Threatened Preterm Birth Care

A Global Curriculum

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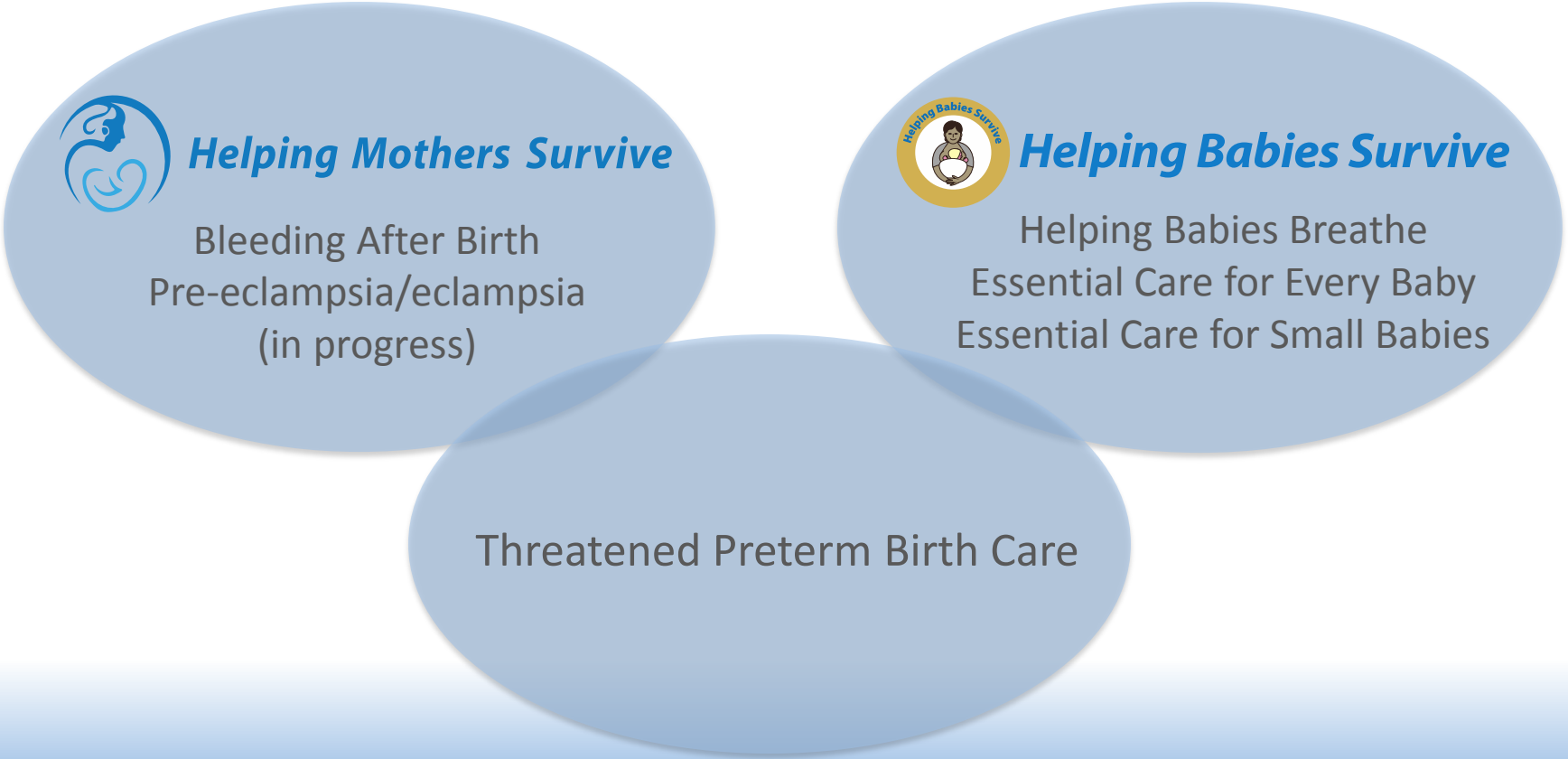
Maternal and Child Survival Program / Jhpiego, USA

+ >30 external reviewers

Helping Mothers and Babies Survive: Threatened PTB Care



Training Materials

Helping Mothers and Babies Survive

Threatened Preterm Birth Care

Facilitator Flip Chart

Helping Mothers and Babies Survive

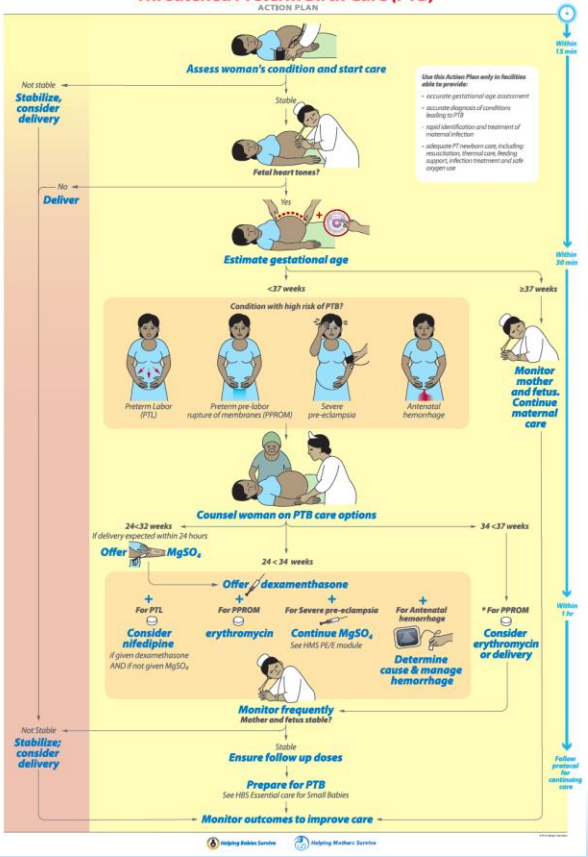
Threatened Preterm Birth Care

Provider Guide

Helping Mothers and Babies Survive

Threatened Preterm Birth Care (PTB)

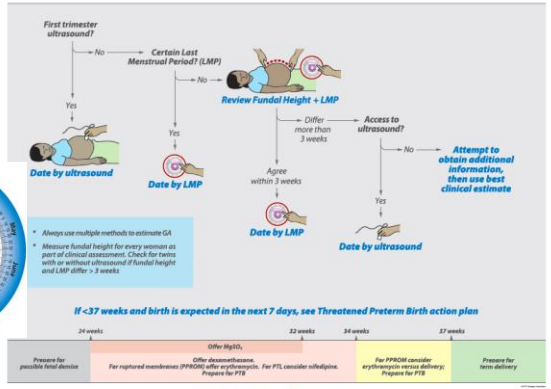
ACTION PLAN



Helping Mothers and Babies Survive

Estimate Gestational Age (GA) to manage preterm birth

JOB AID

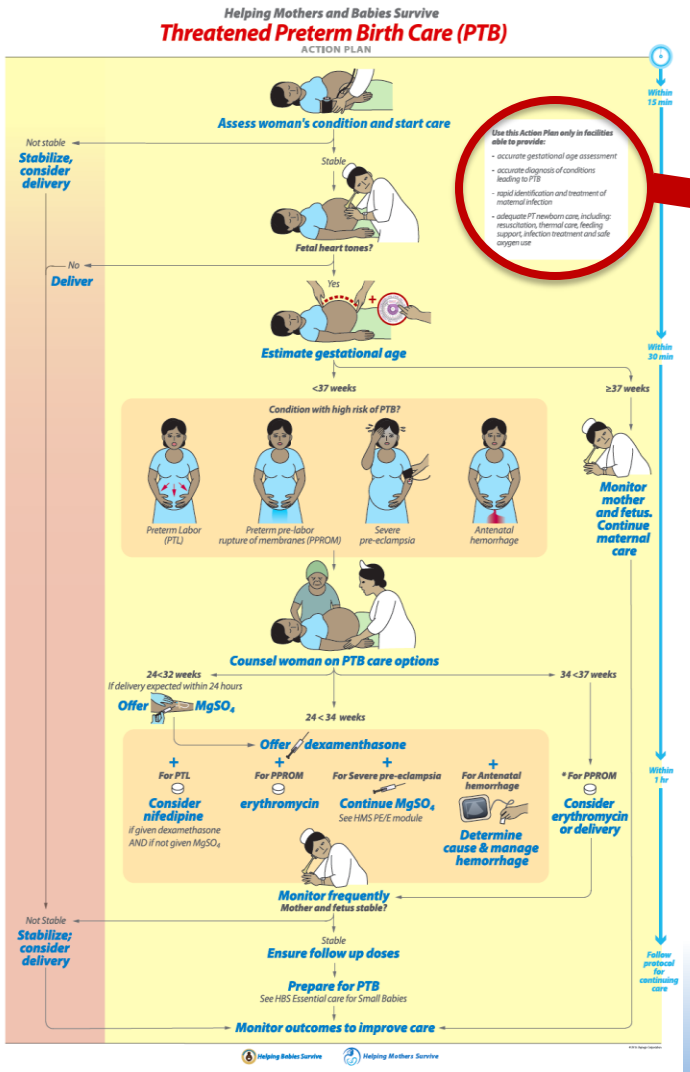


Threatened Preterm Birth Care - Medication Information

	Eligibility	Benefits Side effects and Risks	Regimen
Dexamethasone for lung maturity	• **High confidence GA <34 weeks** • High confidence likely to deliver in 7 days • No suspicion of maternal sepsis or chorioamnionitis • Advanced preterm postnatal care is available: resuscitation, thermal care, feeding support, infection treatment and safe oxygen use	Can reduce death in preterm babies by 30% by: • Maturing fetal lungs • Protecting fetal intestines and blood vessels in the brain ***May increase risk of:*** • Maternal sepsis • Perinatal mortality in infants born at term	**24 mg IM in divided doses** Recommended: 12 mg IM every 12 hrs x 2
Repeat Dose	• It has been >7 days since the first dose • GA is still <34 weeks • There is a high risk of birth within 7 days based on a new clinical assessment • Patient has only received 1 prior course	• Benefits disappear after 7 days, repeat dose may restore • More than 2 courses can be harmful to the fetus	May repeat 24 mg IM in divided doses ONE time if all eligibility criteria have been met
Magnesium Sulfate for neuroprotection	• **Viability <32 weeks GA** • High risk of birth in the next 24 hours • No known maternal cardiac problems or myasthenia gravis • Do not give maintenance doses to women with impaired renal functioning *Repeat dose not recommended for neuroprotection. If patient has severe pre-eclampsia continue $MgSO_4$ for 24 hours after birth or last seizure, whichever is later.*	• Decreases the risk of cerebral palsy and motor major dysfunction ***Common side effects:*** • Sweating • Flushing and feeling of warmth • Headache • Nausea • Slight decrease in fetal heart rate ***Risks:*** • Respiratory or cardiac arrest related to magnesium toxicity (very rare)	**Loading dose:** • 4 g 20% solution IV loading dose over 10-15 minutes • 10 g IM 50% solution (5g in each buttock) **Maintenance Dose:** • 5 g 50% solution IM in alternating buttocks every 4 hours x 24hrs or birth, whichever occurs first **Hold if:** • Respirations <16/minute • Patella reflex absent • Urinary output <120mL over 4 hours
Nifedipine to slow or stop contractions and delay birth 24-48 hours	• **High confidence GA <34 weeks** • In preterm labor • Has been given dexamethasone • Is not being given MgSO4 • No known cardiac problems • Not in active labor	• May delay birth by 24-48 hours to get the benefit of dexamethasone or to transport patient ***Common Side Effects:*** • Nausea, Headache, Flushing • Heart palpitations, Dizziness ***Risks:*** • Severe hypotension • Shortness of breath	**Loading Dose:** 20 mg PO Standard release **Maintenance Dose:** 10-20 mg every 4-8 hours for up to 48 hours Do not exceed 180 mg in 24 hours
Erythromycin for PPROM to prevent infection and delay birth	• **GA <37 weeks (deliver by 37 weeks)** • Ruptured Membranes • No known allergy to erythromycin *Monitor closely and change to treatment protocol if signs of infection appear*	• Helps prevent infection which also reduces prematurity related problems for baby • Delays delivery • Diarrhea, Nausea, Vomiting • Risk of allergic reaction	**250 mg orally 4x/day for 10 days** Stop antibiotics after vaginal birth *If erythromycin unavailable use a penicillin.* *Do NOT use co-amoxiclav/augmentin due to increased rates of necrotizing enterocolitis*

*Never delay delivery for medication if delivery is necessary for the safety of the mother or fetus

Helping Babies Survive | Helping Mothers Survive

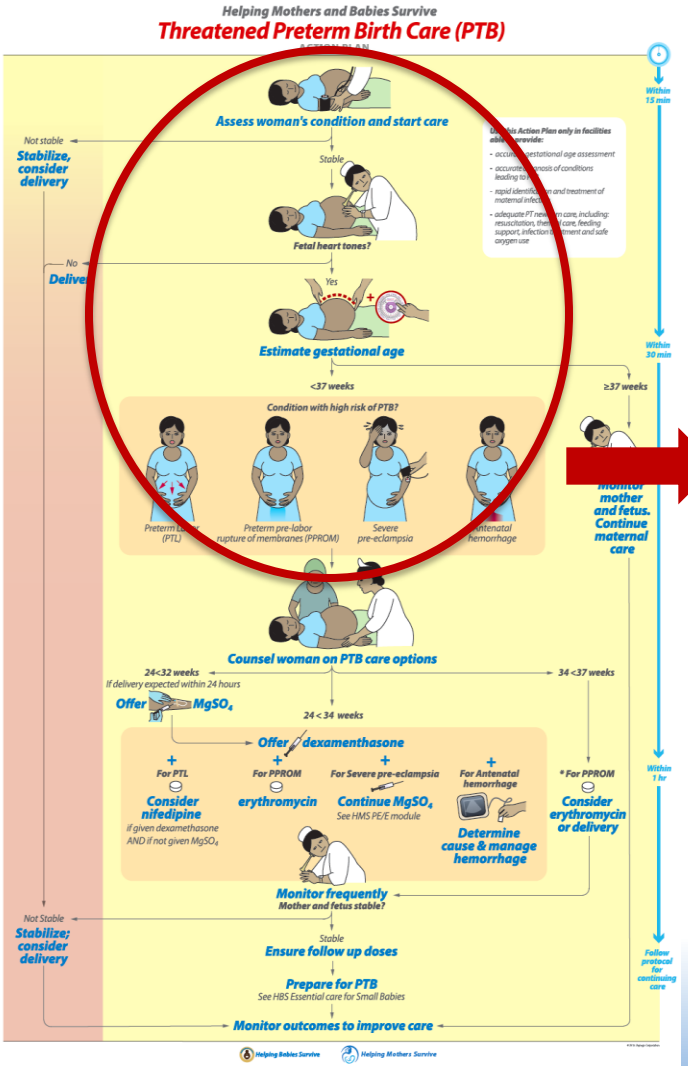


Criteria for Use of Action Plan

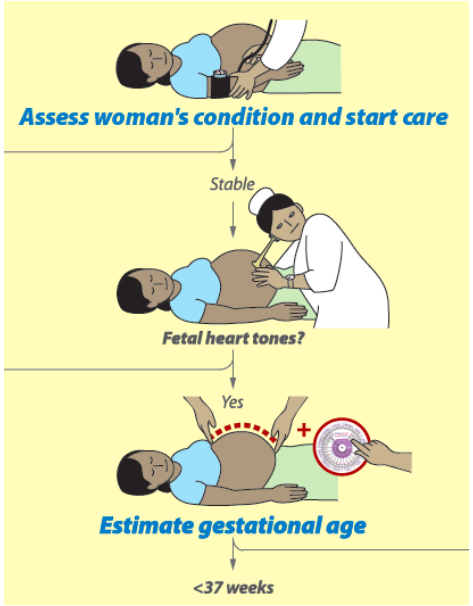
Use this action plan only in facilities able to provide:

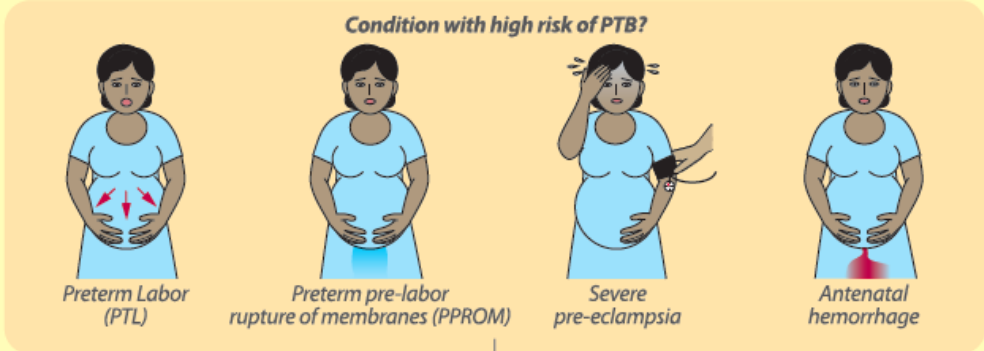
- Accurate gestational age assessment
- Accurate diagnosis of conditions leading to PTB
- Rapid identification and treatment of maternal infection
- Adequate PT newborn care, including:
  - Resuscitation
  - Thermal care
  - Feeding support
  - Infection treatment
  - Safe oxygen use

Why?...Safe use of Antenatal Corticosteroids

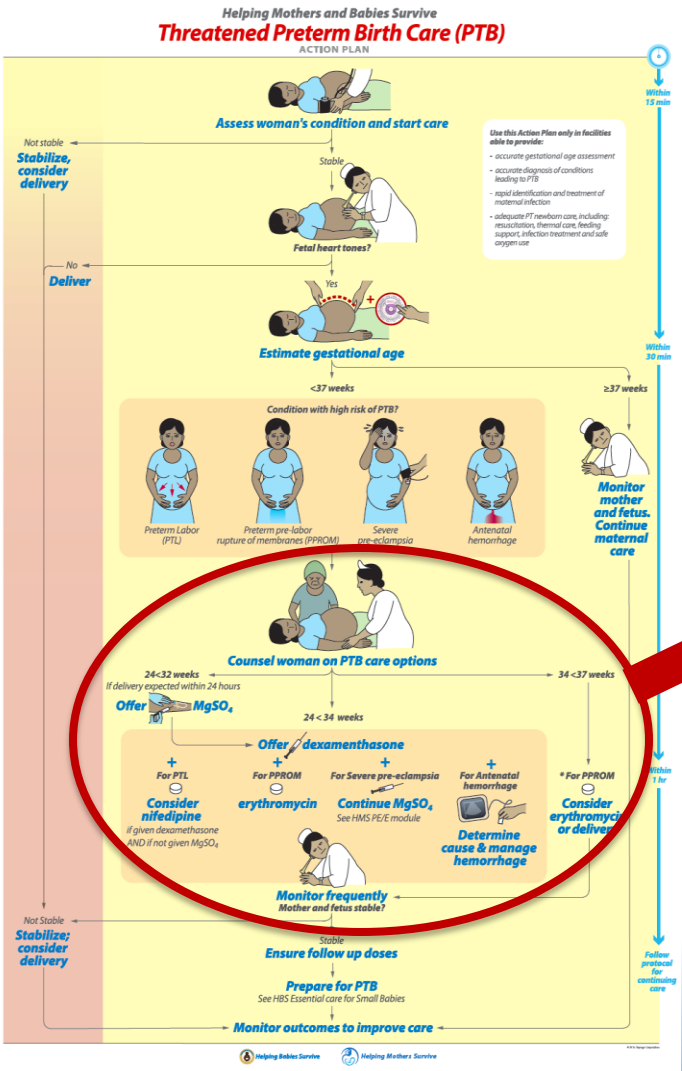


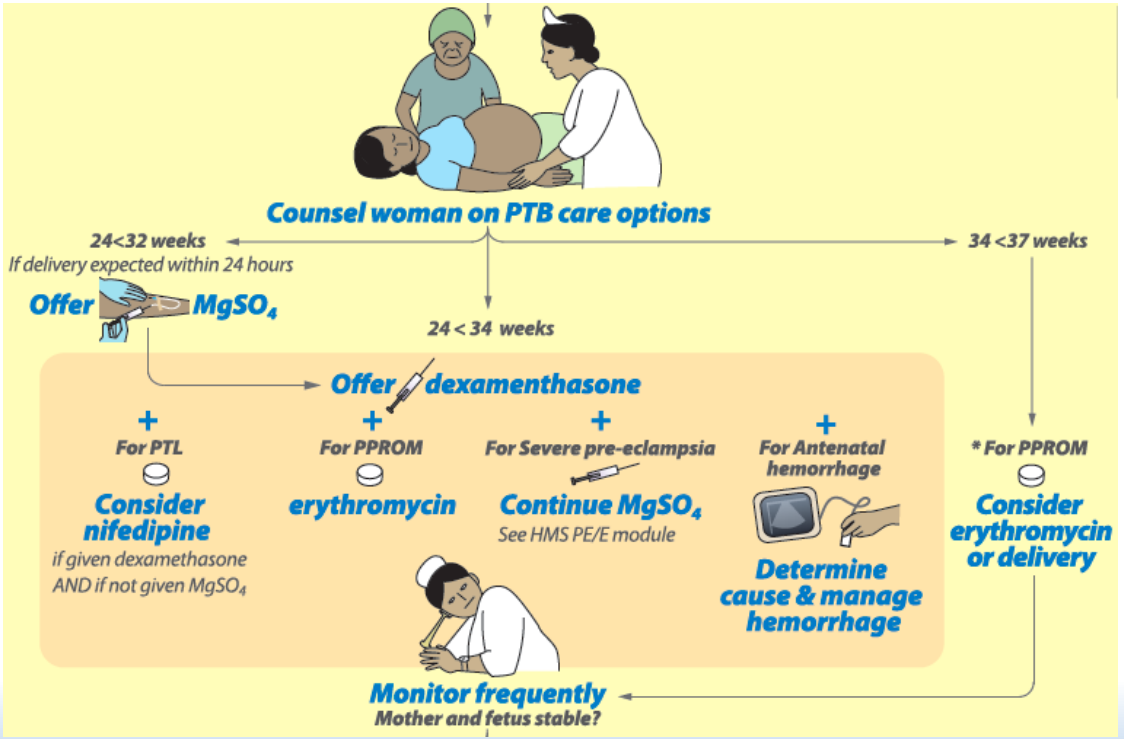
Assess: mom, baby, GA, condition leading to PTB

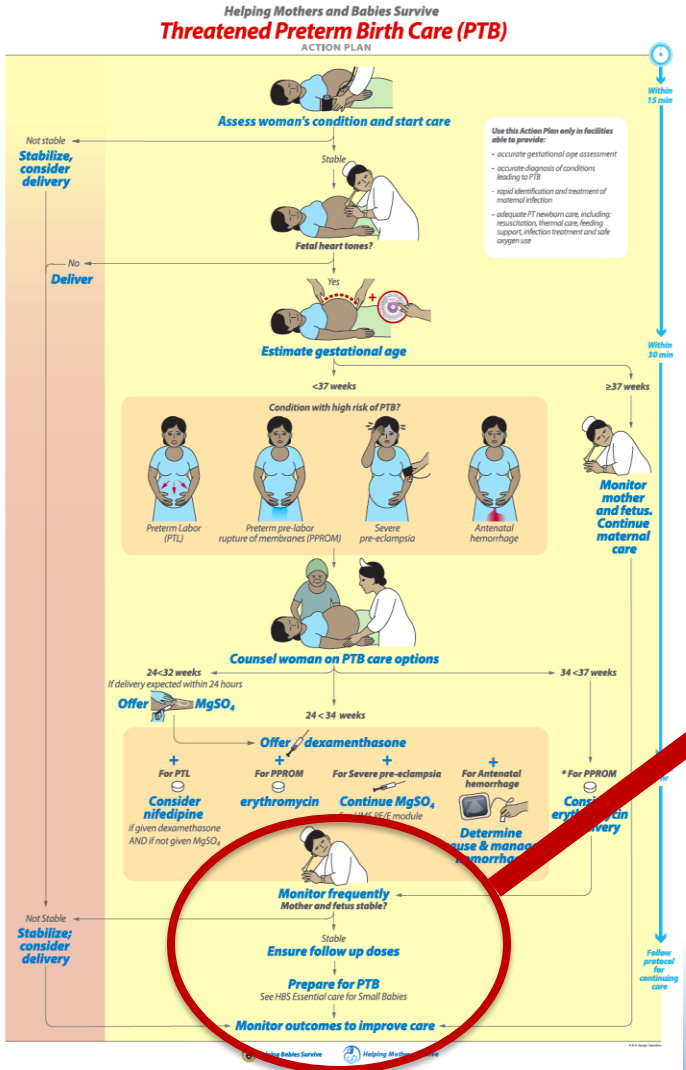




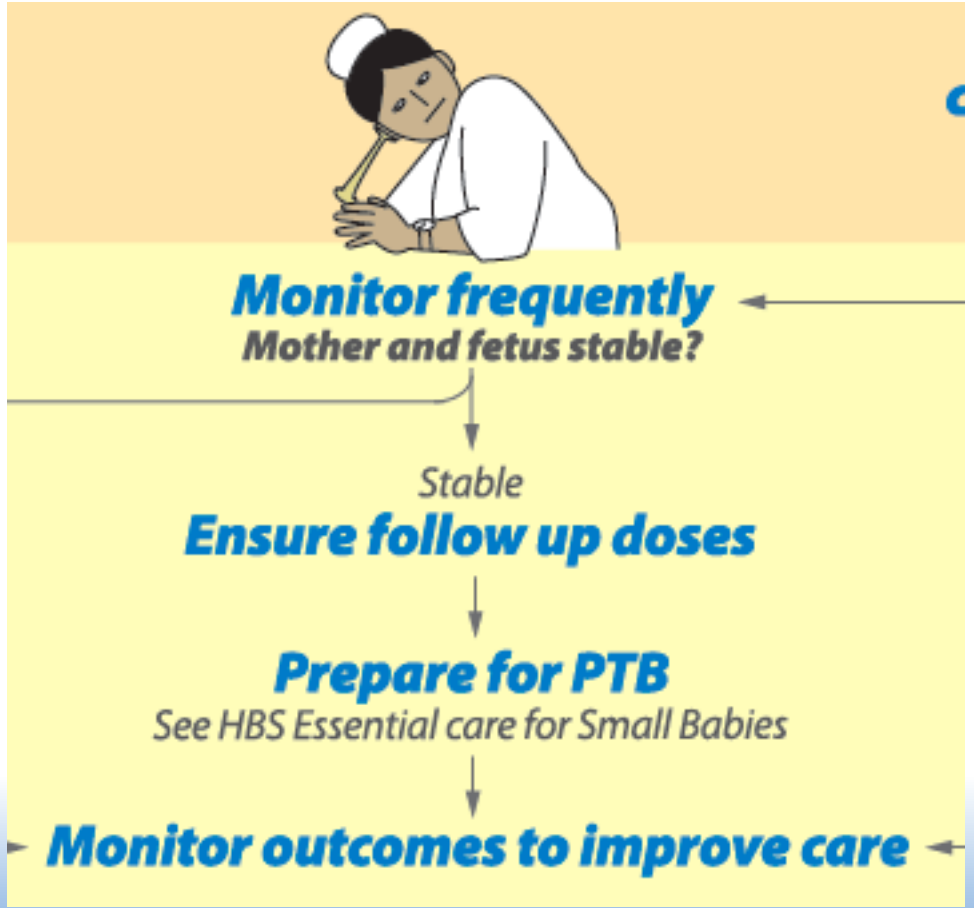
Offer care: dependent on GA and condition






Helping Mothers and Babies Survive
Threatened Preterm Birth Care (PTB)
ACTION PLAN
Assess woman's condition and start care
Within 15 min
Use this Action Plan only in facilities able to provide:
- accurate gestational age assessment
- accurate diagnosis of conditions leading to PTB
- rapid identification and treatment of maternal infection
- adequate PT newborn care, including: resuscitation, thermal care, feeding support, infection treatment and safe oxygen use
Not stable
Stabilize, consider delivery
Stable
Fetal heart tones?
No
Deliver
Yes
Estimate gestational age
Within 30 min
<37 weeks
≥37 weeks
Condition with high risk of PTB?
Preterm Labor (PTL)
Preterm pre-labor rupture of membranes (PPROM)
Severe pre-eclampsia
Antenatal hemorrhage
Monitor mother and fetus. Continue maternal care
Counsel woman on PTB care options
24<32 weeks
If delivery expected within 24 hours
34 <37 weeks
Offer MgSO4
24 < 34 weeks
Offer dexamethasone
For PTL
Consider nifedipine
if given dexamethasone AND if not given MgSO4
For PPROM
erythromycin
For Severe pre-eclampsia
Continue MgSO4
For Antenatal hemorrhage
Determine cause & manage hemorrhage
* For PPROM
Monitor frequently
Mother and fetus stable?
Not Stable
Stabilize; consider delivery
Stable
Ensure follow up doses
Prepare for PTB
See HBS Essential care for Small Babies
Monitor outcomes to improve care
Follow protocol for continuing care

Follow up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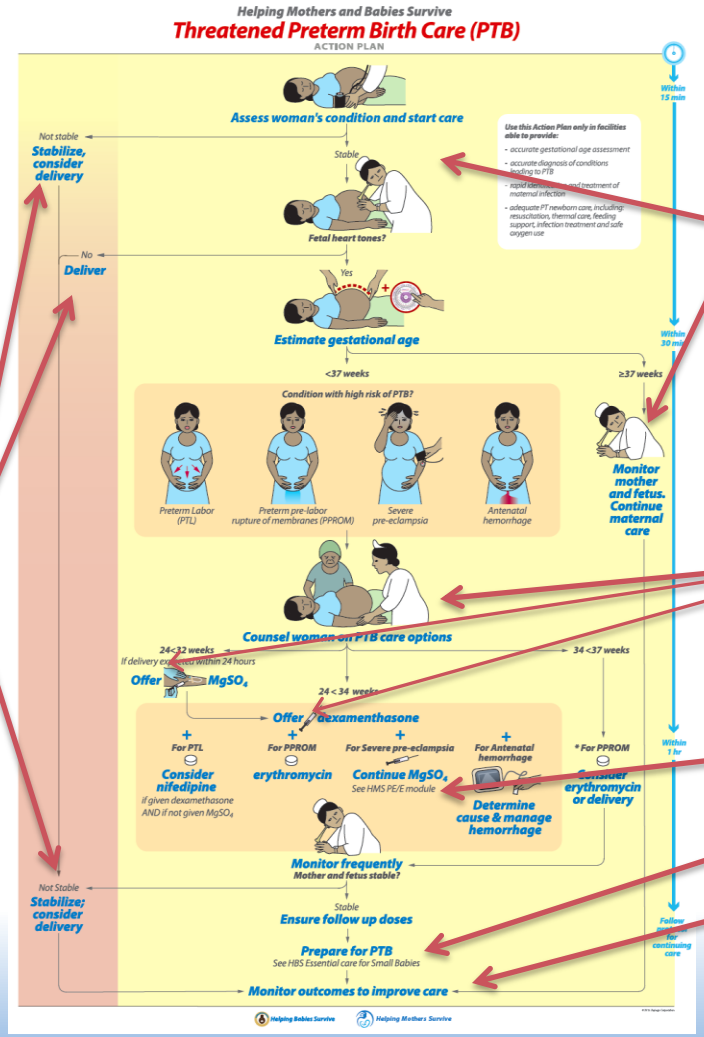
Additional Concepts



Deliver if unstable

Care for Woman

- Don't forget mom in quest to save baby
- She requires maternal care for most conditions leading to PTB

Counseling

- "Offer" not "Give"

Tie-ins to other modules

- HMS: Pre-eclampsia/ Eclampsia
- HBS: Essential Care for Small Babies

Quality Improvement

Photo credit: MCSP

Field Testing: Kogi State, Nigeria

August 31th – September 4th

Key Findings: Materials

Need for Medication Chart

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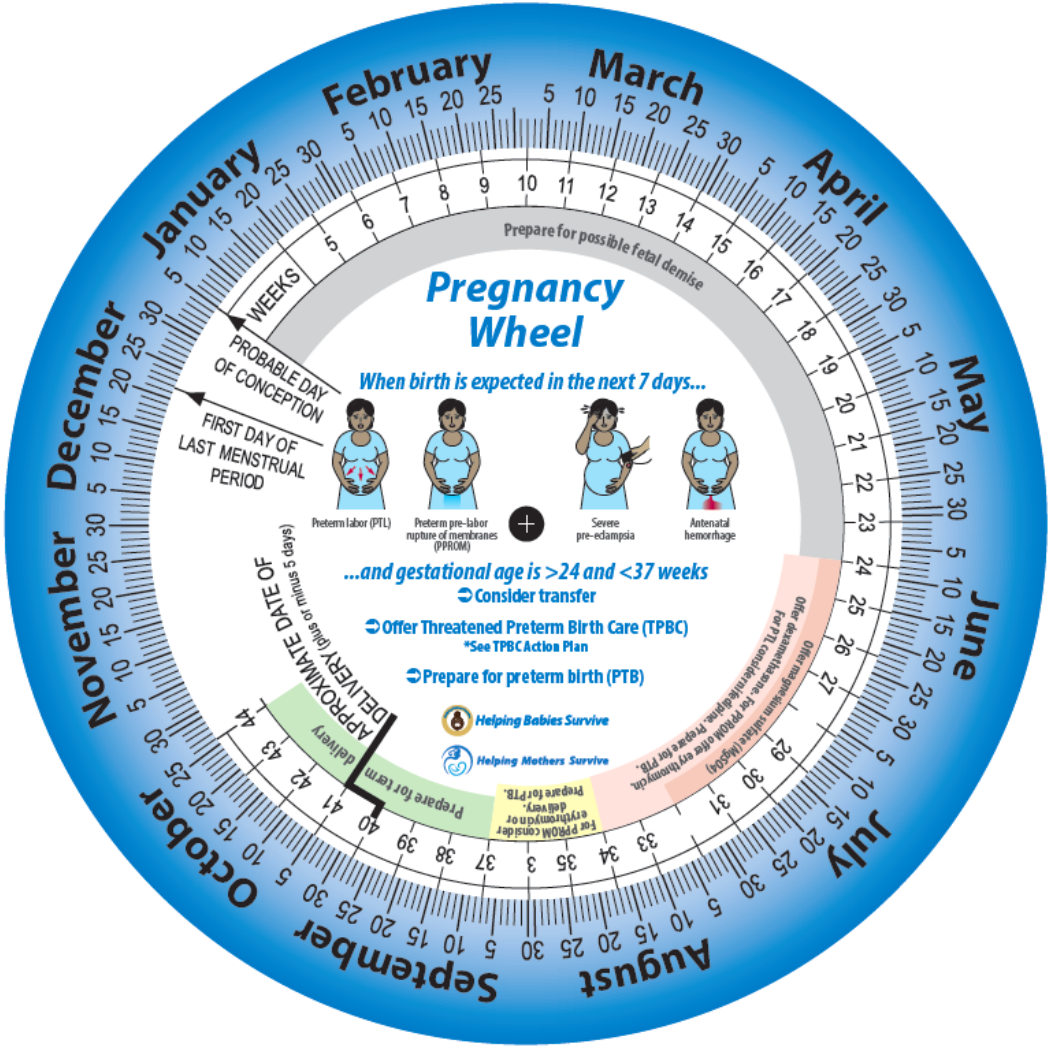
Photo: Jhpiego

Key Findings: Gestational Age (GA)

- GA wheels not widely available but desired
- Job aid easy to follow; case studies useful
- Late entry to ANC key barrier for GA accuracy



Key Findings: Interventions

- ACS already in use; not all sites meet WHO criteria
  - Adequate preterm newborn care biggest gap
  - GA challenge with >50% of patients
- Ob-Gyn residents knowledgeable about MgSO4 for neuro-protection
  - Supply, cost, and staffing for monitoring are barriers to use
- Inappropriate antibiotics currently in use for PPROM
  - Co-Amoxiclav; Metronidazole

Key Findings: Audience

- Team training valuable: "Now we understand where the others are coming from"
  - Requires attention to power dynamics; caution in assuming baseline knowledge
  - High level of interest in perinatal teams
- Materials for lower-level facilities desired
  - TPTB recognition, stabilization and referral

MCSP Next Steps: Module Completion

- Incorporate external reviewers' final edits
- Upload materials to http://reprolineplus.org/
  - Freely available; adaptable

MCSP Next Steps: Implementation

- Prioritize countries/facilities already using ACS
- MCSP maternal and newborn teams will simultaneously plan and strengthen TPTB and preterm newborn interventions
  - Focus on continuous quality improvement; facility led data for decision making
  - Support development of perinatal teams

MCSP Next Steps: GA

Improving GA dating requires:

- Provider behavior shift to seek and record accurate GA
  - Observational study in India and Cambodia examining GA assessment, documentation, and use in clinical decision-making
- Better techniques/algorithms to support estimations w/imperfect information
  - Development of mobile app with gestational age algorithm in India
- Cultural behavior shift to note LMP and seek early ANC
  - Continue integrating and strengthening BCC messaging

For more information, please visit
www.mcsprogram.org

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