Nurse Perceptions of Facilitators and Barriers to Effective Delivery Room Neonatal Resuscitations: A Comparison Across Settings

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Disclosure

There is no actual or potential conflict of interests in relation to this presentation.
Birth asphyxia continues to be one of the major causes of neonatal mortality worldwide. While most newborns transition outside the uterus without difficulty, 4-10% will need assistance establishing respirations. Although delivery room resuscitation requires prompt action, most delivery room resuscitations do not occur in accordance with recommended guidelines.
Gaps affecting neonatal mortality globally

- Social status for women
- Inadequate prenatal care
- Confounding health issues
<table>
<thead>
<tr>
<th>Country</th>
<th>Neonatal Mortality per 1,000 Live Births, 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>4</td>
</tr>
<tr>
<td>Canada</td>
<td>3.6</td>
</tr>
<tr>
<td>Switzerland</td>
<td>3.1</td>
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<tr>
<td>United Kingdom</td>
<td>2.7</td>
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<tr>
<td>Australia</td>
<td>2.4</td>
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<td>France</td>
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<td>Austria</td>
<td>2.3</td>
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<tr>
<td>Belgium</td>
<td>2.3</td>
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<tr>
<td>Comparable Country Average</td>
<td>2.3</td>
</tr>
<tr>
<td>Germany</td>
<td>2.2</td>
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<tr>
<td>Netherlands</td>
<td>2.2</td>
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<tr>
<td>Sweden</td>
<td>1.4</td>
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<tr>
<td>Japan</td>
<td>0.9</td>
</tr>
</tbody>
</table>

Comparable countries are defined as those with above median GDP and above median GDP per capita in at least one of the past 10 years. In cases where 2014 data were unavailable, data from the last available year are shown.

Aims

• To examine the facilitators for and barriers to delivery room neonatal resuscitations from the perspectives of nurses in Zimbabwe and the United States

• To identify areas for improvement that may be similar across settings

• To develop areas for potential collaborative partnership
Methods

- Semi-structured key informant interviews
- Qualitative description
- Direct Content Analysis
- McLeroy et al. (1988) Social Ecological Model (SEM)
Subjects, Sampling, and Setting

United States
Virtua Health, Voorhees, NJ
12
Nurses in a community setting
Labor and delivery nurses

Kutama Clinic
Darwendale area
Zvimba District
3 Nurses in a rural government health clinic
Midwives
Emergent Themes

Zimbabwe
Triage and decision-making
Knowledge
Practice
Competency
Equipment and supplies
Level of care

United States
Skills
Resources
Practice
Equipment
Teamwork
Coding Categories (SEM)

- Individual: skills, knowledge, practice, competency
- Interpersonal: level of care, teamwork
- Organizational: Equipment, supplies
- Societal: triage and decision making
- Policy: Resources, equipment
Simulation-based Education to Enhance Skills

- Neonatal resuscitation training has focused on well-resourced settings
- Helping Babies Breathe has shown skill improvement
- Retention of skills is minimal in both resource-limited and well-resourced settings
- In the United States, skills decline to an unsatisfactory level after just 3 months

(Bang, Patel, Bellad, Gisore, & Goudar, et al., 2016)
Approaches to enhance skill retention in both settings

• Low dose- high frequency practice
• Daily equipment check with a structured checklist
• Self evaluation checklist
• Weekly review meetings
• Telemedicine consultations
Next Step: Baseline Assessment of Neonatal Resuscitation Practices

- Implementation Science framework
- Theoretical Domains framework
  - Identification of targeted behaviors for change
  - Barriers and enablers for the proposed change
  - Change techniques or models of behavior to change
  - Measurement and implementation of the change
TDF Intervention Implementation Process
(Michie et al., 2005)

Step 1
• Targeted behaviors for change

Step 2
• Barriers and enablers for the proposed change

Step 3
• Change techniques or models of behavior to use

Step 4
• Measurement and implementation of the change
Study Limitations

- Sample size
  - Preliminary assessment
    - Comprehensive assessment
Lessons learned

• Access is dependent upon relationship with key stakeholders
• In resource limited environments, more is done with less
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- Virtua Health IRB
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References


