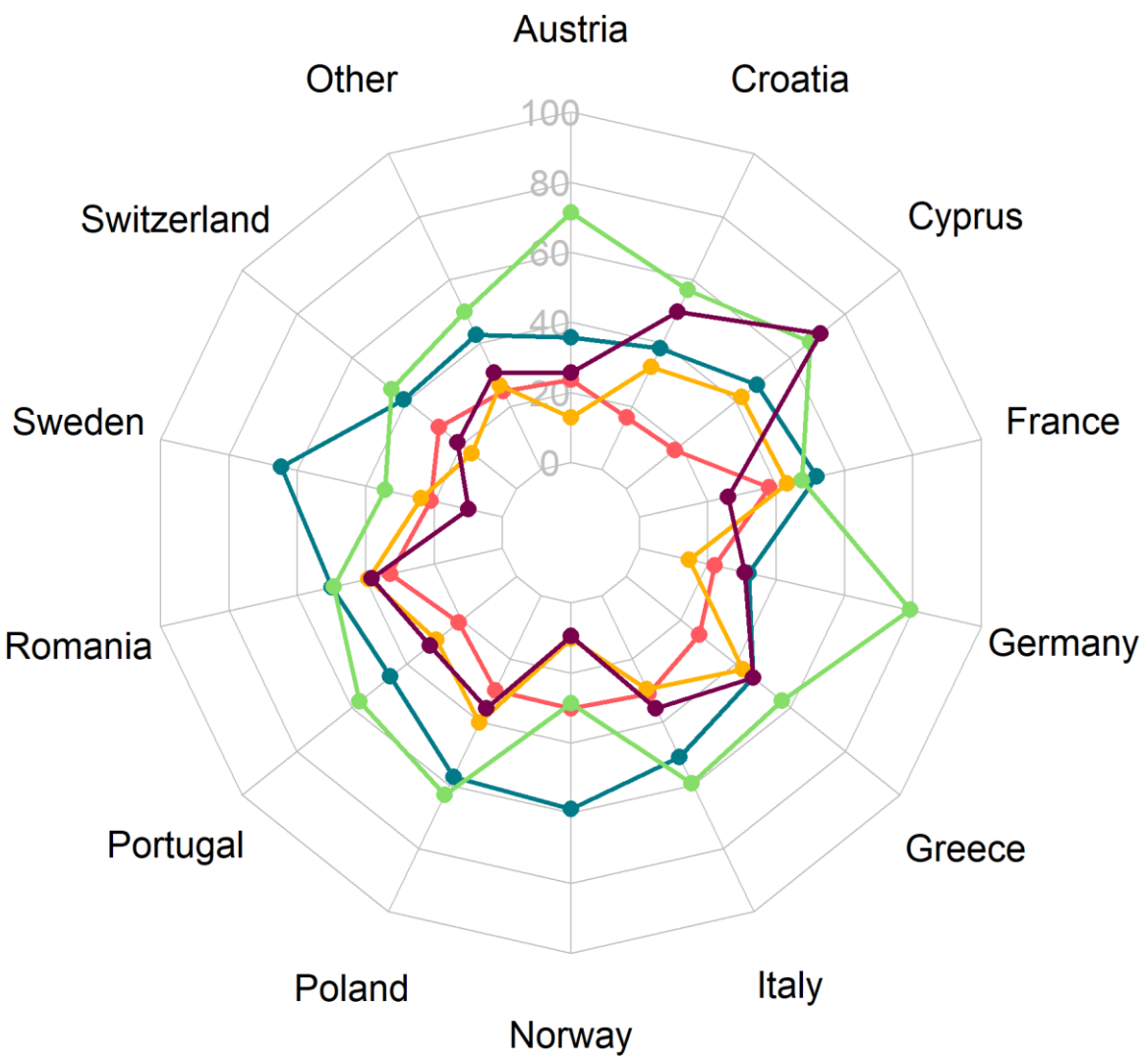

Absent or needing for improvement

Absent or needing for major improvement

**> 50% of HW reported "absence of or need for improvement"** for most indicators

in the areas related to training on experience of care and rights, and in-service supportive supervision

# Composite indicators by area and country




- 1 Training on routine care for healthy women/newborns
- 2 Training on maternal and neonatal emergencies
- 3 Training on experience of care and rights
- 4 In-service supportive supervision
- 5 Guidelines and protocols

- **No country free from gaps**
- No consistent country-level patterns
- Significant heterogeneity across countries

Major differences across countries and by professional qualification were confirmed by **multivariate analysis**

*Composite indicators identify HW reporting gaps - either absence or need for improvement - across all indicators of the area under analysis*

# Key messages




## Key findings

- ✓ **HW requested more training supportive supervision, and guidance in all assessed countries**
- ✓ HW perceptions call for in depth analyses
- ✓ Results underline the importance of strengthening monitoring systems and ensuring an enabling, positive and motivating working environment for HW

Addressing these gaps is essential to
**enhance workforce capacity,**
**improve staff retention,** and
**ensure equitable, high-quality maternal and newborn care across countries and settings**

## Opportunities

- ✓ IMAgiNE data **can be triangulated** with other indicators
- ✓ The existing methods allow comparison **across settings and over time**

# Opportunities for collaboration?

IRCCS materno infantile Burlo Garofolo
Regione Friuli Venezia Giulia

## Ongoing/Recent Activities WHO CC Trieste

WHO Collaborating Center for Maternal And Child Health Trieste Italy

### WHO Policies & Standards & Guidelines

NEW WHO/UNICEF Strategy EURO

WHO Strategy for Ageing

A healthy start for a healthy life:
**A strategy for child and adolescent health and wellbeing (2026-2030)**

Standards for MNCAH quality improvement




Global standards for quality health care services for adolescents
Second edition

Over 20 guidelines

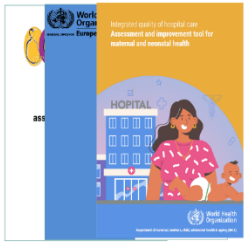
### WHO Manuals




### Quality Assessment & Improvement Tools

8 Tools
Largely used in > 30 countries in Quality Assessments (in collaborations with MoH)

Last version (2023)




### WHO Training packages

1) WHO Early Essential Newborn Care Course (ENCC) 14 modules (2017-2024)
2) WHO Effective Perinatal Care (EPC) 30 Modules (2017)







### WHO/UNICEF Boards on Global Indicators, QoC & Strategies

1) WHO/UNICEF Child Health Accountability Tracking (CHAT) Technical Advisory Group
2) WHO Mother and Newborn Information for Tracking Outcomes and Results (MoNITOR) Technical Advisory Group
3) WHO-MCA's Life Course Quality of Care Measurement Coordination Working Group (LCQM-CWG)
4) WHO, UNICEF, LSHTM Every newborn action plan (ENAP) subgroup "Improving newborn measurement"
5) WHO IAAH Technical Working Group on Adolescent Competencies and Standards for adolescent health care
6) WHO Strategic and Technical Advisory Group of Experts (STAGE) on Maternal, Newborn, Child, and Adolescent Health and Nutrition (MNCAHN) – partner

### Support to countries

- Quality Assessment & Improvement
- Maternal, Newborn, Child, Adolescent

•EURO & AFRO & 37 countries of IMAGINE
•Others as needed

### Quality Assessment and Improvement studies (only larger ongoing studies reported here)

1) 37 countries IMAgiNE GLOBAL (Improving MAternal Newborn care)

2) ITALY (9 hospitals, QI Study) IMAgiNE FVG (Improving MAternal Newborn care): Implementation of WHO standards for improving the quality of MN hospital care.

3) ITALY - BRAZIL (2 countries QI study) CHOICE (Child HOspItal CarE: Implementation of WHO standards for improving the quality of pediatric hospital care

4) ITALY- BRAZIL- SRI LANKA-TANZANIA (4 countries) EPINICU - (Empowering Parents of newborns in NICU): study to evaluate models of interventions in different settings

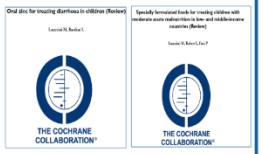
5) AFRICAN CONTRIES (4 countries, QI study) IMPULSE (IMProving qUaLity and uSe of nEwborn indicators) in collaboration with LSHTM, CUAMM, WHO, UNICEF

6) WHO (6 countries) ARQS Implementation research to inform Adolescent Responsive Quality Services, based on WHO HQ request

### Systematic reviews to inform WHO/UNICEF Strategies

About 30 conducted, many on WHO request
Most recent topics:
- Effective coverage
- Mental Health & Digital Transition
- Family center newborn developmental care

Effective coverage measurements and cascade for maternal, newborn, child and adolescent health in high-income countries: systematic review







### Lancet Series and Commissions

- Family Center Care for Vulnerable newborns (Lancet CAH Series)
- Maternal and Newborn Health (Lancet Commission)







### Epidemiological studies

- First description of COVID characteristics in 2500 Italian children (66 centers)
- Birth Register Norway (1.6 Million cases)







We are looking for expert epidemiologists coordinating WHO CC research activities



Contact us!


Ilaria Mariani (research midwife)
ilaria.mariani@burlo.trieste.it

prof. Marzia Lazzerini (PI)
marzia.lazzerini@burlo.trieste.it


thank you

# The Coordinating team



Marzia Lazzerini

*Principal Investigator*



Maria Verdecchia

*Project Manager*

*Epidemiologist*

WHO Collaborating Center for Maternal And Child Health Trieste Italy



Ilaria Mariani

*Research Midwife statistician*



Margherita Camanni

*Research Midwife*



Lorenzo Cora

*Research statistician*



Mariazzurra Carlino

*Research statistician*



Mary Kinney

Researcher in Health policy

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marzia.lazzerini@burlo.trieste.it
maria.verdecchia@burlo.trieste.it
margherita.camanni@burlo.trieste.it
ilaria.mariani@burlo.trieste.it
lorenzogiovanni.cora@burlo.trieste.it
mariazzurra.carlino@burlo.trieste.it


# Nearly 150 researchers from 110 institutions

University of Sydney (**Australia**), University of Newcastle (**Australia**), Miracle Babies Foundation (**Australia**), Health University of Applied Sciences Tirol, Innsbruck (**Austria**), Medical University Innsbruck (**Austria**), Haute Ecole Léonard de Vinci (**Belgium**), University Center Nursery and Midwifery, Ghent University, Gent (**Belgium**), NGO Baby Steps, Sarajevo (**Bosnia and Herzegovina**), Instituto de Medicina Integral Professor Ferdinando Figueira (**Brazil**), Universidad de Valparaíso (**Chile**), Hebei Medical University (**China**), National Research Institute for Family Planning (**China**), Tongji University Affiliated Obstetrics and Gynecology Hospital (**China**), Second Affiliated Hospital of Chongqing Medical University (**China**), School of Health Sciences, Cyprus University of Technology (**Cyprus**), NGO Birth Forward, Nicosia (**Cyprus**), Roda – Parents in Action, Zagreb (**Croatia**), Association for Birth Houses & Centers APODAC, Prague (**Czech Republic**), Tartu Applied Health Sciences University (**Estonia**), Estonian Midwife Association (**Estonia**), Sexual and Reproductive Health and Rights Research Unit, Institut National d'Études Démographiques (INED), Paris (**France**), Baby Friendly Hospital Initiative (BFHI) (**France**), University of Georgia (**Georgia**), Department of Epidemiology and International Public Health, School of Public Health, Bielefeld University (**Germany**), Katholische Stiftungshochschule, München University of Applied Sciences (**Germany**), University of Applied Sciences and Arts Hildesheim/Holzminden/Göttingen (**Germany**), University of West Attica, Athens (**Greece**), Bumil Pamil Organization (**Indonesia**), Health Polytechnic Ministry of Health of Jakarta III (**Indonesia**), Ruppin Academic Center, Department of Nursing, Emek Hefer, (**Israel**), Shamir Medical Center (**Isreal**), Medical School and Midwifery School, Genoa University, Genoa (**Italy**), Institute for Maternal and Child Health IRCCS Burlo Garofolo, Trieste (**Italy**), Milano-Biccoca University, Milano (**Italy**), , Humanitas University (**Italy**), Riga Stradins University Department of Obstetrics and Gynaecology, Rīga, (**Latvia**), Kaunas University of Applied Sciences, (**Lithuania**), Department of Life sciences and Medicine, Univeristy of Luxembourg (**Luxembourg**), Beruffsverband vun de Laktatiounsberoderinnen zu Lëtzebuerg asbl (Professional association of the Lactation Consultants in Luxembourg), (**Luxembourg**), Department of Obstetrics and Gynaecology, Leiden University Medical Centre (LUMC) (**Netherlands**), University College Hospital, Ibadan. Oyo state(**Nigeria**), PAMO University of Medical Sciences/PAMO Teaching Hospital (**Nigeria**),Department of community medicine, UiT The Arctic University of Norway (**Norway**), Department of health and caring sciences, Western Norway University of Applied Sciences, Norway (**Norway**), Centre of Postgraduate Medical Education, Warsaw (**Poland**), EPIUnit, Institute of Public Health, University of Porto, Porto, (**Portugal**), Universidade Europeia, Lisboa, (**Portugal**), Administração Regional de Saúde do Algarve, Algarve, (**Portugal**), Institute of Social Sciences of the University of Lisbon, Lisbon, (**Portugal**), Associação Portuguesa pelos Direitos da Mulher na Gravidez e Parto, Lisbon, (**Portugal**), Universidade Lusófona do Porto, (**Portugal**), Universidade Lusíada - Porto (**Portugal**), Nursing School of Porto, Porto, (**Portugal**), Associação Portuguesa dos Enfermeiros Obstetras, Portugal (**Portugal**), SAMAS Association, Bucharest, (**Romania**), Saudi Association of Midwifery (**Saudi Arabia**), La casa de Isis Birth Centre - Orba, Alicante (**Spain**), Centar za mame, Belgrade, Serbia National Institute of Public Health, Ljubljana, (**Slovenia**), Department of Anthropology, Philosophy and Social Work. Medical Anthropology Research Center (MARC), Rovira i Virgili University (URV), Tarragona, (**Spain**), Institut Català de la Salut, Generalitat de Catalunya, (**Spain**), Member of Observatory of Obstetric Violence in Spain – OVO (**Spain**), University of Colombo (**Sri Lanka**), University of Gothenburg, Gothenburg, (**Sweden**), Lund University, Skåne University Hospital, Lund, (**Sweden**), Haute École de Santé Vaud, Lausanne, (**Switzerland**), Yönetim Kurulu/Board of Directors Avrupa Ebeler Derneği/European Midwives Association (**Turkey**), Balikesir University, Faculty of Health Sciences, Department of Midwifery (**Turkey**), Faculty of Health Sciences, Sakarya University of Applied Sciences Department of Nursing Akyazı (**Turkey**), Tribe Lab at King's College London (**UK**), Safe Birth NGO (**Ukraine**), Universidad de la República, Facultad de Ciencias Sociales (**Uruguay**), Ohio University, School of Nursing, Athens, Ohio, (**USA**)

# Questionnaire #2 Health workers

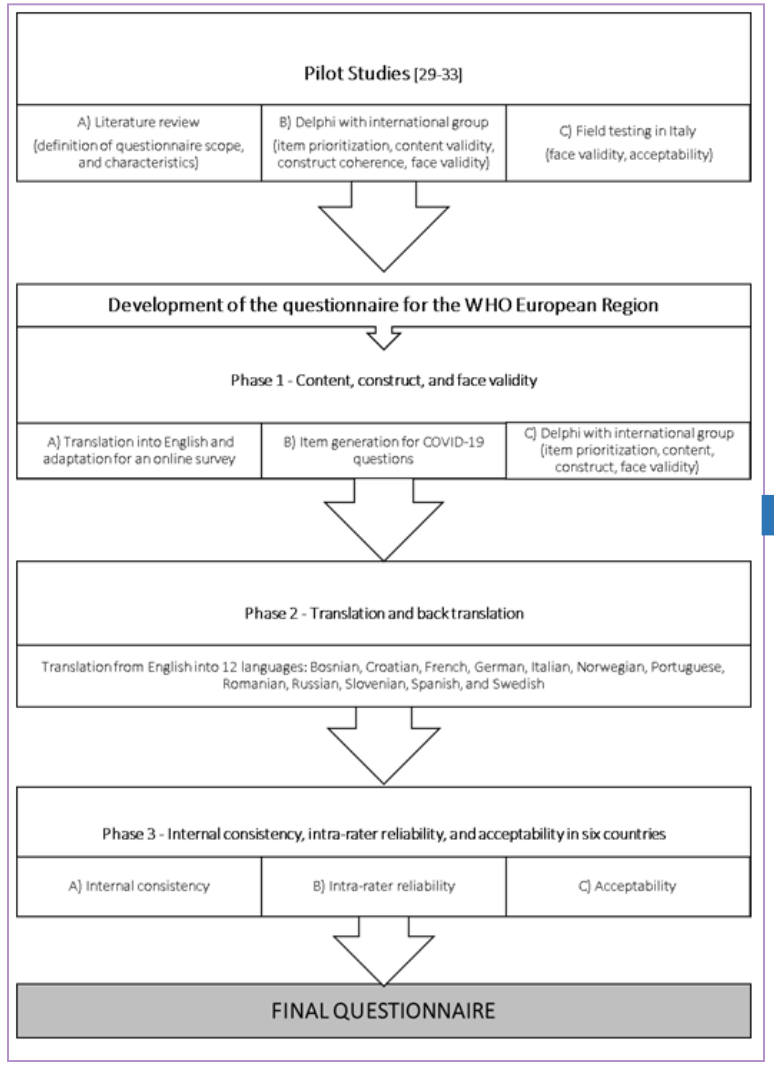



**Table 1** Characteristics of the IMAgiNE questionnaire for health workers

| Expected use | Collect useful data to improve the QMNC during childbirth at facility level in the WHO European Region |
|---|---|
| Phenomena of Interest | QMNC as for a set of 40 prioritised WHO Quality Measures[23] |
| Domains | Four domains:<br>1. Provision of care, as defined by WHO Standards[23]<br>2. Experience of care, as defined by WHO Standards[23]<br>3. Availability of Physical and Human Resources, as defined by WHO Standards[23]<br>4. Organisational changes related to the COVID-19 pandemic response |
| Responders | Health workers are defined as professionals routinely working in maternal and neonatal care around the time of childbirth at facility level for at least 1 year |
| Context | WHO European Region |
| Administration format | 1. Self-administered, online, anonymous and voluntary<br>2. Informed consent required |
| Other characteristics | 1. Multi-item instrument including different dimensions of QMNC<br>2. Collects information of the key WHO Quality Measures for which using health workers as source of data is appropriate and important<br>3. Complementary to a tool collecting information on service users' perception of QMNC[30]<br>4. Content heavily informed by health workers (ie, end users of the questionnaire)<br>5. Content sufficiently comprehensive, retaining acceptability by health workers<br>6. Clear, specific, and concise questions, structured in logical sequence<br>7. Comparable pathways for maternal and neonatal area<br>8. Includes open-ended questions to collect suggestions from health workers and additional feedback<br>9. Socio demographic country-adjustable questions under requests<br>10. Good psychometric properties according to literature<br>11. Allowance for scoring of QMNC with a single quantitative index |

Focus on 40 key WHO Quality Measures

Two tailored versions:
1) HW from maternal area
2) HW from neonatal area

| | HW |
|---|---|
| Provision | 10 |
| Experience | 10 |
| Resources | 10 |
| COVID-19 | 10 |

Open access Original research
BMJ Open

**WHO Standards-based questionnaire to measure health workers' perspective on the quality of care around the time of childbirth in the WHO European region: development and mixed-methods validation in six countries**