

Towards access, quality and coverage of health services

WHO guidelines
for maternal and newborn health
Antenatal Care (2016)
Improving preterm birth outcomes (2015)
Postnatal care (2014)

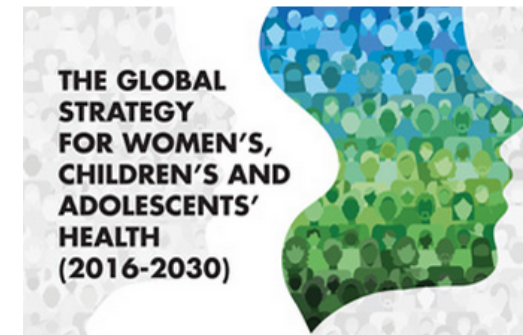
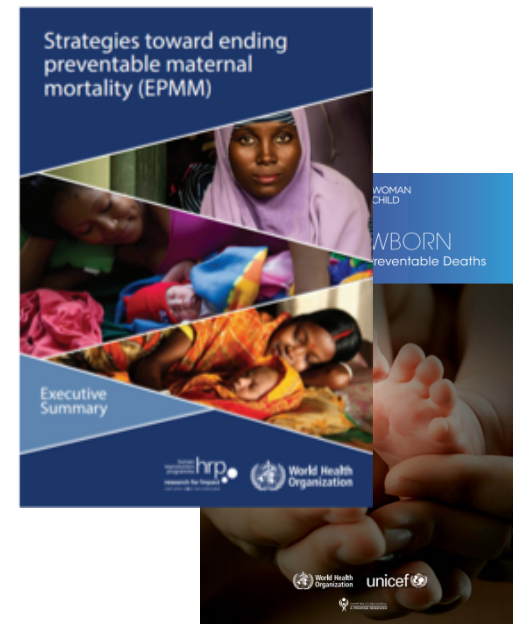
Reproductive Health and Research (RHR)

Maternal, Newborn, Child and Adolescent Health (MCA)



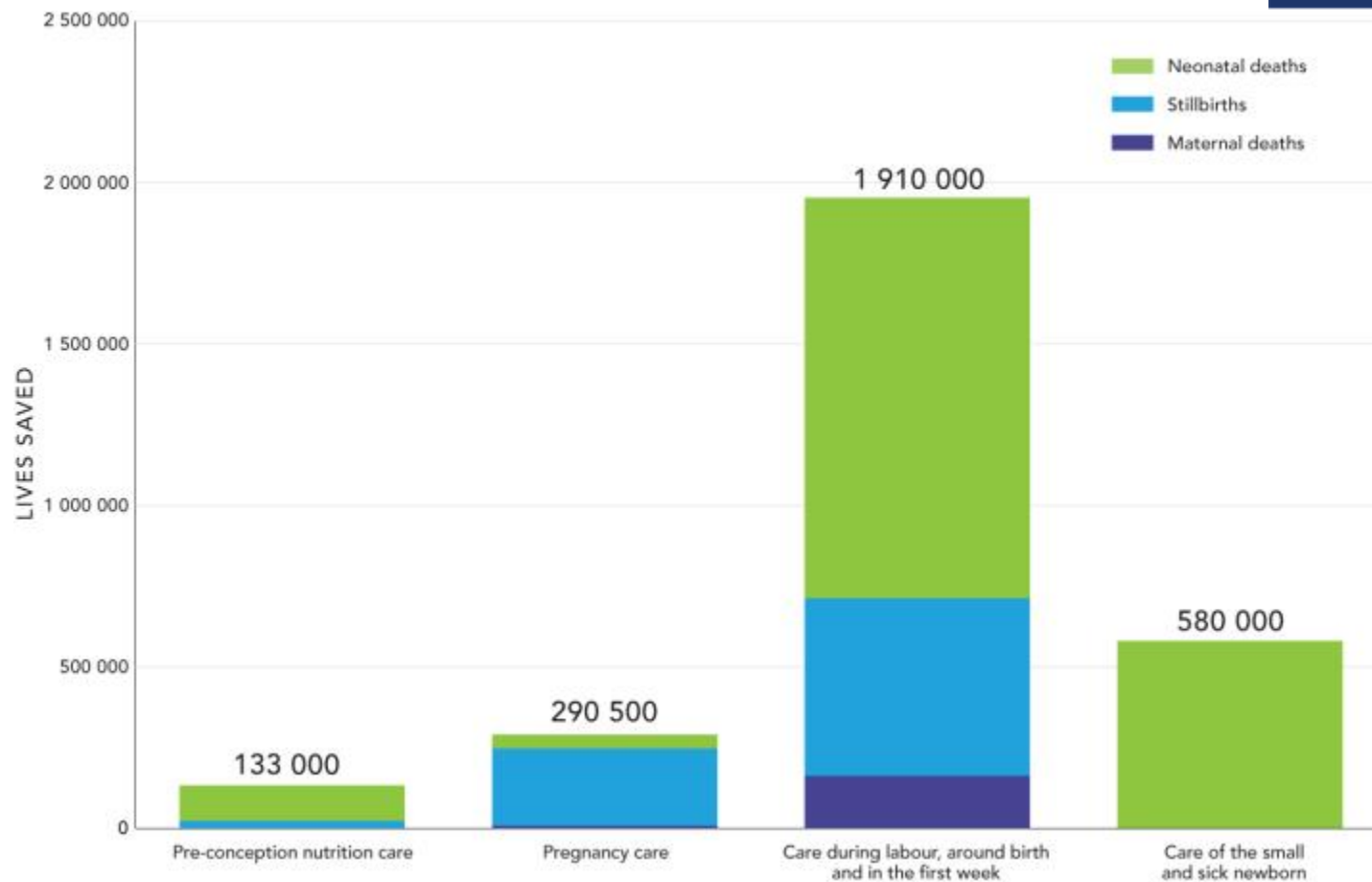
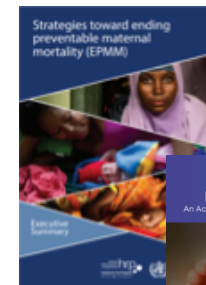
Critical time for global health

- MDGs to SDGs
- Two complementary strategies with shared objectives
 - Every Newborn Action Plan (ENAP)
 - Ending Preventable Maternal Mortality (EPMM)
- New Global Strategy for women's children's and adolescent's health
 - Survive, thrive, transform
- Launch of GFF as a financing platform for SRMNCAH



Coverage and quality matter

- Due to focused efforts, **facility-based births** are increasing globally
 - Higher proportions of avoidable maternal and perinatal morbidity and mortality occur in facilities
- Major roadblock: Quality of care



The lives of nearly 3 million babies and women could be saved each year with high coverage of quality care around birth and care for small and sick babies

Quality of care throughout the continuum

WHO envisions a world where *“every pregnant woman and newborn receives quality care throughout the pregnancy, childbirth and the postnatal period”*.

Prioritizes **person-centred health and well-being**:

- Reducing mortality and morbidity
- Providing respectful care that takes into account clients' values and preferences
- Optimizing service delivery within health systems

Positive pregnancy experience

- ✓ A healthy pregnancy for mother and baby (including preventing or treating risks, illness and death)
- ✓ Physical and sociocultural normality during pregnancy
- ✓ Effective transition to positive labour and birth
- ✓ Positive motherhood (including maternal self-esteem, competence and autonomy)

What is a WHO guideline?

- ❑ “A **WHO guideline** is any document, whatever its title, that contains WHO recommendations about health interventions, whether they be clinical, public health or policy interventions.”
- ❑ “A **recommendation** provides information about what policy-makers, health-care providers or patients should do. It implies a choice between different interventions that have an impact on health and that have ramifications for the use of resources.”

WHO recommendations on
antenatal care for a
positive pregnancy experience



WHO Antenatal Care Guidelines (2016)

Antenatal Care (ANC) is critical



Through timely and appropriate, evidence based actions related to health promotion, disease prevention, screening, and treatment

- ❑ Reduces complications from pregnancy and childbirth

- ❑ Reduces stillbirths and newborn deaths

- ❑ Integrated care delivery throughout pregnancy

ANC model – positive pregnancy experience

Overarching aim

To provide pregnant women with *respectful, individualized, person-centred care* at every contact, with implementation of effective **clinical practices** (interventions and tests), and provision of relevant and timely **information**, and psychosocial and emotional **support**, by *practitioners with good clinical and interpersonal skills* within a **well functioning health system.**

Most recent recommendations on routine ANC

Grouped under five areas: **49 recommendations**

- A. Nutritional interventions **(14)**
- B. Maternal and fetal assessment **(8)**
- C. Preventive measures **(5)**
- D. Interventions for common physiological symptoms **(6)**
- E. Health system interventions to improve the utilization and quality of ANC **(6)**

Routine ANC recommendations from other WHO guidelines **(10)**



WHO ANC model 2016

WHO FANC model	2016 WHO ANC model
<i>First trimester</i>	
Visit 1: 8-12 weeks	Contact 1: up to 12 weeks
<i>Second trimester</i>	
Visit 2: 24-26 weeks	Contact 2: 20 weeks Contact 3: 26 weeks
<i>Third trimester</i>	
Visit 3: 32 weeks	Contact 4: 30 weeks Contact 5: 34 weeks
Visit 4: 36-38 weeks	Contact 6: 36 weeks Contact 7: 38 weeks Contact 8: 40 weeks
Return for delivery at 41 weeks if not given birth.	

Contact versus visits

- ❑ The guideline uses the term '**contact**' - it implies an active connection between a pregnant woman and a health care provider that is not implicit with the word 'visit'.

- ❑ In terms of the operationalization of this recommendation, 'contact' can take place at the facility or at community level
 - be adapted to local context through community outreach and lay health worker programmes
 - **Midwife-led continuity-of-care models**, in which a known midwife or small group of known midwives supports a woman throughout the antenatal, intrapartum and postnatal continuum, are recommended for pregnant women in settings with well functioning midwifery programmes.

- ❑ Context-specific recommendations
 - Interventions (such as malaria, tuberculosis)
 - Health system (such as task shifting)

Early ultrasound

- In the new WHO ANC guideline, an ultrasound scan before 24 weeks' gestation is recommended for all pregnant women to:
 - ❖ estimate gestational age
 - ❖ detect fetal anomalies and multiple pregnancies
 - ❖ and enhance the maternal pregnancy experience

- An ultrasound scan after 24 weeks' gestation (late ultrasound) is not recommended for pregnant women who have had an early ultrasound scan.
 - Stakeholders should consider offering a late ultrasound scan to pregnant women who have not had an early ultrasound scan.

- The implementation and impact of this recommendation on health outcomes, facility utilization, and equity should be monitored at the health service, regional, and country level
 - based on clearly defined criteria and indicators associated with locally agreed and appropriate targets.

Effective implementation of ANC requires:

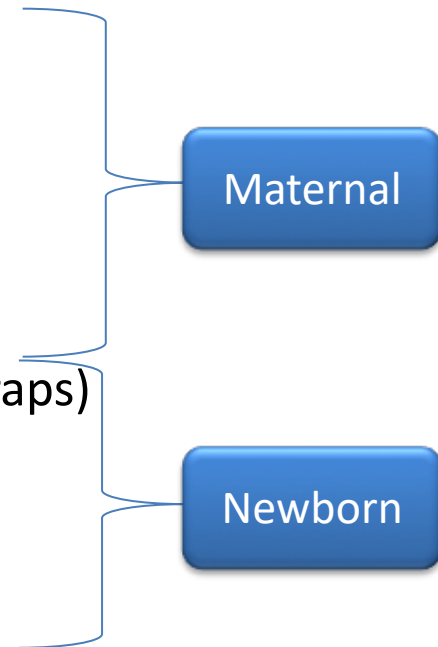
- Health systems approach and strengthening
 - Continuity of care
 - Integrated service delivery
 - Improved communication with, and support for women
 - Availability of supplies and commodities
 - Empowered health care providers
 - Recruitment and retention of staff in rural and remote areas
 - Capacity building



WHO recommendations on interventions to improve preterm birth outcomes (2015)

Guideline scope – population and interventions

- Population
 - pregnant women at **imminent risk** of preterm birth (<37 weeks gestation) and preterm babies immediately after birth in all settings
- Interventions
 - Antenatal corticosteroids
 - Tocolytics
 - Magnesium sulfate for fetal neuroprotection
 - Antibiotics for PTL with intact/ruptured membranes
 - Optimal mode of birth
 - Thermal care (Kangaroo Mother Care (KMC), plastic wraps)
 - Continuous Positive Airway Pressure (CPAP)
 - Surfactant
 - Oxygen therapy



Guideline scope – critical outcomes

Maternal

- Birth prior to 28, 32, 34 or 37 weeks of gestation
- Pregnancy prolongation (interval between randomization into the study and birth, < 48 hours or < 7 days)
- Severe maternal morbidity or death
- Maternal sepsis (chorioamnionitis, puerperal sepsis)
- Severe adverse effects of treatment

Newborn

- Neonatal death
- Fetal death or stillbirth
- Perinatal death (fetal or early neonatal death)
- Severe neonatal morbidity
- Birth weight (mean; low or very low)
- Infant or child death
- Long-term morbidity

Antenatal corticosteroids (ACS) for preterm birth (PTB)

- ACS therapy is recommended for women at risk of preterm birth from 24 weeks to 34 weeks of gestation when the following conditions are met:
 - Gestational Age (GA) assessment can be accurately undertaken;
 - preterm birth is considered imminent;
 - there is no clinical evidence of maternal infection;
 - adequate childbirth care is available (*including the capacity to recognize and safely manage preterm labour and birth*);
 - the preterm newborn can receive adequate care if needed (*including resuscitation, thermal care, feeding support, infection treatment and safe oxygen use*).

Strong recommendation based on moderate-quality evidence for newborn outcomes and low-quality evidence for maternal outcomes

ACS for preterm birth (2)

❑ **Recommended** for women:

- pre-term birth (PTB) is imminent within 7 days of starting treatment, including first 24 hours.
- Single or multiple birth
- Preterm premature rupture of membranes (PPROM) and no clinical signs of infection
- Hypertensive disorders in pregnancy
- Women with growth restricted fetus
- women with pre-gestational and gestational diabetes (accompanied by interventions to optimize maternal blood glucose control)

❑ **Not recommended** for women:

- women with chorioamnionitis who are likely to deliver preterm
 - women undergoing planned caesarean section at late preterm gestations (34–36+6 weeks)
- Intramuscular (IM) dexamethasone or betamethasone (total 24 mg)

Tocolytics for preterm birth

- Tocolytic treatments (acute and maintenance treatments) are not recommended for women at risk of imminent preterm birth for the purpose of improving newborn outcomes. (*Conditional recommendation, very low quality-evidence*)
 - Acute use to delay birth (up to 48 hours) can be considered for in-utero fetal transfer to appropriate neonatal care setting
 - Nifedipine is the preferred agent in such context
 - Betamimetics have a higher risk of adverse drug reactions and should not be used
 - Further trials needed on whether tocolytics can actually improve substantive perinatal outcomes are a research priority

Magnesium sulfate for neuroprotection

- Magnesium sulfate is recommended for women at risk of imminent preterm birth before 32 weeks of gestation for prevention of cerebral palsy in the infant and child. (*Strong recommendation, moderate quality-evidence*)
 - Should only be given if preterm birth is likely within the next 24 hours
 - Insufficient evidence to recommend one dosing regimen over the other. Tested regimens include:
 - IV 4 g, then 1 g/hour until delivery or for 24 hours, whichever came first;
 - IV 4 g over 30 minutes or IV 4 g bolus as single dose;
 - IV 6 g over 20-30 minutes, followed by IV maintenance of 2 g/hour.

Antibiotics for women with PPROM

- Antibiotic administration is recommended for women with PPROM
 - No antibiotic without confirming the diagnosis of PPROM.
 - Monitor women for signs of clinical chorioamnionitis
- Erythromycin is recommended as the antibiotic of choice for prophylaxis in women with PPROM (*Conditional recommendation, moderate quality-evidence*)
 - Oral erythromycin 250 mg four times a day for 10 days (or until delivery)
- Combination of amoxicillin and clavulanic acid (“co-amoxiclav”) is not recommended

Kangaroo Mother Care (KMC)

- Kangaroo mother care is recommended for the routine care of newborns weighing 2000 g or less at birth, and should be initiated in healthcare facilities as soon as the newborns are clinically stable.
- As close to continuous KMC as possible
- Intermittent Kangaroo mother care if continuous KMC is not possible

Respiratory support: CPAP, Surfactant, Oxygen

- **Continuous positive airway pressure (CPAP)** therapy is recommended for the treatment of preterm newborns with respiratory distress syndrome and should be started as soon as the diagnosis is made.
- **Surfactant replacement** therapy is recommended for intubated and ventilated newborns with respiratory distress syndrome.
- During ventilation of preterm babies born at or before 32 weeks of gestation, it is recommended to start **oxygen therapy with 30% oxygen or air** (if blended oxygen is not available), rather than with 100% oxygen.

Caution: respiratory support



WHO guidelines on postnatal care of the mother and the newborn (2013)

Routine postnatal care: content

- ❑ **Monitoring and assessment** of maternal and neonatal well-being
- ❑ Support for **good caregiving practices**
 - Warmth, hygiene, early initiation and exclusive breastfeeding, responsive care and stimulation
- ❑ **Prevention, detection and treatment** of complications
 - Maternal: postpartum hemorrhage (PPH), hypertension, infection
 - Neonatal: asphyxia, prematurity, sepsis
- Providing **information and counselling**
 - Nutrition, family planning, psychological support

Twelve recommendations

- Timing of discharge from a health facility
- Number and timing of postnatal contacts
- Home visits for postnatal care

- ❑ Assessment of the baby
- ❑ Exclusive breastfeeding
- ❑ Cord care
- ❑ Other postnatal care for the newborn

- ❑ Assessment of the mother
- ❑ Counselling
- ❑ Iron and folic acid supplementation
- ❑ Prophylactic antibiotics
- ❑ Psychological support

Timing of discharge and follow up care

- After an uncomplicated vaginal birth in a health facility, healthy **mothers and newborns should receive care** in the facilities for **at least 24 h after birth**
 - For the newborn, this includes an immediate assessment at birth, a full clinical examination around 1 h after birth and before discharge
 - If birth is at home, the first postnatal contact should be as early as possible within 24 h of birth

- **At least three additional postnatal contacts** are recommended for all mothers and newborns, on **day 3 (48-72 h)**, between **days 7-14** after birth, and **6 weeks after birth**

Timing of discharge and follow up care

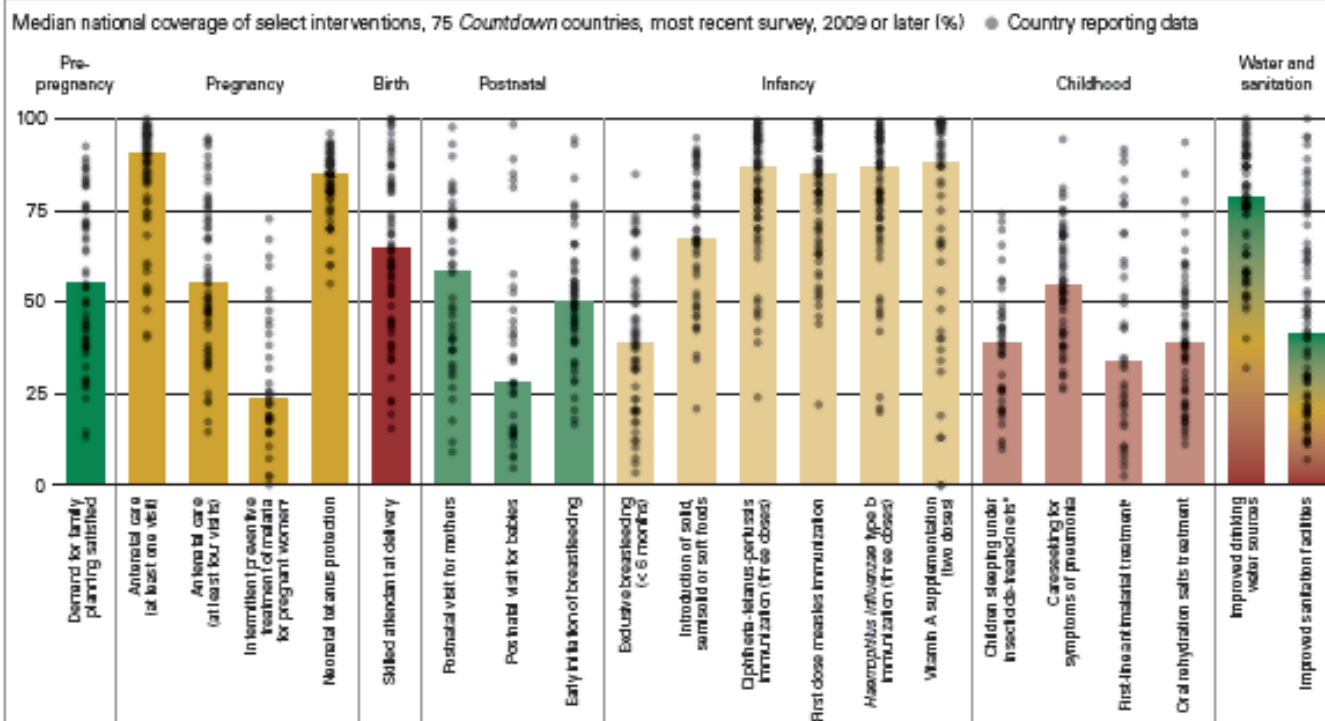
- ❑ **Home visits** are recommended for care of the mother and newborn in the first week after birth
 - By midwives, other skilled providers , or well-trained and supervised community health workers (CHWs)
- ❑ **Clean, dry cord care** is recommended for newborns born in health facilities, and at home in low neonatal mortality settings
- ❑ Daily chlorhexidine application to the umbilical cord stump during the first week of life is recommended for newborns who are **born at home** in settings with **high neonatal mortality** (≥ 30 neonatal deaths per 1000 live births)
- ❑ **Bathing should be delayed** to after 24 hours of birth.

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From guidelines to policies and practice

FIGURE 2

Coverage of interventions varies across the continuum of care



Note: Figure excludes data on Rwanda for 2014–15.

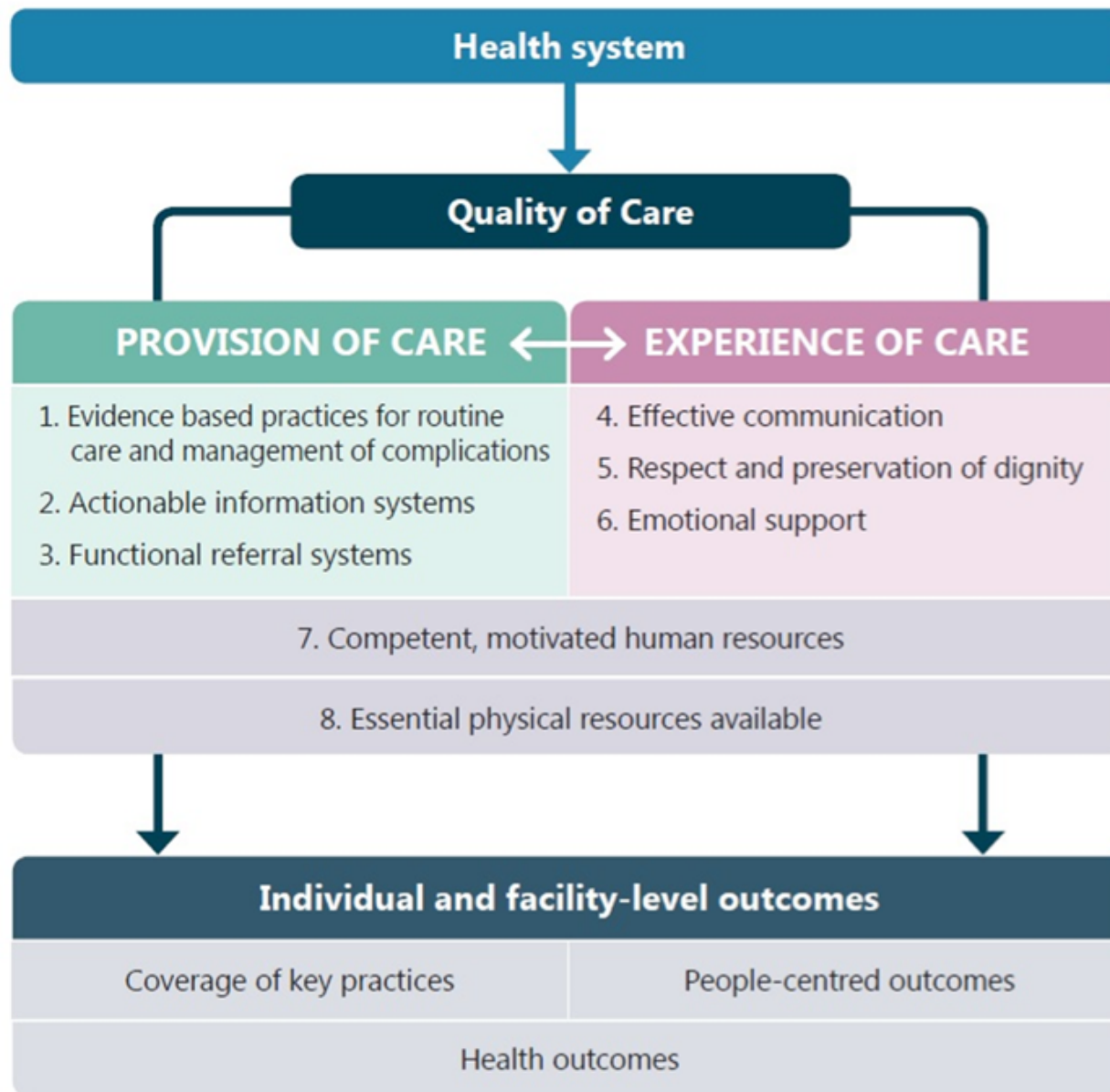
a. Analysis is restricted to countries where at least 75% of the population is at risk of malaria and where a substantial proportion (50% or more) of malaria cases is due to *Plasmodium falciparum* ($n = 44$) or where 50–74% of the population is at risk of malaria and where a substantial proportion (50% or more) of malaria cases is due to *P. falciparum* ($n = 8$).

Source: Immunization rates, World Health Organization (WHO) and United Nations Children's Fund (UNICEF); postnatal visit for mothers and postnatal visits for babies, Saving Newborn Lives analysis of Demographic and Health Surveys and Multiple Indicator Cluster Surveys; improved water and sanitation, WHO and UNICEF Joint Monitoring Programme for Water Supply and Sanitation; all other indicators, UNICEF global database, July 2015, based on Demographic and Health Surveys, Multiple Indicator Cluster Surveys and other national surveys.

Programme implications of new WHO guidelines

- ❑ Review and update national policies and guidelines
- ❑ Review and update national standards and practice tools for improving quality of care
- ❑ Facilitate a continuum between facility- and home-based care
- ❑ Ensure adequate infrastructure
- ❑ Ensure adequate human resources with relevant skills mix
- ❑ Update advocacy and communication materials
- ❑ Monitor adherence to recommendations

WHO conceptual framework for QoC



Quality of care implementation framework

Establish national policy, strategy and structures

Build a broad coalition of stakeholders

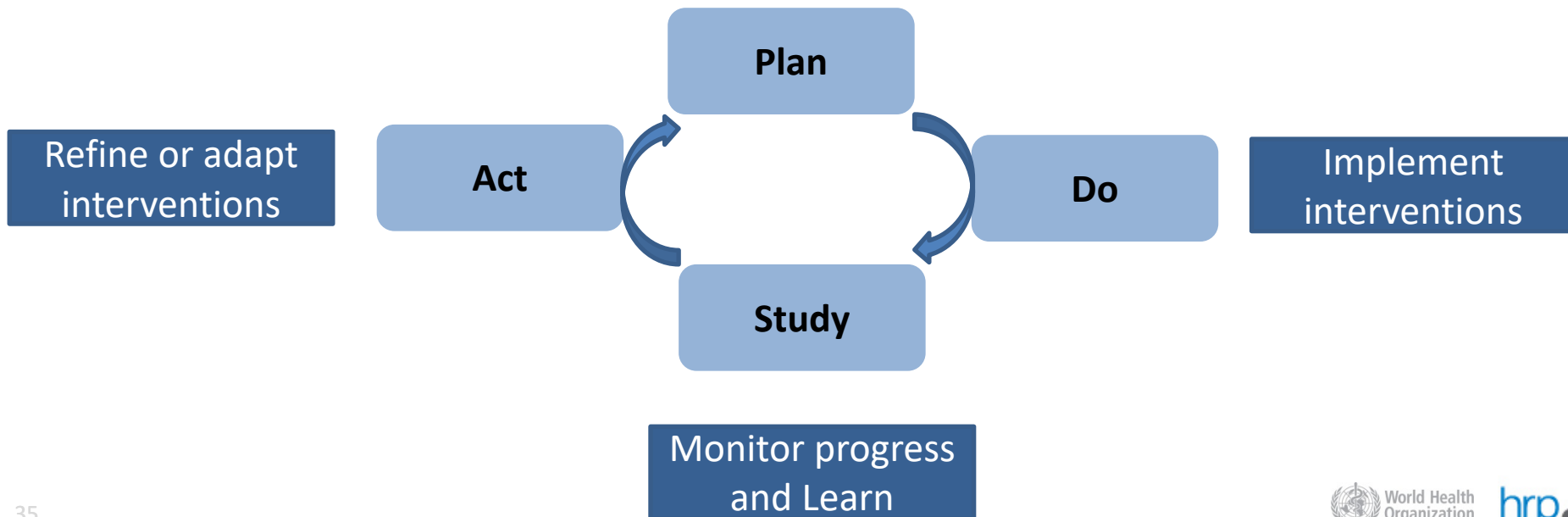
Conduct a landscape analysis and review data from health facilities

Develop an operational plan and assign responsibility

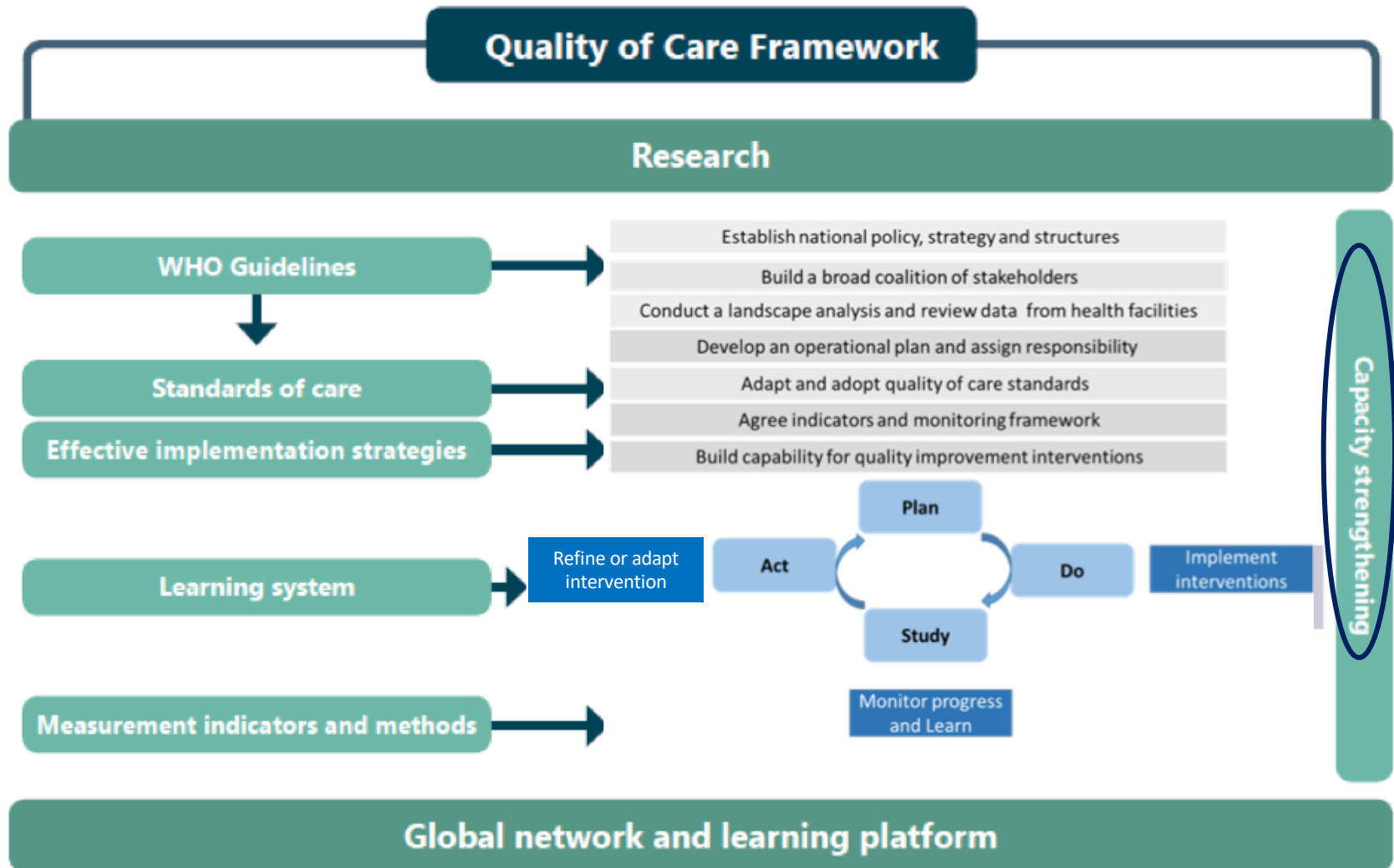
Adapt and adopt quality of care standards

Agree indicators and monitoring framework

Build capability for quality improvement interventions



Tout mettre en commun



HOW to strengthen the quality of the provision of care in EmONC facilities?

Addressing the 'planning issues'

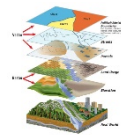
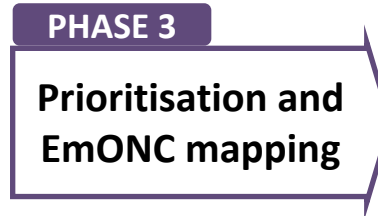
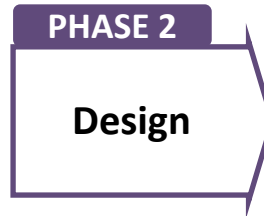
Addressing the 'implementation issue'

Situation Analysis
(Baseline Information)

PLANNING of national network of EmONC facilities

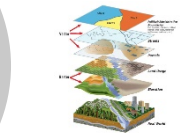
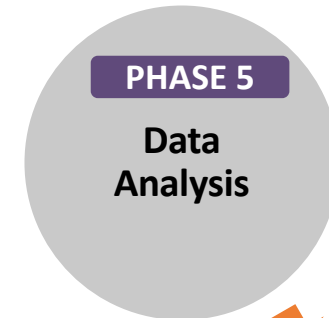
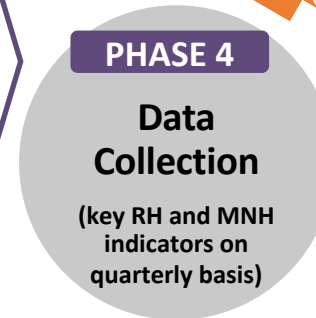
MONITORING and QUALITY IMPROVEMENT (PDSA)

- National Health Plan, RMNCAH plans/strategies
- EmONC Need Assessments (including 'rapid' Need Assessments)
- HMIS
- Surveys: DHS, SARA, etc



GIS/AccessMod

dhis2



GIS/AccessMod

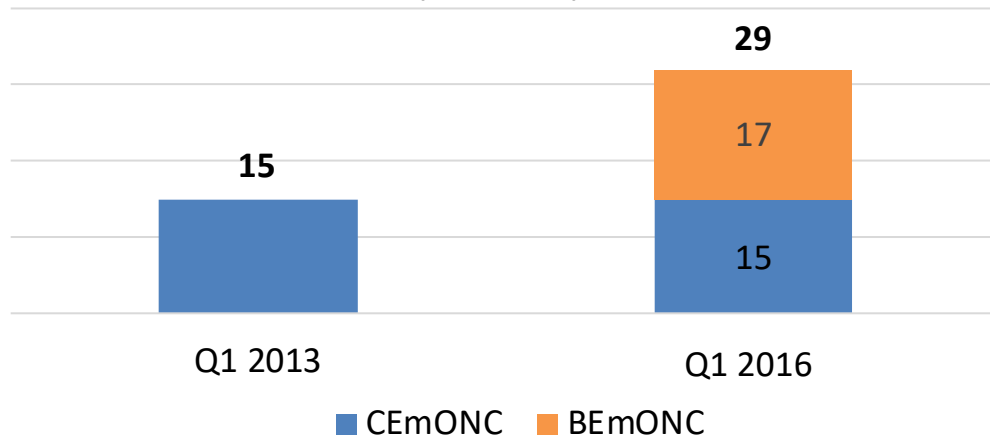


Regular review of the performance of the MNH monitoring and quality improvement system

Results from the implementation of the approach in Togo

(since 2013)

Number of functioning EmONC facilities in Togo
(24h/7d)



- Missions and staffing of a BEmONC facilities defined (national BEmONC standard)
- 65 additional midwives deployed in BEmONC facilities
- Regular monitoring of key RH and MNH indicators (DHIS2) and 'PDSA' cycle at facility and sub-national levels

Proportion of EmONC facilities with Magnesium Sulfate



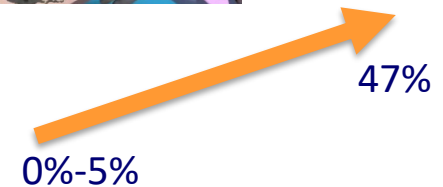
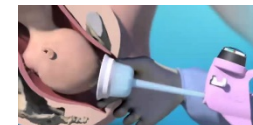
38 2014 2016

Proportion of EmONC facilities with intrauterine device (IUD)



2014 2016

Proportion of EmONC facilities with vacuum extractions performed



2014 2016

Lessons learned from the implementation of the approach in Haiti, Togo, Madagascar, Guinea, Burundi and Benin

- ❑ **EmONC facility network** – phased approach starting with limited number of facilities (in line with the international recommended standard) while maximizing the population coverage (eg. using GIS/AccessMod)
- ❑ **Monitoring of a limited amount of data** (one page of data) to be defined by providers and stakeholders in a national workshop (indicators)
- ❑ **Pro active and supportive collection, analysis of data** in facilities ('support teams' at subnational levels) and implementation of responses
- ❑ **Quality Improvement process and concepts of Implementation science** ('bottom-up approach', empowerment of facility staff', right to fail, mentorship program, etc) leveraged to improve quality of care and organization of services
- ❑ Close monitoring of the program (in particular the quality improvement)
- ❑ **Importance of national coordination mechanisms in SRMNCAH** (eg. H6) for national scope of the process.

Appendix

EmONC Signal Functions – 24h/7d

1. Administer parenteral antibiotics
2. Administer uterotonic drugs
3. Administer parenteral anticonvulsants
4. Manually remove the placenta
5. Remove retained products
6. Perform assisted vaginal delivery
7. Perform basic neonatal resuscitation (with bag and mask)

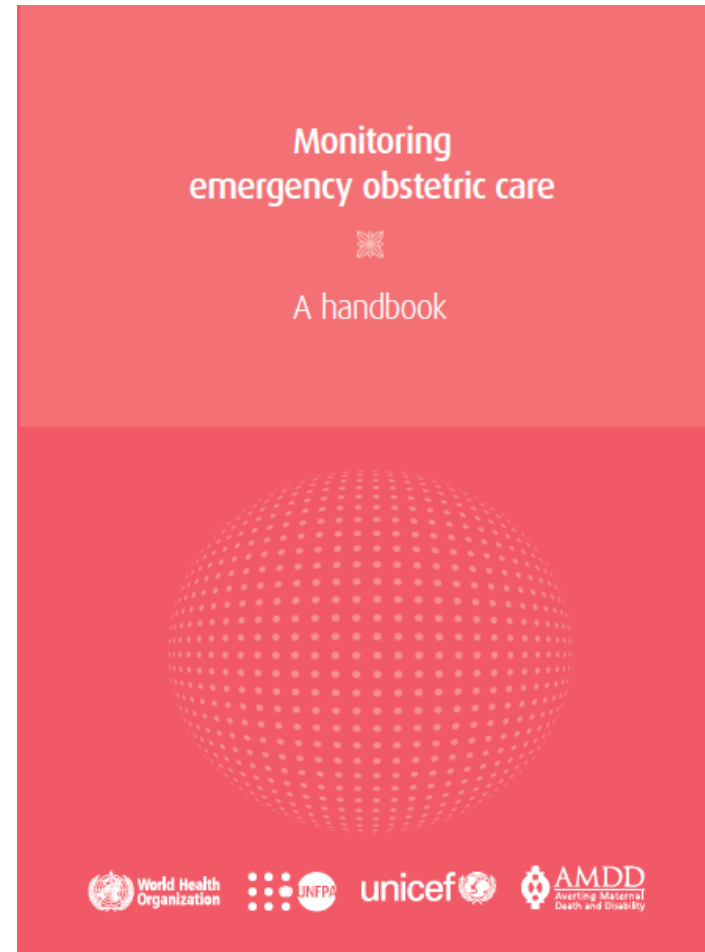
**Basic
EmONC**

8. Blood transfusion
9. Cesarean delivery

**Comprehensive
EmONC**

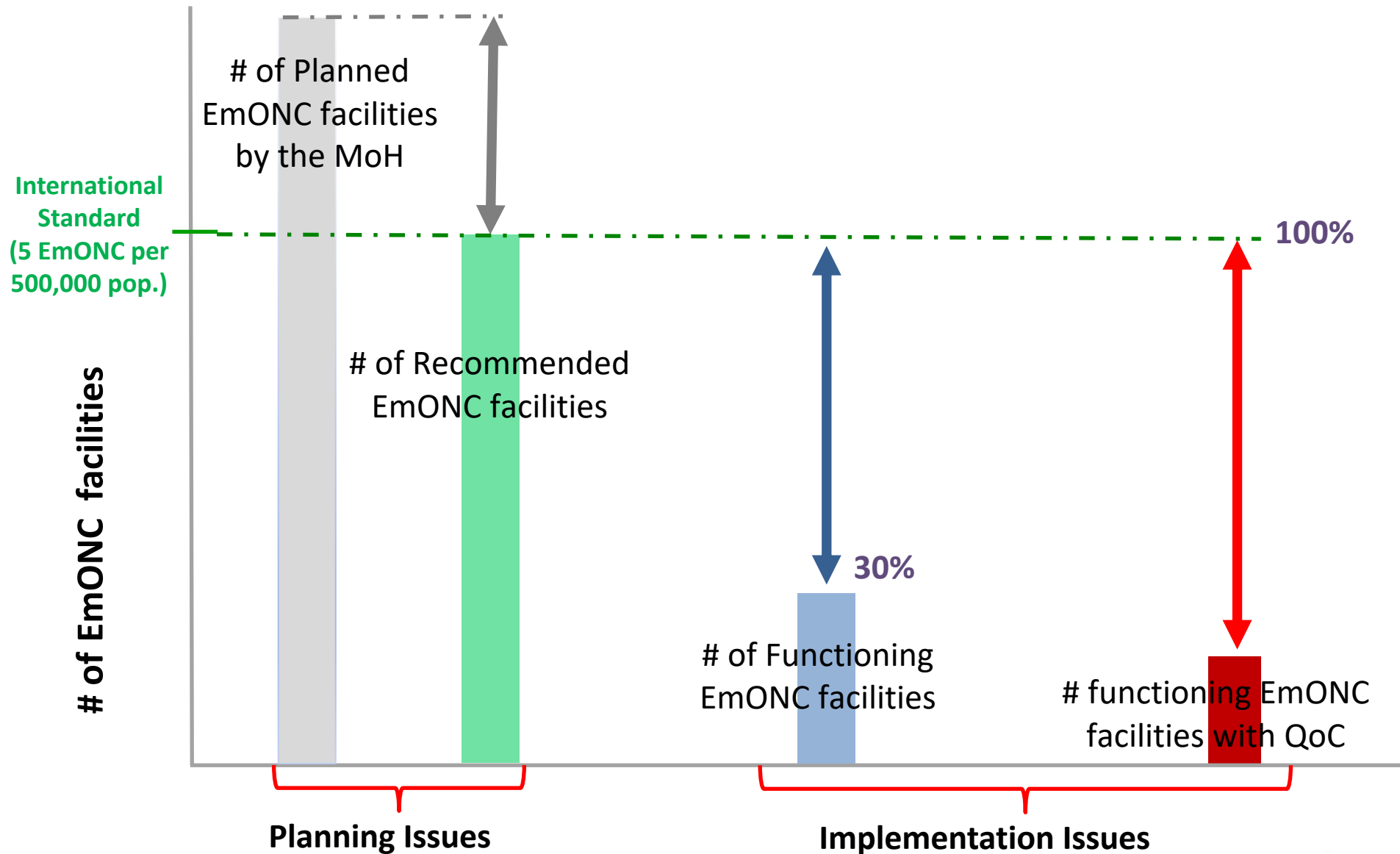
Global Guidance on EmONC Indicators

- ❑ 5 EmONC facilities per 500,000 population (minimum recommendation)
- ❑ At least one of these provides C-EmONC level care; others might be B-EmONCs or additional C-EmONCs
- ❑ Functioning EmONC defined by functioning 24h/7d and performing all signal functions in the last



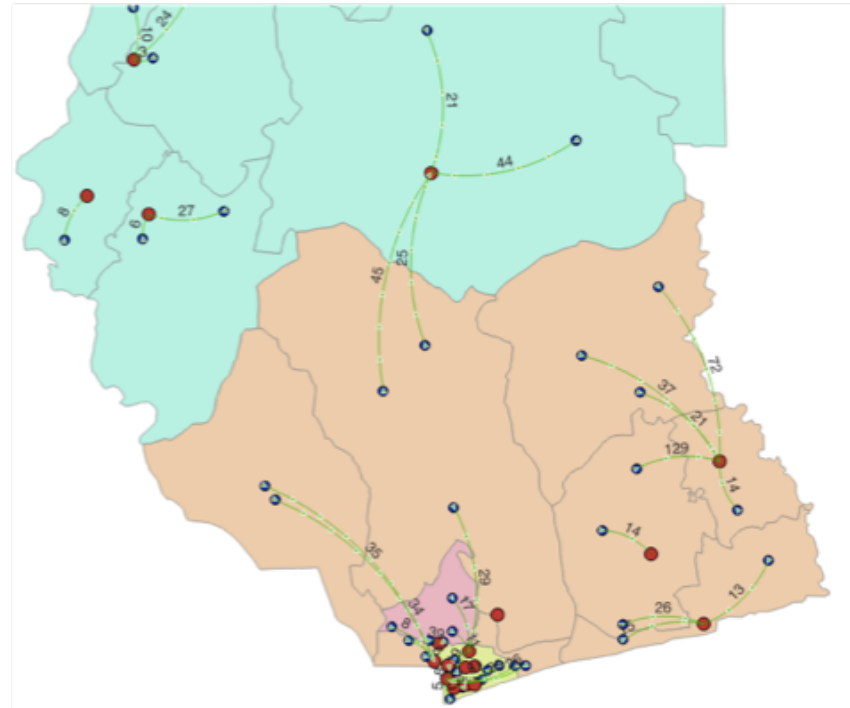
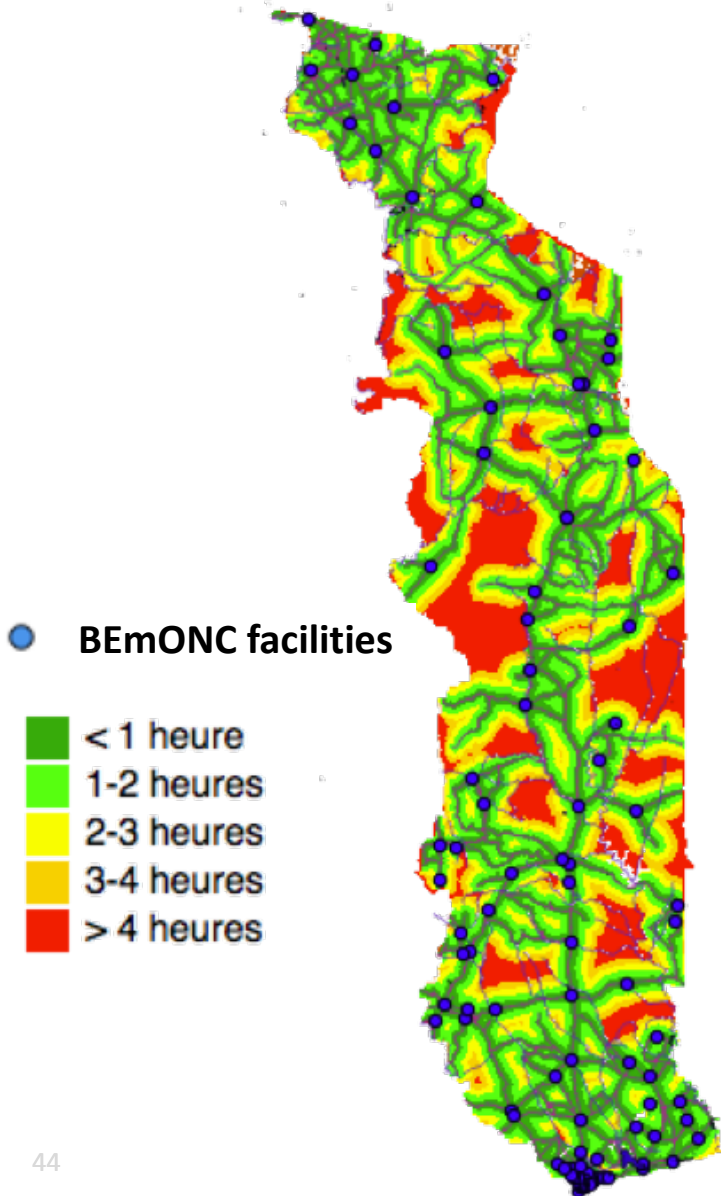
<http://www.who.int/reproductivehealth/publications/monitoring/9789241547734/en/>

Situation Analysis: EmONC availability in high burden countries



Details on prioritization of EmONC facilities (Phase 3)

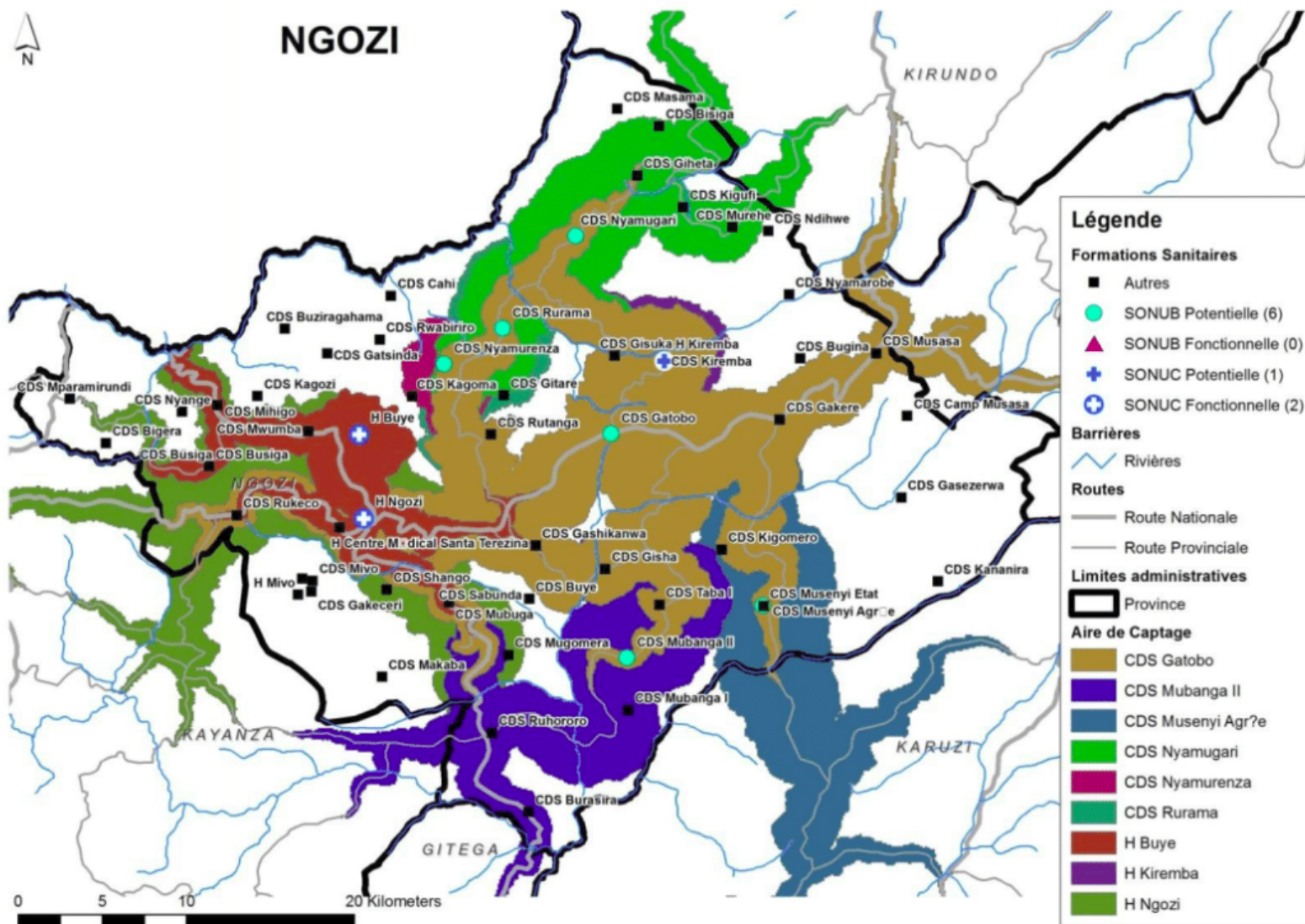
Geographic accessibility analysis – Example of Togo (2015)



B. Temps de voyage (référence) modélisé entre SONUB (points bleus) et SONUC le plus proche (point rouge)

Details on prioritization of EmONC facilities (Phase 3)

Coverage of population at 120min (catchment areas of facilities) – Example of Burundi (2017)



National EmONC 'monitoring sheet' (one pager)

EmONC Signal Functions*

HR* (midwives),
Supplies*,
infrastr., FP

Ministry of Health
Quarterly monitoring of maternal and newborn health service in EmONC facilities

Name of the health facility:		ID of health facility:		Population (catchment area):										
Region:	Code of the region:	Date of data collection:		Quarter:	Year:									
1	Have the following signal functions been performed in the considered quarter (yes or no)?			Yes	No*	2	Availability of other MNH services (yes or no)		Yes	No*				
2.1	Administer general anesthesia					2.1	Maternity open 24h/24h and 7d/7d							
2.2	Administer oxytocin drugs (ayotocin)					2.2	Systematic use of partograph							
2.3	Administer general anesthesia					2.3	MNTS							
2.4	Manually remove the placenta					2.4	Management of breech presentation							
2.5	Remove retained products (manual vacuum extraction, dilation, curettage)					2.5	National package for clinical management of GDV							
2.6	Perform assisted vaginal delivery (vacuum extraction)					2.6	Vaccination BCG, Polio 0 for newborn							
2.7	Perform basic neonatal resuscitation (with bag and mask)					2.7	Service for PMTCT/Syphilis/HIV							
2.8	Perform Caesarean					2.8	Service for Mangrove Mother Care (MAMC)							
2.9	Perform blood transfusion					2.9	Number of newborns with post-natal visit within 48h							
<p>1. Problem of availability of human resources: insufficient (or total absence) of skilled birth attendant;</p> <p>2. Problem of education: health provider not trained to execute the function;</p> <p>3. Problem of equipment / material / medicines not available, or not usable;</p> <p>4. Problem of protocols/procedures: the national protocols or the type of health facility does not allow to execute the function;</p> <p>5. No cases, no cases during the quarter requiring to execute the function;</p> <p>6. Others (to specify at the back of the sheet)</p>														
3	Availability of EmONC essential medicines during in the considered quarter (yes or No)													
4	Availability of key human resources for EmONC (specify the number or Not Available - "NA")													
5	At the visit, the health facility has (please circle)		Water	Yes	No	Electricity	Yes	No	Phone	Yes	No	Available ambulance	Yes	No
6	Other Reproductive Health services		Nbr of cases		6		Other Reproductive Health services		Nbr of cases					
6.1	Nbr of women who gave birth leaving the health facility with contraception method				6.1		Injections							
6.2	IUD				6.2		Post-abortion care							
7	Number of births in the health facility in the quarter		Total	Vaginal without vacuum extractor	Vaginal with vacuum extractor	Cesarean section	Referred							
8	Number of direct obstetric complications		Number of patients	Number of deaths	Number of deaths	Number of deaths	Number of deaths	Number of deaths	Number of deaths	Number of deaths				
8.1	Hemorrhage (acute postpartum)		Managed / referred											
8.2	Hemorrhage (late postpartum)													
8.3	Eclampsia/epilepsy													
8.4	Severe pre-eclampsia or eclampsia													
8.5	Post-partum sepsis													
8.6	Prolonged labor / Obstetric labor													
8.7	Complications of abortion													
8.8	Other direct obstetric complications													
9	Number of indirect obstetric complications													
10	Maternal deaths from unknown causes													
11	Number of neonatal complications													
11.1	Infections													
11.2	Respiratory infections													
11.3	Low birth weight (< 2000g)													
11.4	Neonatal resuscitation													
11.5	Very early neonatal deaths (≤ 24h) et < 2000g													
11.6	Stillbirths (> 2000g)													
12.1	Supervision of peripheral health facilities in reproductive health - yes, no		12.2	Community sensitization in reproductive health - yes, no		12.3								

Done by: _____ Approved by: _____ Validation date: _____

MNH service availability (including KMC, PMTCT, BCG/Polio vaccination for newborn, # newborns with post-natal visit)



Direct Obstetric Complications* (# patients managed/referred, # of deaths, # of deaths notified, # of deaths reviewed) and indirect complications

Neonatal complications* (# patients managed/referred, # of deaths, # of deaths notified, # of deaths reviewed)