Evaluation of Stillbirth Deliveries at Kintampo Municipal Hospital

Kerry-Ann Kelly, MPH – MS-IV
Morehouse School of Medicine
2011 GE/NMF Scholar
Study Design

- Observational
  - Chart Review
  - Descriptive Analysis
Objectives of Project

• To assess overall burden of stillbirth deliveries at Kintampo Municipal Hospital (KMH)

• To describe exposures of women delivering stillborn babies

• To describe and evaluate reporting strategies for women who deliver stillbirth infants
Background: Definitions

- Stillbirth (3rd trimester)
  - fetal death occurring at ≥ 28 wks gestation or ≥ 1000g
- Macerated Stillbirth (Antepartum)
  - fetal death occurring before onset of labor
  - maternal infection or HTN, diabetes
- Fresh Stillbirth (Intrapartum)
  - fetal death occurring during labor
  - Obstetric complication, asphyxiation
Overview of Stillbirth

Causes of stillbirth

- Childbirth complications, maternal infections in pregnancy
- Maternal disorders, hypertension and diabetes
- Fetal growth restriction, Congenital abnormalities

Causes of stillbirth in Kintampo*

- Obstetric complications, infections
- Neonatal death due to asphyxia

Overview of Stillbirth: Global

- 2.6 million 3rd trimester stillbirths each year
- 98% of stillbirth occur in low to middle-income countries
- 76% of all stillbirths occur in south Asia or sub-Saharan Africa
- Global Policy targets (i.e. MDG, Global Burden of Disease) omit stillbirth
- Worldwide 1.2 million births occur during labor (intrapartum)
- African woman has 24 times higher risk of having intrapartum stillbirth than woman of a higher-income country

Overview of Stillbirth

- Stillbirth rate slightly lower than neonatal death rates

Domestic*

- Ghana has a high stillbirth burden
- Kintampo, most deaths occur are antepartum
- Highest risk for stillbirth during intrapartum period

Country variation in third trimester stillbirth rates

Based on new estimates of 193 countries

Methods

• Chart Review
  • Review of delivery records from January 2010 to December 2010
  • Review of delivery records from 1st quarter of 2011 (January 2011 – March 2011)
  • Individual maternal chart review

• Interviews
  • Interview with charge nurse of maternity ward
Results

Stillbirth Burden at Kintampo Municipal Hospital in 2010

- N = 1893
- N = 83 (4%)

Actual Stillbirth Rate at KMH

# stillbirths/total births x 1000

- Stillbirths
- All Births
Results

Estimated Stillbirth Rates of 5 countries* vs. Actual Stillbirth Rate at Kintampo Municipal Hospital

Djibouti (2009) 34
Bangladesh (2009) 36
Pakistan (2009) 47
Senegal (2009) 34
Nigeria (2009) 42
KMH (2010) 43.8

Stillbirth rate per 1000 births

*Top 5 countries with the highest stillbirth rates.

Results

Proportion of Macerated Stillbirth Deliveries vs. Fresh Stillbirth Deliveries at KMH 2010

- **MSB**: N=33 (40%)
- **FSB**: N=50 (60%)
Macerated Stillbirth vs. Fresh Stillbirth deliveries at Kintampo Municipal Hospital for First Quarter 2011

Total births - 343
Stillbirth rate - 52.4 per 1000 births
Results

Chart Review
- Maternity inpatient numbers unable to be linked with Outpatient Department
- History of maternal pregnancy not tracked in records
- No other record of pregnancy kept

Interview – Charge Nurse
- Provide encouragement to come to antenatal clinic
- No additional investigation for women with multiple stillbirths
- Lack of counseling services for women
Conclusion

- KMH has a high Stillbirth burden in 2010/2011
- Stillbirths numbers reported only
- No system in place to capture risk factors of women
- No structured counseling or support for women
- Unable to track women through inpatient numbers within hospital
Evidenced-Based Practices*

Newborn-Care Training and Perinatal Mortality in Developing Countries

Findings *
• WHO Essential newborn care course
  • Neonatal death – no decrease in first 7 days after birth
  • Significant reduction in the rate of intrapartum stillbirth

Limitations

- Unable to locate patient folders
- Variable record keeping limited descriptive analysis
Recommendations

DATA COLLECTION
- Strengthen data collections system
  - Use OPD numbers in maternity unit
- Establish a system to audit all stillbirth deliveries
- Review resuscitation training with midwives

INVESTIGATION
- Prioritize an implementation of a research agenda
- Provide dedicated research team to investigate stillbirth delivery audit
Recommendations

EDUCATION

• Evidence-based training and planning for midwives
• Include stillbirth in maternal and neonatal health initiatives
• Include Stillbirth modules in Public Sensitization Programs and Community Outreach Initiatives
• Review resuscitation training with all skilled birth attendants
References


Stillbirths
An Executive Summary for The Lancet’s Series

“Millions of families experience stillbirth, yet these deaths remain uncounted, unsupported, and the solutions understudied. Better counting of stillbirths alongside maternal and neonatal deaths and strategic programmatic action will make stillbirths count.”

• 50 organisations
• 18 countries
• 69 authors
• Six Series paper
• Two Research Articles
• 8 linked comments
Acknowledgements

- Edem Tette - Mentor
- General Electric (GE) / National Medical Fellowship
- Florence Atia R.N., Charge Nurse