Background

- The first month of a newborn’s life is the most vulnerable time for infant survival
- Highest risk of infant mortality is during the 1st day of life with one of the most common problems being respiratory distress
- Infant mortality rate from respiratory distress was 2.1% in 2019 in the United States (11.5/100,000 births)
- If respiratory distress is not identified and effectively treated, then it can lead to infant mortality

Purpose and Aims

Evaluate the impact of a simulation learning environment had on mother-baby nurses’ knowledge, skill, confidence, and satisfaction levels in identifying and managing newborn respiratory distress

Aims
1. Increase nursing knowledge in identifying newborn respiratory distress
2. Increase nursing skill level in providing PPV to newborns
3. Increase nursing confidence and satisfaction level in providing initial resuscitative steps to newborns in respiratory distress

Methods

Setting: Mother-Baby Unit in a Tertiary Academic Medical, Level I Trauma Center in the South-Eastern U.S.
Sample: Mother-Baby/Post-Partum nursing staff
Sample size: 17 nurses

Demographics

<table>
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<tr>
<th>ETHNICITY</th>
<th>YEARS OF NURSING EXPERIENCE</th>
<th>NRP CERTIFIED</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Indian or Alaska Native</td>
<td>5-10 years</td>
<td>NRP certified (yes)</td>
</tr>
<tr>
<td>Black or African American</td>
<td>5-10 years</td>
<td>NRP certified (no)</td>
</tr>
<tr>
<td>Native Hawaiian or Other Pacific Islander</td>
<td>5-10 years</td>
<td>NRP certified (no)</td>
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<tr>
<td>White Caucasian</td>
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<td>NRP certified (no)</td>
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<tr>
<td>Hispanic</td>
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<td>NRP certified (no)</td>
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<tr>
<td>Other</td>
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<td>NRP certified (no)</td>
</tr>
<tr>
<td>Prefer not to answer</td>
<td>5-10 years</td>
<td>NRP certified (no)</td>
</tr>
</tbody>
</table>

Intervention

- Multiple in-situ simulations
- 12-week time frame
- Varying shift times

Results and Discussion

- **Aim 2**: A paired T-test showed that there was statistical and clinically significant evidence that the skill level of nurses providing PPV to newborns increased. The mean increased by 8.5 points. P value <0.05.

Limitations and Sustainability

- Time constraints: High acuity and high census
- Post-test design for knowledge, confidence, and satisfaction level surveys
- Difficulty obtaining the 2-3 week post-eval

Conclusion

This project highlights the statistical and clinical significance of the effect of simulation on improving nurses’ skill level in providing PPV to newborns. This is a clinically impactful finding that showcases the importance of simulation learning to improve nursing skill level.

References