

Malawi: Improving Preterm Outcomes

- 13 District hospitals 3 zones, 6 Districts in Central Malawi
- 7 MoH hospitals, 6 CHAM hospitals
- ~65,000 deliveries/year
- High national prematurity rate (18% -20% born <37 weeks)



Hospitals Intervention to Improve Preterm Outcomes

PRIMARY AIM

- *Decrease hospital based newborn mortality due to prematurity by 30% over 18 months*

SECONDARY AIMS:

- *Decrease overall newborn deaths, maternal deaths, stillbirths mortality*

PARTNERS

Reproductive Health Unit (MoH) with Zones and District

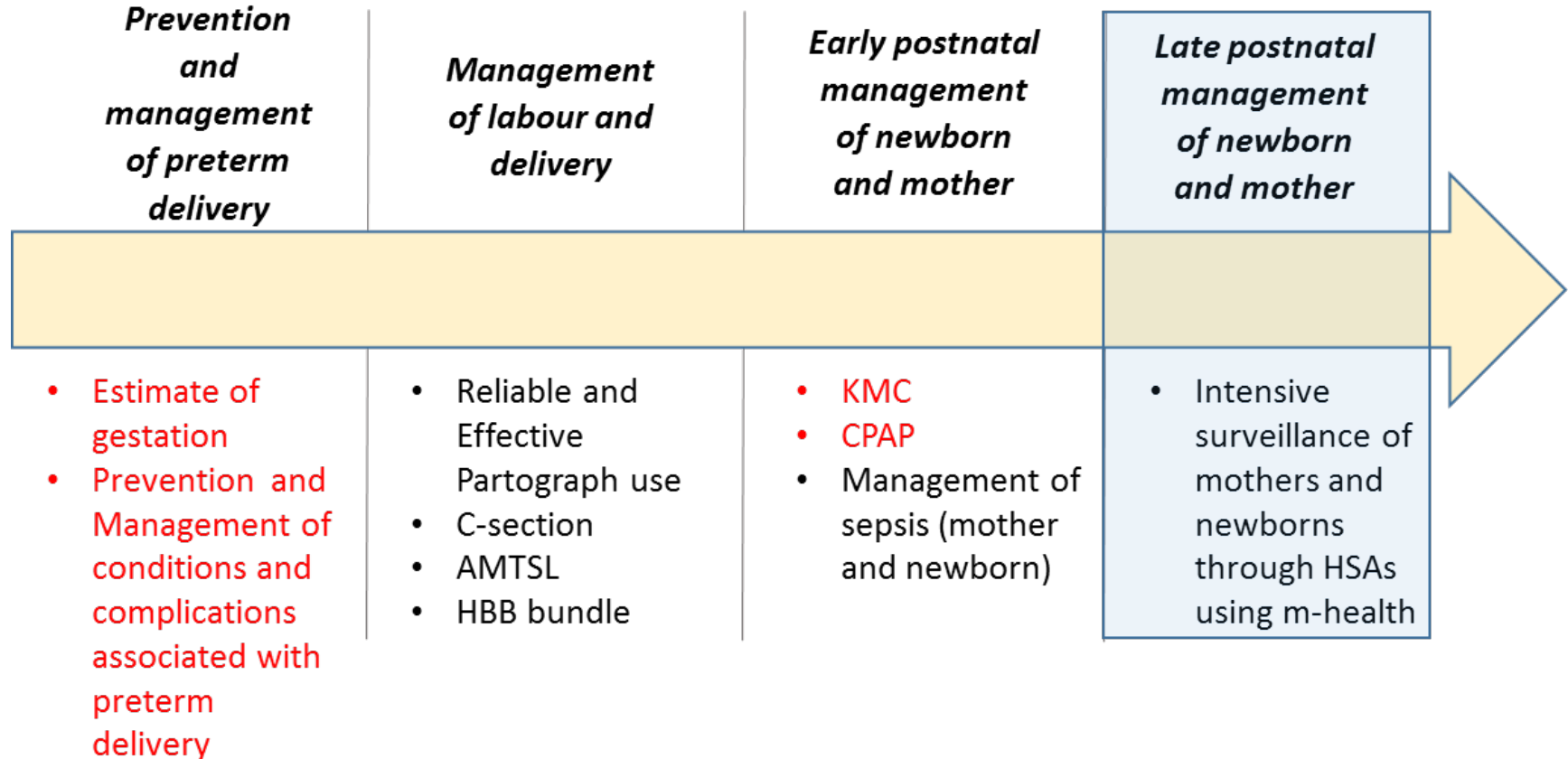
Management teams

MaiKhanda Trust (NGO)

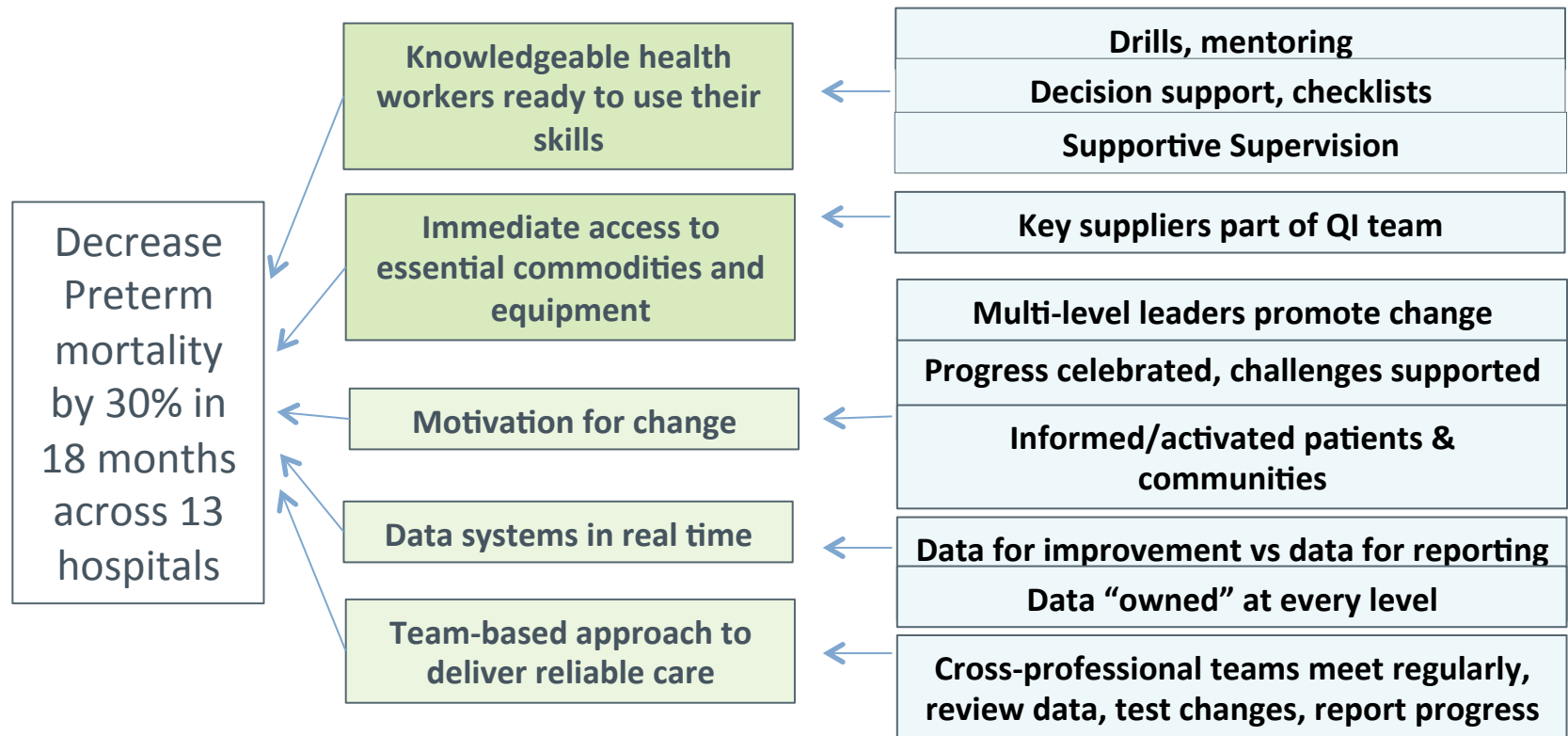
Institute for Healthcare Improvement

Funded by BMGF

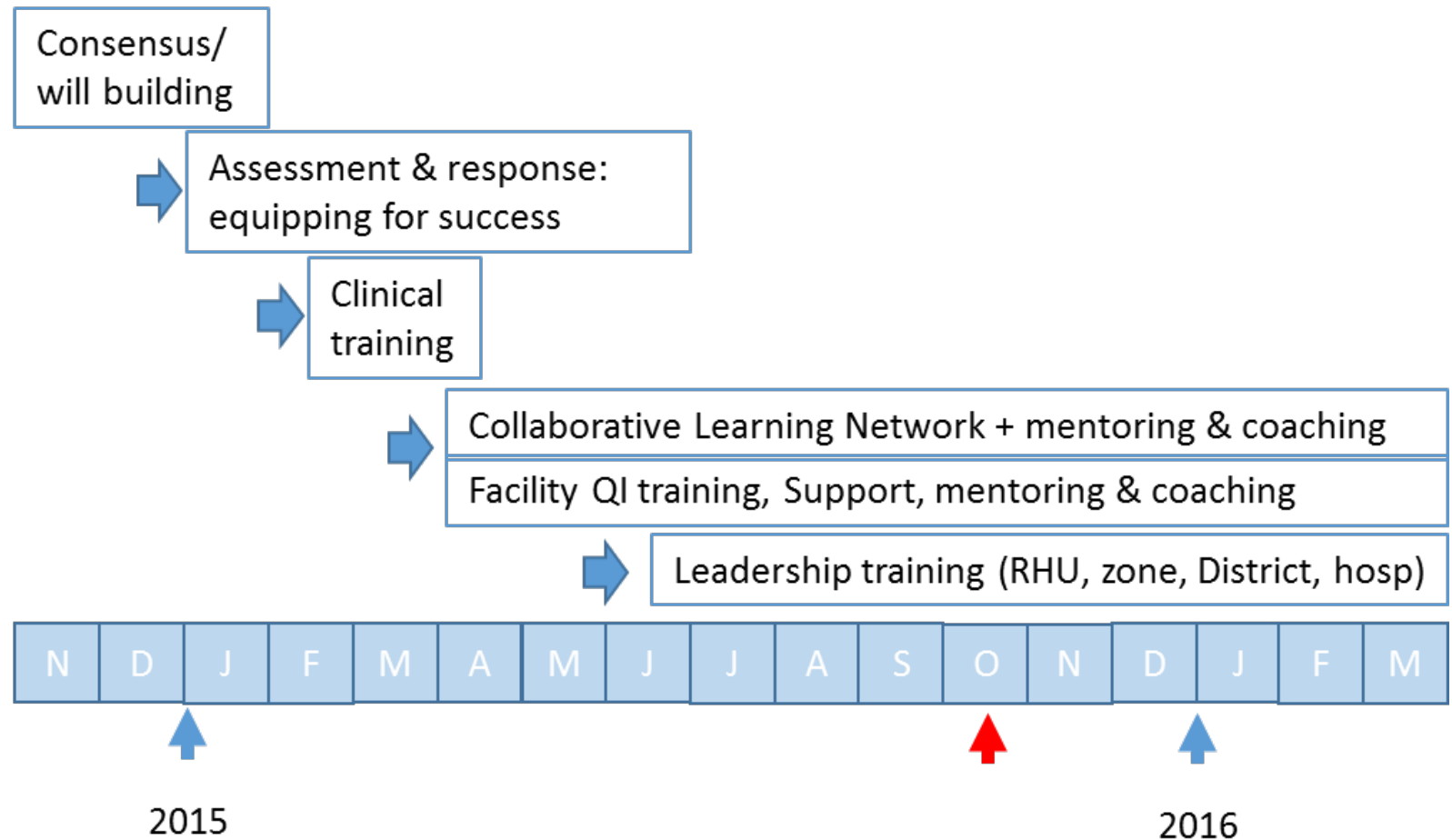
Improving Preterm Outcomes: The Clinical Intervention



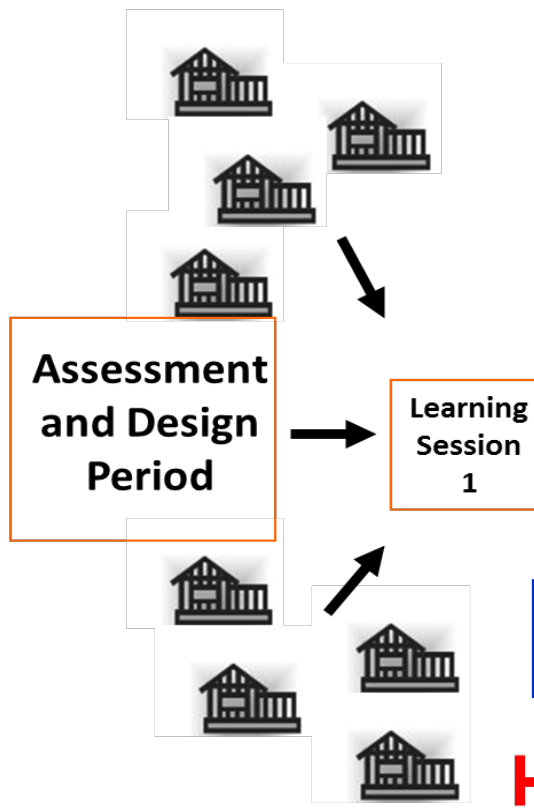
Comprehensive Intervention: The Theory of Change



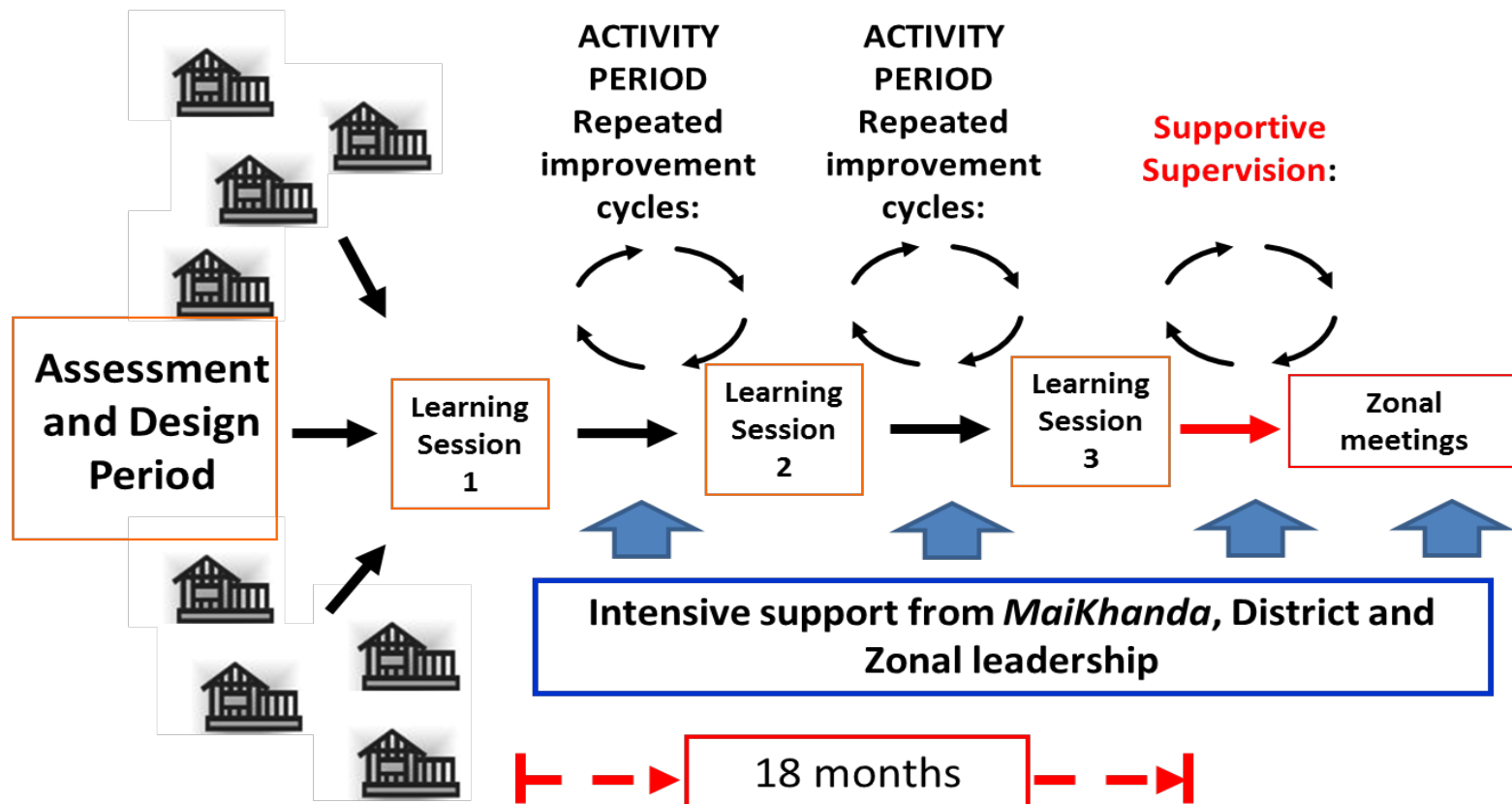
Improving Preterm Outcomes: Intervention Design



Improving Preterm Outcomes: The Systems Intervention



Improving Preterm Outcomes: The Systems Intervention (*IHI BTS Collaborative*)



Practical data collection and reporting for Improvement

- New tools (e.g. checklist) for measuring processes and outcomes
- Weekly chart review
- Monthly Registers review
- Weekly reports

*Innovation,
intensive NGO
support*



ROUTINE

- Checklists
- Routine register data into DHIS

SUPPLEMENTAL

- Targeted chart review
- Surveys
- Monthly/quarterly reports

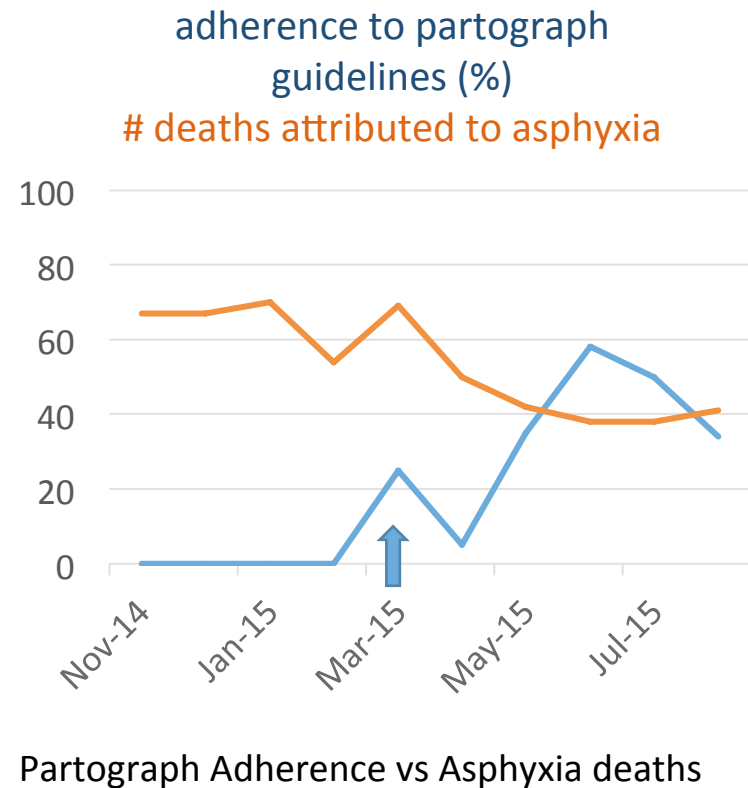
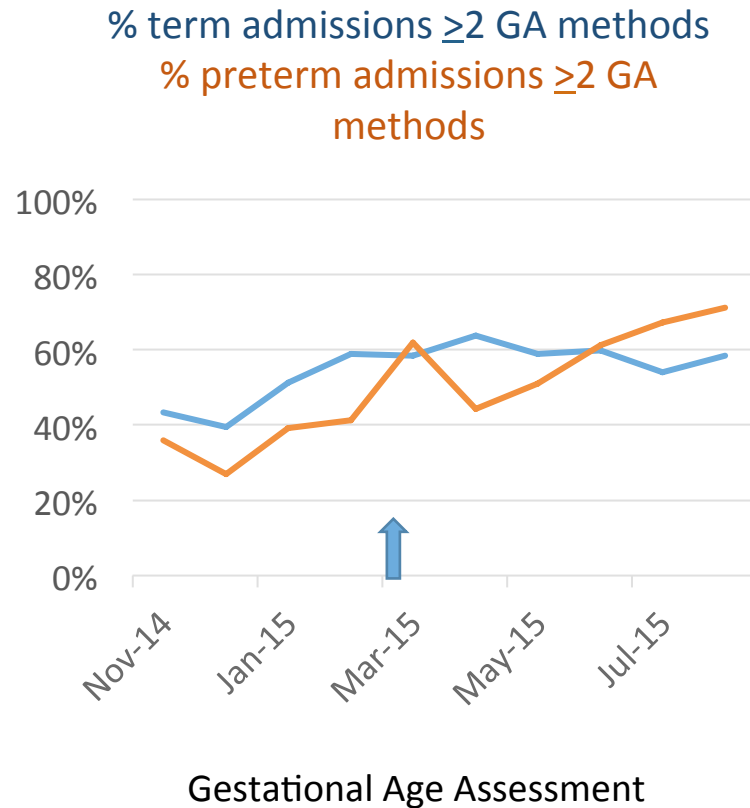
*Routine vs
supplemental
data collection
and reporting
for continuous
monitoring and
improvement*

| Assessment | Labour state | Labour | active | latent | false | | | |
|------------|--------------------------------------|--------|--------------|-------------|---------|------------------|---|---|
| | | Date | | | | | | |
| | Gestation | Method | FH | ANC card | LMP | US | | |
| | Est GA | | | | | | | |
| | Final GA assessment | | | | | | | |
| | Assess for complications | | | | Action | | | |
| | PROM | | Y | N | Y | N | | |
| | Multiple gestation | | Y | N | Y | N | | |
| | Pre-eclampsia | | Y | N | Y | N | | |
| | APH | | Y | N | Y | N | | |
| | ACS given (<35 wk, eligible) | | Y | N | 1 | 2 | 3 | 4 |
| | | | | | | | | |
| Labour | Partograph used | | Y | N | | | | |
| | C section | | Y | N | | | | |
| | Antibiotic given before CS? | | Y | N | N/A | | | |
| | Delivery set ready for mother | | Y | N | | | | |
| Delivery | Resuscitation set for baby | | Y | N | | | | |
| | oxytocin used | | Y | N | | | | |
| | | | | | | | | |
| Birth | clearing airway, bagging if needed | | Y | N | | | | |
| | drying, wrapping, skin to skin | | Y | N | | | | |
| | Chlorhexidine | | Y | N | | | | |
| | Breast fed within 30 min | | Y | N | | | | |
| | Birth weight | | | | | | | |
| | asphyxiated | | Y | N | | | | |
| | | | | | | | | |
| Post Natal | Initial disposition of baby | | KMC | PN | NNU | Referre d out | | |
| | | | Com KMC | | | | | |
| | Complications (mother) | | PPH | RU | Sepsis | Referre d out | | |
| | Complications (Baby) | | Resp. Distr. | Sepsis | | | | |
| | Treatment of baby complications | | CPAP/ O2 | Antibiotics | | | | |
| | Final disposition of mother and baby | | Comm KMC | Disch home | abscond | Referre d out | | |
| | Outcome (baby) | | Alive | NND | FSB | MSB | | |
| | Outcome (mother) | | Alive | MD | | | | |

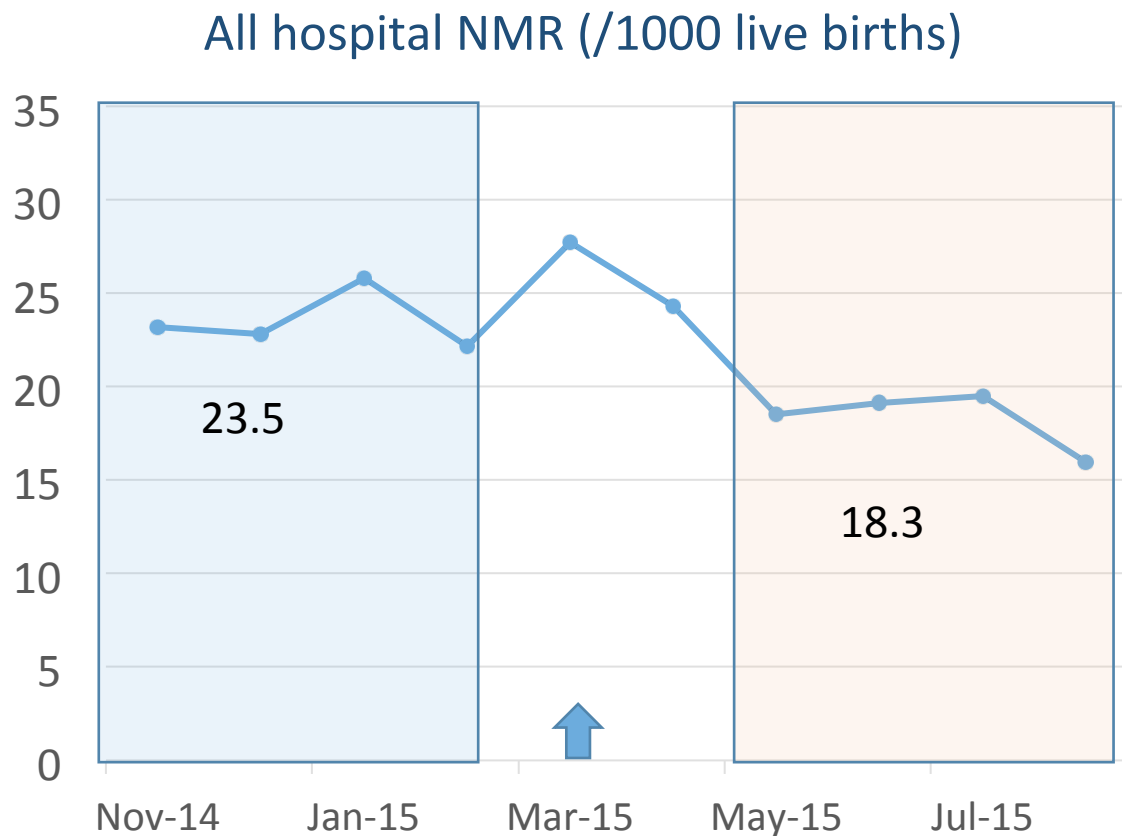
Using a checklist as a Quality Improvement tool to improve Preterm Survival

| | | | | | | | |
|-------------------|------------------------------|--------|------------|----------|--------|---|-----|
| # checklists used | 129 | | | | | | |
| # of LBWs | 14 | | | | | | |
| Assessment | Labour state | Labour | active | latent | FALSE | | |
| | | | 12 | 1 | 0 | | |
| | Gestation | Method | FH | ANC card | LMP | | US |
| | | | 13 | 0 | 12 | | 3 |
| | Est GA | | <28 wks | 28-34 | 34-36 | | >36 |
| | | | 0 | 2 | 9 | | 2 |
| | | | Assess for | | Action | | |
| | | | Y | N | Y | | N |
| | PROM | | 0 | 13 | 0 | | 0 |
| | Multiple | | 1 | 12 | 2 | | 0 |
| | Pre-eclampsia | | 0 | 13 | 1 | | 0 |
| | APH | | 0 | 13 | 1 | | 0 |
| | ACS given (<35 wk, eligible) | | Y | N | 1 | 2 | 3 |
| | | | 9 | 0 | 0 | 0 | 0 |
| | | | Y | N | N/A | | |
| Labour | Partograph used | | 13 | 0 | | | |
| | C section | | 0 | 13 | | | |

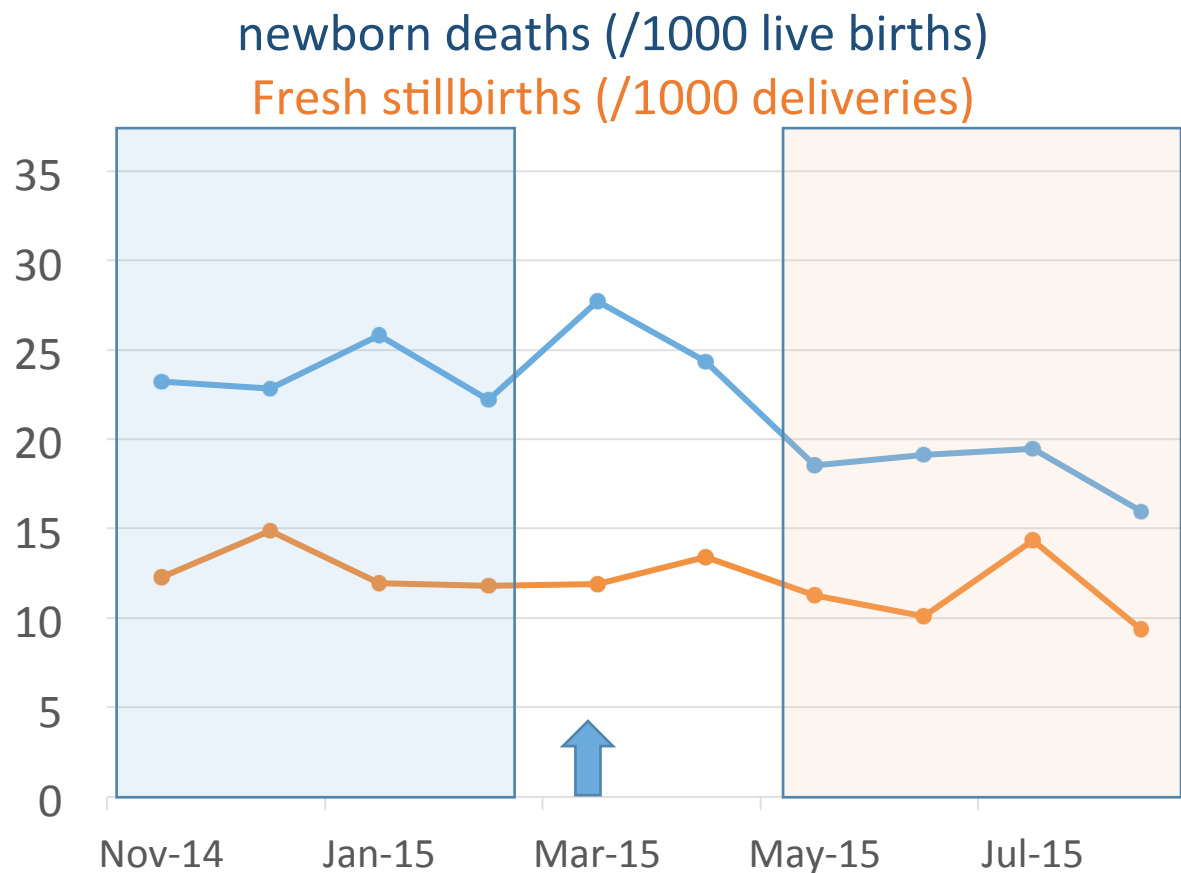
Improving Processes for Preterm Survival along the Continuum



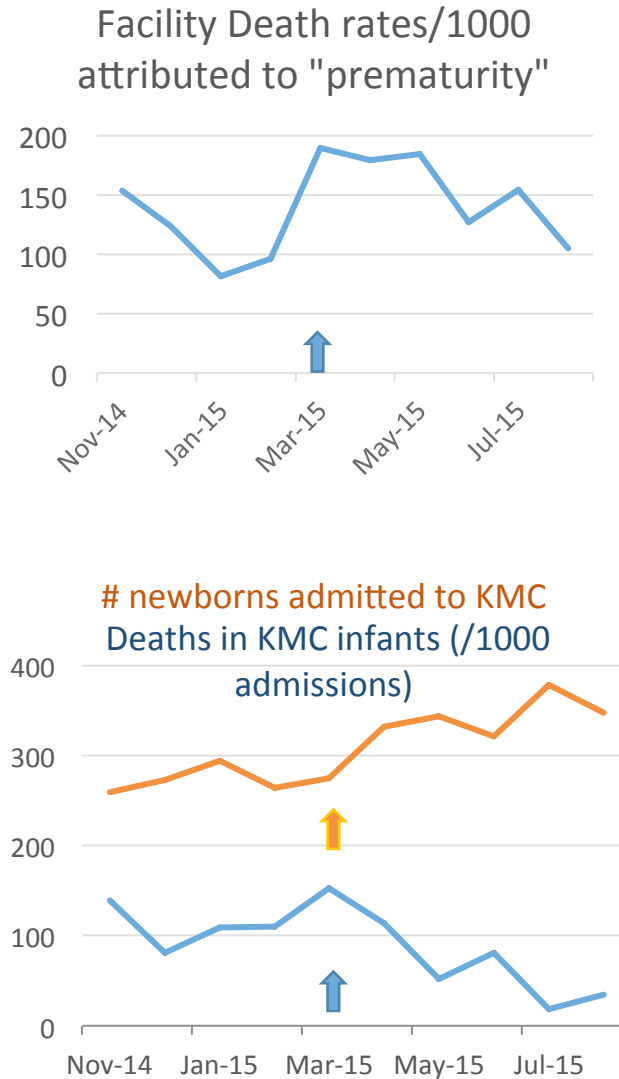
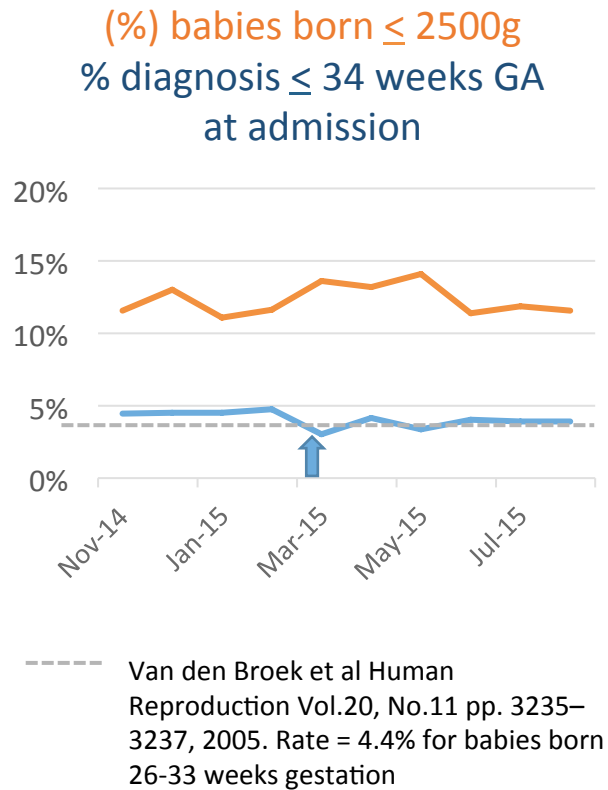
All newborn in-hospital deaths across 13 hospitals (54,000 births)



Newborn deaths vs Fresh Stillbirths



“Preterm” or “Low Birth Weight”



Conclusions:

#1 “Comprehensive” approach to multi-facility maternal/newborn care: promising early results

- Rapid improvement in key processes of care
- Early improvement in newborn (and small baby) mortality – survival strategies for small babies are working
- No impact as yet on stillbirths and maternal (too early to tell?)

#2 Lessons “Real Life” implementation of maternal/newborn care

- Key barrier: is routine measurement and feedback of process and outcome data
- Sustainability: Progress on transition of “comprehensive” approach to district, regional structures

#3 Who is “preterm”? Should the focus be on “small babies” for now?

- No reliable way to determine GA at time of labour
- No reliable way to assign “prematurity” as cause of death