BIRTH ASPHYXIA IN TANZANIA

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Has documented that she has no financial relationships to disclose or Conflicts of Interest (COIs) to resolve.
Overview of Birth Asphyxia Worldwide

• Intra-partum asphyxia accounts for:
  – 814,000 deaths/year
  – 42 million disability adjusted life years (DALY’s)
  – 5th most common cause of death <5yo

• Per WHO asphyxia is simply failure to initiate or maintain regular birthing at birth.

• Birth asphyxia is a clinical term denoting tissue hypoxia and ischemia prior to delivery
Birth Asphyxia throughout the World

- Up to 10 percent of newborns require some assistance to initiate breathing.
- Less than 1% of babies need extensive resuscitation.
- Suctioning and stimulation are often successful as an intervention.
- When resuscitation (i.e. ventilation) is needed, it must be administered in a timely manner.
Background of Tanzania’s newborns

- 1.6 million babies are born each year in Tanzania.
- 140,000 live births (<10%) are registered annually.
- 51,000 deaths occur in babies within the first month of life every year.
- Neonatal mortality rate 32/1000 live births.
- Tanzania accounts for 0.6% of the world’s population but 2% of the global neonatal deaths.
- No improvement for over a decade.
Millennium Development Goals

MDG 1: Eradicate extreme poverty and hunger
MDG 2: Achieve universal primary education
MDG 3: Promote gender equality

MDG 4: Reduce child mortality
• Aims for a 2/3 reduction in deaths of children under 5yo between 1990 and 2015.

MDG 5: Improve maternal and child health
MDG 6: Combat HIV/AIDS, malaria …
MDG 7: Ensure environmental sustainability
MDG 8: Develop global partnership
Strengths, challenges and opportunities for newborn care in Tanzania
Progress towards MDG4

Causes of Newborn Deaths

The 3 main causes of neonatal death in Tanzania are well known:
- Birth asphyxia
- Infections
- Complications of preterm and low birth weight

![Pie chart showing the distribution of newborn deaths causes in Tanzania.](image)
Birth Asphyxia Tanzania

• Incidence of birth asphyxia in hospital settings is between 20-25%.
• Resuscitation skills and knowledge among our health service providers is limited.
• APGAR less than 5 in our centre results in poor neuro-developmental outcome.
## STATISTICS FOR NICU ACCORDING TO DIAGNOSIS AT BUGANDO MEDICAL CENTRE 2010

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Alive</th>
<th>Death</th>
<th>Total</th>
<th>% of all diagnosis</th>
<th>Mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prematurity</td>
<td>67</td>
<td>120</td>
<td>187</td>
<td>35%</td>
<td>64%</td>
</tr>
<tr>
<td>Birth Asphyxia</td>
<td>114</td>
<td>61</td>
<td>175</td>
<td>33%</td>
<td>34.9%</td>
</tr>
<tr>
<td>Neonatal Sepsis</td>
<td>32</td>
<td>47</td>
<td>79</td>
<td>14.8%</td>
<td>59%</td>
</tr>
<tr>
<td>Post colostomy</td>
<td>19</td>
<td>13</td>
<td>32</td>
<td>6%</td>
<td>40.6%</td>
</tr>
<tr>
<td>Meconium Aspiration</td>
<td>24</td>
<td>6</td>
<td>30</td>
<td>5.60%</td>
<td>20.0%</td>
</tr>
<tr>
<td>RDS</td>
<td>9</td>
<td>7</td>
<td>16</td>
<td>1.90%</td>
<td>43.7%</td>
</tr>
<tr>
<td>Hischsprung</td>
<td>4</td>
<td>4</td>
<td>8</td>
<td>1.50%</td>
<td>50%</td>
</tr>
<tr>
<td>Spinal bifida (Surgery)</td>
<td>4</td>
<td>0</td>
<td>4</td>
<td>0.75%</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Total NICU admissions</strong></td>
<td>262</td>
<td>238</td>
<td>531</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Other neonatal outcomes

• Little is known about neonatal morbidity

• Survivors may have long term ongoing consequences of illness and disability.
Coverage and quality of services for newborn health

Figure 2.1: Antenatal care attendance in Tanzania, 1992-2004

Source: 9-12
Birth preparedness

ANC provides an opportunity to help women prepare for childbirth by providing:

- Information about pregnancy danger signs.
- Skilled care at childbirth and healthy postnatal practices.
Birth preparedness

According to the TDHS 2004-05

➢ Only half of women were informed of signs of pregnancy complications during ANC.

➢ Alarmingly, just eight percent of health facilities had all the medicines necessary for treatment.
Key findings about care at the community level

• Women prepared materials for childbirth and the newborn baby, and many set aside money for emergencies.

• Home deliveries were propelled by:
  ➢ cost and lack of availability of transport, informal payments
  ➢ poor quality of care in health facilities
  ➢ a lack of privacy and
  ➢ a preference for familiar birth attendants.
Key findings about care at the community level

- Hygiene was poor during home delivery.
- Despite many good essential newborn care practices, risky newborn care behaviours were observed in relation to:
  - resuscitation
  - drying and warming
  - breastfeeding
  - cord care
  - skin care
  - eye care and
  - recognition of danger signs.
Childbirth

Figure 2.2: Trend in attendance during childbirth, 1992-2004

Source: 9-12
Neonatal Resuscitation Goals

• A national program was introduced in 2009 to provide basic neonatal resuscitation skills to:
  – Train instructors
  – Care providers
• MHSW is expecting to reduce the incidence of asphyxia related mortality by 50% (from 13260 cases in 2006 to 6630 in 2015).
Strengths, challenges and opportunities for newborn health

• The project Helping Babies Breathe was launched in Tanzania September 2009
• This project has been developed by the AAP in collaboration with WHO, Save the Children, USAid and others.
• The aim is to reduce the number of newborn deaths.
• Outcome studies to document effectiveness of this program will need to be done.
- Basics very similar to Neonatal Resuscitation Program
- “Bulb suction” is boilable
- PPV bag with kit is permanent and can clean all parts!
- Easier to teach in low resource settings
Postnatal Care

• Only 13 percent of babies who were delivered were examined within two days of giving birth.
• Coverage varies greatly by geography.
• BCG coverage is 91%
Return for Postnatal care

• Out of 157 mother with babies aged less than 6 months interviewed; the following were the result:

<table>
<thead>
<tr>
<th>Timing of First Postnatal visit</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Within one wk</td>
<td>9</td>
<td>5.7%</td>
</tr>
<tr>
<td>1-4 wks</td>
<td>36</td>
<td>22.9%</td>
</tr>
<tr>
<td>After 4 wks</td>
<td>112</td>
<td>71.3%</td>
</tr>
<tr>
<td>Total</td>
<td>157</td>
<td>100%</td>
</tr>
</tbody>
</table>

• Only 5.7% of mothers came back to the health facility for check up after delivery, most of them were those who undergone a Caesarian section.

• 71% came after four weeks for their infant immunization and not for their own check up.
Newborns in the context of Tanzanian health care system

- 90% of the population live within 10 kilometers of a hospital
- There are only 4 special neonatal care units located in consultant hospital
- Very few hospitals and health centers have neonatal wards/rooms
- There is critical shortage of skilled health providers and very limited specialist care
- Limited skills on neonatal resuscitation
• Tanzania desires to be a part of the vital research studies which have potential to result in accelerated progress toward MDG 4 as challenged by Lawn et al in her recent paper.

THANK YOU/ASANTENI