Educational Impact of Helping Babies Breathe (HBB) Classes on Knowledge And Confidence in Shirati, Tanzania
Rameen Atefi OMS II, Omeed Atefi OMS II, Alissa Farrell DO, Eiman Mahmoud MD MPH

Welcome!

Background

Methods

Results

Conclusions
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HBB is an evidence-based neonatal resuscitation program that is taught to help lower neonatal mortality. Tanzania’s neonatal mortality is nearly 5 times that of the United States’, with approximately 30% of deaths occurring during the first day of life. The purpose of this study is to assess the impact of educational sessions on knowledge and confidence of nursing students towards neonatal resuscitations techniques in Shirati.

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A one-day HBB class was taught to 46 nursing students in Shirati, Tanzania on June 13th, 2017. A HBB survey was given to students before and after the class to assess their neonatal resuscitation skills. Topics on the survey included questions related to HBB and confidence in bag-valve mask use. These surveys were then compared to quantitatively understand changes in knowledge and confidence after training.
Before Class Assessment

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Average class quiz performance increased by 18.5% (70.1% to 88.6%). There was a 43.5% increase in the number of students who received a 100% on the survey after attending the training. Confidence in using a bag-valve mask for resuscitation increased by 24% (71.7% to 95.7%). 100% of the students found the class to be useful, 80.4% felt that they would use the knowledge gained during the session in the future.
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Self-Reported Confidence in Bag Valve Mask Use Before Class

- 28.3% Not Confident
- 71.7% Confident

Self-Reported Confidence in Bag Valve Mask Use After Class

- 95.7% Confident
- 4.3% Not Confident
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Average Percent Score on HBB Assessment

Before HBB Class

After HBB Class
These results are promising for future trainees as it demonstrates that those who attend the class are more likely to improve their disposition and knowledge regarding neonatal resuscitation. Designating an outstanding student or nurse to regularly teach refresher classes could help reinforce proven resuscitation techniques and discourage ingrained, negative habits. Future studies should assess the same population for retention of knowledge, and reach out to more rural populations with similar classes and surveys. With continued training, application of HBB can continue the downward trend of neonatal deaths in Tanzania.
**Background**

1. Which of the following best describes you?
   - Midwife
   - Nurse
   - Medical Officer
   - Doctor
   - Nursing student
   - Health extension worker
   - Other: _________________

2. Have you ever been trained in or attended a "Helping Babies Breathe" class?
   - Yes
   - No

3. Within the first minute of life, what is the most important factor that will lead you to intervene and help a baby breathe?
   - Heart rate less than 150 beats per minute
   - Baby is not crying or breathing well
   - Baby is born blue
   - Always intervene and provide breathing assistance

4. When should you start using the bag-valve mask?
   - Only when a doctor is present
   - When the baby is born blue
   - If you have cleared the airway, stimulated, and the baby is still not breathing
   - When the baby has not been breathing for over 2 minutes

5. How long do you have to dry the baby, assess breathing, and provide respiratory intervention if the baby needs it?
   - 1 minute
   - 3 minutes
   - 5 minutes
   - 10 minutes

6. Do you feel comfortable using the bag-valve mask?
   - Yes
   - No

7. How many breaths per minute should you give to a newborn baby with a bag-valve mask who is not breathing?
   - You should never provide breathing intervention
   - 12 - 20 breaths per minute
   - 30 breaths per minute
   - 40 breaths per minute