

PUBLIC HEALTH 2019 SANTÉ PUBLIQUE  
30 APRIL-2 MAY SHAW CENTRE O T T A W A DU 30 AVRIL AU 2 MAI CENTRE SHAW



# EVALUATION OF POSTNATAL CARE FOR MOTHERS AND NEWBORNS IN RURAL UGANDA: A QUALITY IMPROVEMENT STUDY

30 APRIL, 2019

TISHA DASGUPTA<sup>1,4</sup>, DAMIAN DUFFY<sup>1,4</sup>, HENRY WOO<sup>3,4</sup>, MARY MARGARET AJIKO<sup>5</sup>, ELEANOR REIMER<sup>2,4</sup>

1. OFFICE OF PEDIATRIC SURGICAL EVALUATION AND INNOVATION, 2. BC CHILDREN'S HOSPITAL DEPARTMENT OF PEDIATRIC ANESTHESIA, 3. BC WOMEN'S HOSPITAL, 4. UNIVERSITY OF BRITISH COLUMBIA, 5. SOROTI REGIONAL REFERRAL HOSPITAL

# Disclosure Statement

- I have no affiliation (financial or otherwise) with a pharmaceutical, medical device or communications organization.
- Project approval was granted by the Board of Ethical Conduct at Soroti Regional Referral Hospital

# OBJECTIVES



- To characterize the quality of postnatal care at Soroti Regional Referral Hospital (SRRH)
- Survey new mothers at SRRH about their post delivery experience and maternity staff about hospital care protocol
- Determine compliance rate of WHO recommendations at SRRH
- Record total number of births, complicated deliveries, maternal and neonatal deaths
- Determine programmatic strengths, challenges associated, and barriers to improved care

# INTRODUCTION



- High neonatal (27 per 1000 births) and infant (22 per 1000 births) mortality rates recorded in Uganda in 2016<sup>1</sup>
- Uganda did not meet the targets for 2015 Millennium Development Goals 4 & 5 to Reduce Child Mortality and Improve Maternal Health<sup>2</sup>
- Anecdotal encounters from BC Children's Hospital (BCCH) staff visiting Uganda reported deficits in quality of care
- First few days and weeks after delivery are a crucial time for mothers and newborns- most maternal and infant deaths arise during this time<sup>3</sup>
- World Health Organization (WHO) recommends several checks during this time

# WHO RECOMMENDATIONS ON POSTNATAL CARE OF THE MOTHER AND NEWBORN



- Receive care in the hospital for 24h
- 3 postnatal contacts

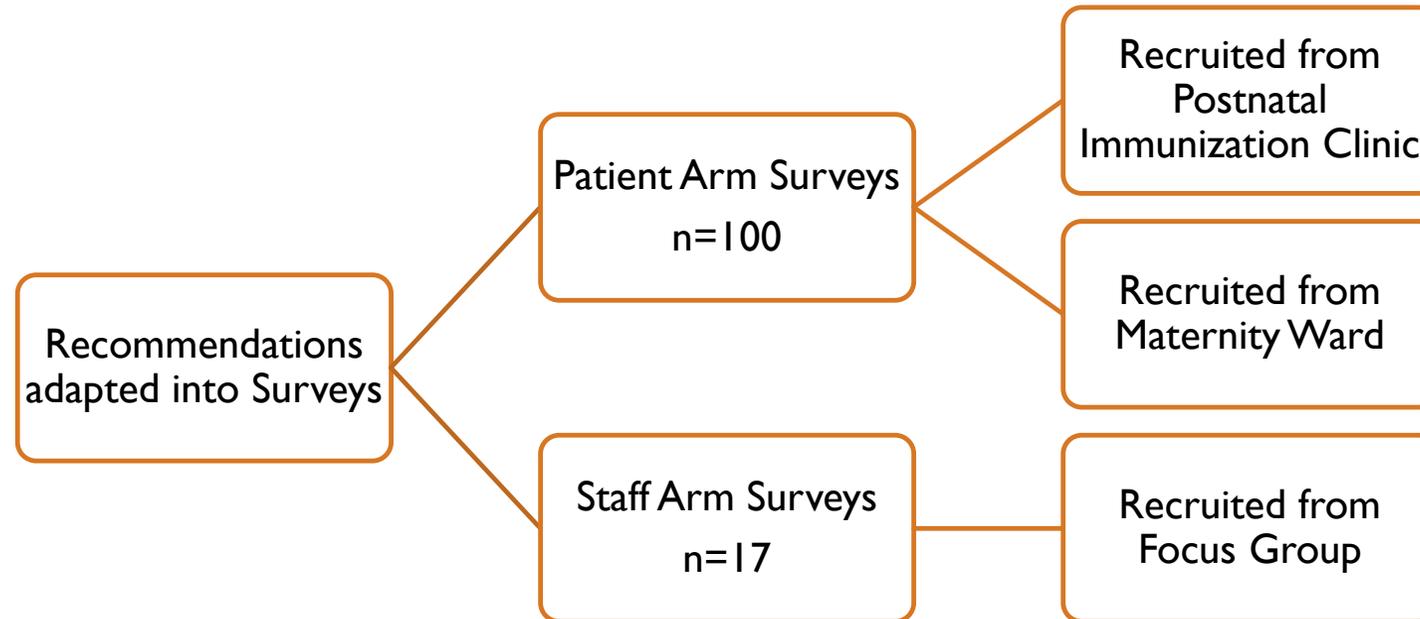


- Exclusive breastfeeding for first 6 months
- Regular assessment of mom
- Post-partum counselling



- Regular assessment of baby
- Cord cleaned with chlorhexidine
- Bathing, immunization and risk assessment

# METHODS



- 100 mothers and 17 staff members recruited between July 15-Aug 4, 2018 at Soroti Regional Referral Hospital
- Demographics captured to gain better understanding of maternal patient population
- Total number of births, complicated deliveries, maternal and neonatal deaths captured from hospital records
- Compliance rate of WHO guidelines calculated and thematic analysis of overall experience performed

# DEMOGRAPHIC RESULTS



Average age of mother → 26 years  
Range 16-45



Average distance travelled to hospital → 9 km  
Range 0.5-150



Average number of children → 2  
Range 1-10



Average number of antenatal visits  
during pregnancy → 4



83% are married

# RESULTS



- Average stay at hospital → 3 days
- Mothers come back for PNC and immunization
- Breastfeeding is common
- Immunization encouraged
- Pre-term and low birth-weight babies identified
- Post-delivery counselling for mothers



- Not all babies or mothers checked routinely
- No standardized checklist
- Many unable to afford chlorhexidine
- Newborns bathed before 24h
- 50% staff unaware of guidelines and standard of care to follow

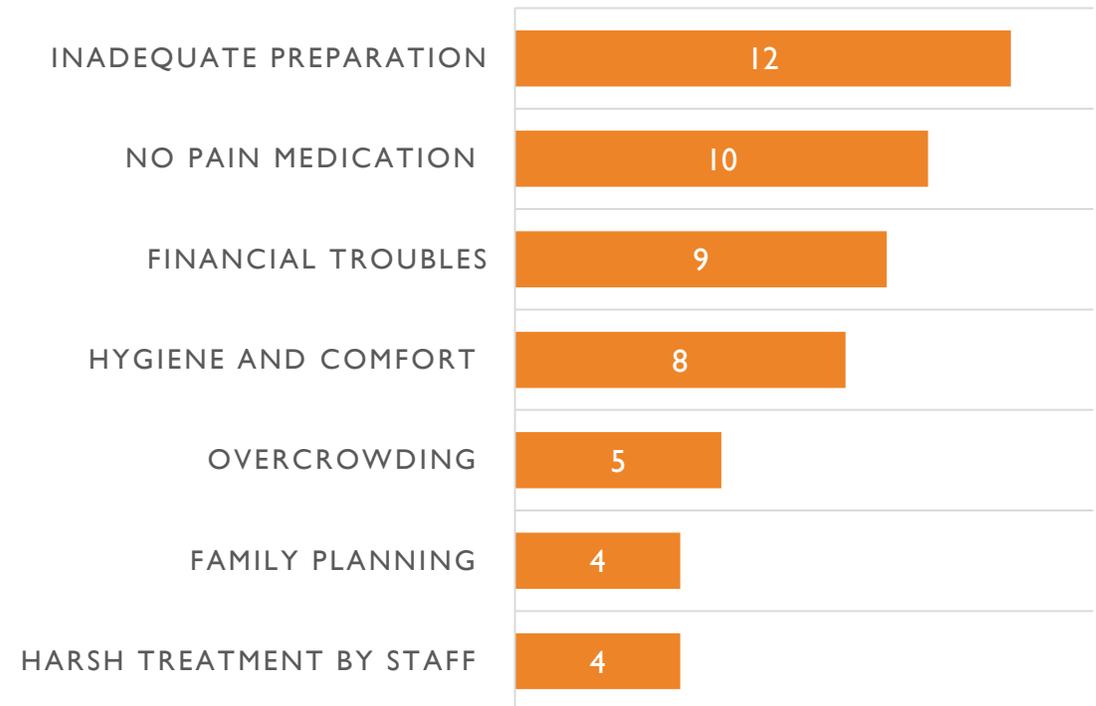
# BARRIERS TO CARE & OTHER PATIENT CONCERNS

## BARRIERS TO ACCESSING HEALTH CENTER SERVICES



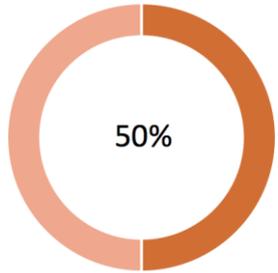
- Average number of deliveries per week → 54
- Average number of complications requiring emergency C-sections per week → 11 (20%)
- Average number of infant deaths per week → 3 (5%)
- 1 maternal death in 3 week study period

## CONCERNS WITH CARE PROVIDED AT SRRH





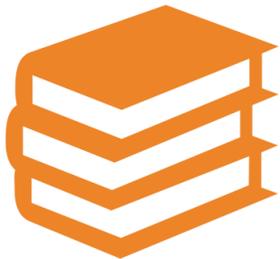
# SUMMARY & LIMITATIONS



Only 50% guidelines followed



Barrier to accessing PNC: Lack of transport and financial resources



Lack of education: primary barrier to staff participation



Major patient concerns: Lack of preparation and unavailability of medication



Neonatal mortality high in SRRH compared to national average (27 per 1000 births)



Limitations: Short study period and biased sampling population

# FUTURE DIRECTION

- Education seminars for physicians, nurses, midwives and students at SRRH
- Checklists developed for newborn and maternal assessments
- Improved resource allocation for medications and to reduce overcrowding
- Advocate for policy changes and system improvements in Uganda

## REFERENCES

- 1. The DHS Program. (2016). Uganda DHS 2016- Key Indicators Report. Retrieved January 31, 2018, from <https://dhsprogram.com/publications/publication-PR80-Preliminary-Reports-Key-Indicators-Reports.cfm>
- 2. Final Millennium Development Goals Report for Uganda 2015. (n.d.). Retrieved from <http://www.ug.undp.org/content/uganda/en/home/library/mdg/final-millennium-development-goals-report-for-uganda-2015.html>
- 3. WHO recommendations on postnatal care of the mother and newborn. (2016, October 11). Retrieved from [http://www.who.int/maternal\\_child\\_adolescent/documents/postnatal-care-recommendations/en/](http://www.who.int/maternal_child_adolescent/documents/postnatal-care-recommendations/en/)

# ACKNOWLEDGEMENTS

- The authors would like to graciously thank the staff at Soroti Regional Referral Hospital for their continued support, and help with recruitment and interpretation
- Project supplies were graciously funded in part via donations to the Samosa Social Fundraiser with BC Children's Hospital Foundation



THANK YOU!

# APPENDIX I- COMPLETE GUIDELINES

- **RECOMMENDATION 1: Timing of discharge from a health facility after birth**
  - mothers and newborns should receive care in the facility for at least 24 hours after birth.
- **RECOMMENDATION 2: Number and timing of postnatal contacts**
  - At least three additional postnatal contacts are recommended for all mothers and newborns, on day 3, between days 7–14 after birth, and six weeks after birth.
- **RECOMMENDATION 4: Assessment of the baby**
  - The following signs should be assessed during each postnatal care contact: stopped feeding well, history of convulsions, fast breathing (breathing rate  $\geq 60$  per minute), severe chest in-drawing, no spontaneous movement, fever (temperature  $\geq 37.5$  °C), low body temperature (temperature  $< 35.5$  °C), any jaundice in first 24 hours of life, or yellow palms and soles at any age.
- **RECOMMENDATION 5: Exclusive breastfeeding**
  - All babies should be exclusively breastfed from birth until 6 months of age. Mothers should be counselled and provided support for exclusive breastfeeding at each postnatal contact.
- **RECOMMENDATION 6: Cord care**
  - Daily chlorhexidine application to the umbilical cord stump during the first week of life is recommended for newborns
- **RECOMMENDATION 7: Other postnatal care for the newborn**
  - Bathing should be delayed until 24 hours after birth.
  - Immunization should be promoted as per existing WHO guidelines.
  - Preterm and low-birth-weight babies should be identified immediately after birth and should be provided special care as per existing WHO guidelines.
- **RECOMMENDATION 8: Assessment of the mother**
  - All postpartum women should have regular assessment of vaginal bleeding, uterine contraction, fundal height, temperature and heart rate (pulse) routinely during the first 24 hours starting from the first hour after birth.
- **RECOMMENDATION 9: Counselling**
  - All women should be given information about the physiological process of recovery after birth, and that some health problems are common.

## APPENDIX 2- COMPLIANCE RATE: MEETS TARGET

### ✓ **RECOMMENDATION 1: Timing of discharge from a health facility after birth**

- Average number of days spent at the hospital after delivery → 3 days
- 0.02% mothers were discharged on the same day

### ✓ **RECOMMENDATION 2: Number and timing of postnatal contacts**

- Mothers and newborns return for 3 postnatal contacts at 6 day, 6 week and 6 months
- Babies are also immunized at these visits

### ✓ **RECOMMENDATION 5: Exclusive breastfeeding**

- 100% of mothers exclusively breastfeed their babies, at least for the first 6 months of life

### ✓ **RECOMMENDATION 7: Other postnatal care for the newborn**

- 100% mothers are counselled on the importance of immunization, preventable diseases and schedule
- 100% pre-term and low birth-weight babies are identified and provided special care

### ✓ **RECOMMENDATION 9: Counselling**

- 100% mothers are counselled on post-partum pain, bleeding and discharge, hygiene, nutrition and breastfeeding

## APPENDIX 3- COMPLIANCE RATE: NEEDS IMPROVEMENT

### ✗ **RECOMMENDATION 4: Assessment of the baby**

- 17% staff reported not all criteria are routinely checked
- Fontanelle development, congenital malformations, dehydration, cord stump and reflex are checked in some cases

### ✗ **RECOMMENDATION 6: Cord care**

- 30% staff reported Chlorhexidine gel is used
- Parents have to buy Umbigel out-of-pocket

### ✗ **RECOMMENDATION 7: Timing of first bath**

- 18% staff reported babies are bathed <24 hours

### ✗ **RECOMMENDATION 8: Assessment of the mother**

- 15% staff reported not all criteria are routinely checked
- Convulsions, pain, ambulation and anemia are checked in some cases

### ✗ **STAFF AWARENESS**

- 50% staff members are not aware of the recommendations