Building Safe Obstetrics Knowledge & Capacity: Baseline Findings of an Innovative Training & Mentorship Intervention in Cambodia


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Disclosure

Speaker: Sehrish Bari, MPH

Presented research and activities was supported by the GE Foundation as part of the SafeSurgery2020 Project.
Background – Access to Surgery in Cambodia

- 97% of people in South Asia are unable to access safe surgical care
- In Cambodia: 419 Surgical Procedures are performed per 100,000 population
- Ranks #146 of 192 countries
- Major gap in available surgical services
Background – Safe Surgery 2020 Baseline Assessment

A collaborative training and mentorship initiative that aims to build the surgical capacity of Cambodian hospitals

A baseline assessment was conducted in 5 hospitals in Cambodia before implementation of SS2020 intervention package

Study Objective:
This prospective, observational study evaluates the baseline state of cesarean surgical care and performance in SS2020 intervention hospitals in Cambodia

SS2020 Trainings & Programs
- Leadership and Mentorship Training
- Clinical Training
- Surgical Key Performance Indicator Training
- SPECT Equipment Sterilization Training
- WFSA Safe Anesthesia Training
- Touch Surgery App Training
- Bio-medical Engineering Training
- Project ECHO Mentorship through Video Conferencing
- Perioperative Enhancement Project
Methodology

Observations of cesarean procedures were conducted in 5 intervention hospitals in February 2019 to assess baseline adherence to global standards of surgical care.

**Data Collection**

- Observation tool developed to assess adherence to several surgical performance items
- Local data collectors hired & trained
- Convenience sample
  - Data collectors observed as many surgeries as feasible over a 10-day period, including business hours, weekends and evenings
Data Analysis

- Descriptive analysis conducted to aggregate indicator outcomes across all hospitals & by hospital type

- Data were collapsed into 18 performance indicators
  - Most (n=14) found on the WHO Safe Surgery Checklist (SSC)
  - Additional SS2020 program-specific indicators also analyzed (n=4)

- Scores between 0 to 18 assigned to each surgery to indicate # of performance indicators successfully achieved
Results

48 Cesarean Procedures observed in 5 intervention hospitals
[1 national & 4 provincial/regional]

Number of Performance Indicators Achieved:
- **0** procedures had a perfect score
- **4.2%** of procedures scored between 13-17
- **56.3%** scored 7-12
- **39.6%** scored 1-6
- Mean = 7.4 for all 18 indicators
  - 5.0 for 14 SSC indicators
# Results

## Percentage of Observed Cesarean Procedures Achieving Performance Indicators, Disaggregated by Indicator & Hospital Type

<table>
<thead>
<tr>
<th>#</th>
<th>Performance Indicator</th>
<th>All Hospitals</th>
<th>National Hospital</th>
<th>Provincial Hospitals</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Post-op removal of all instruments for decontamination*</td>
<td>97.90%</td>
<td>100.00%</td>
<td>97.00%</td>
</tr>
<tr>
<td>2</td>
<td>Pulse oximeter used</td>
<td>95.80%</td>
<td>100.00%</td>
<td>93.90%</td>
</tr>
<tr>
<td>3</td>
<td>Operative site cleansed</td>
<td>93.80%</td>
<td>100.00%</td>
<td>90.90%</td>
</tr>
<tr>
<td>4</td>
<td>Instrument, sponge, and needle counted</td>
<td>77.10%</td>
<td>73.30%</td>
<td>78.80%</td>
</tr>
<tr>
<td>5</td>
<td>Surgical instruments free of visible soil*</td>
<td>64.60%</td>
<td>100.00%</td>
<td>48.50%</td>
</tr>
<tr>
<td>6</td>
<td>Patient identity, consent, and procedure confirmed</td>
<td>55.30%</td>
<td>71.40%</td>
<td>48.50%</td>
</tr>
<tr>
<td>7</td>
<td>Discussion of instrument/equipment sterility</td>
<td>54.20%</td>
<td>86.70%</td>
<td>39.40%</td>
</tr>
<tr>
<td>8</td>
<td>Visible chemical sterilization tape*</td>
<td>52.10%</td>
<td>100.00%</td>
<td>30.30%</td>
</tr>
<tr>
<td>9</td>
<td>Safe Surgery Checklist utilization rate (paper checklist, read aloud)*</td>
<td>31.70%</td>
<td>86.70%</td>
<td>0.00%</td>
</tr>
<tr>
<td>10</td>
<td>Vaginal cleansing performed for cesarean sections</td>
<td>22.90%</td>
<td>0.00%</td>
<td>33.30%</td>
</tr>
<tr>
<td>11</td>
<td>Prophylactic antibiotic administered</td>
<td>20.80%</td>
<td>33.30%</td>
<td>15.20%</td>
</tr>
<tr>
<td>12</td>
<td>Discussion of airway difficulty</td>
<td>18.80%</td>
<td>60.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>13</td>
<td>Discussion of patient post-op recovery</td>
<td>16.70%</td>
<td>40.00%</td>
<td>6.10%</td>
</tr>
<tr>
<td>14</td>
<td>Discussion of blood loss risk</td>
<td>14.60%</td>
<td>46.70%</td>
<td>0.00%</td>
</tr>
<tr>
<td>15</td>
<td>Surgeon’s discussion of procedure difficulty</td>
<td>12.50%</td>
<td>26.70%</td>
<td>6.10%</td>
</tr>
<tr>
<td>16</td>
<td>Anesthesiologist’s discussion of patient concerns</td>
<td>8.30%</td>
<td>20.00%</td>
<td>3.00%</td>
</tr>
<tr>
<td>17</td>
<td>Surgeon’s discussion of patient concerns</td>
<td>4.30%</td>
<td>13.30%</td>
<td>0.00%</td>
</tr>
<tr>
<td>18</td>
<td>Discussion of equipment/instrument issues</td>
<td>2.10%</td>
<td>6.70%</td>
<td>0.00%</td>
</tr>
</tbody>
</table>

*SS2020 program-specific indicators, not WHO SSC
Results

Lowest Performing Indicators
- Communication items generally scored lowest

<table>
<thead>
<tr>
<th>Indicator</th>
<th>National</th>
<th>Provincial</th>
<th>All Hospitals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate of discussion on equipment/instrument problems during surgery</td>
<td>6.7%</td>
<td>0%</td>
<td>2.1%</td>
</tr>
<tr>
<td>Rate of surgeon's discussion on patient-specific concerns</td>
<td>13.3%</td>
<td>0%</td>
<td>4.3%</td>
</tr>
</tbody>
</table>

Highest Performing Indicators
- Non-communication items generally scored better

<table>
<thead>
<tr>
<th>Indicator</th>
<th>National</th>
<th>Provincial</th>
<th>All Hospitals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pulse oximetry usage rate</td>
<td>95.8%</td>
<td>93.9%</td>
<td>100%</td>
</tr>
<tr>
<td>Rate of post-op decontamination of all (used and unused) instruments</td>
<td>97.9%</td>
<td>97%</td>
<td>100%</td>
</tr>
</tbody>
</table>
Conclusion

Lessons learned from this baseline observational study:

• Cesarean surgery performance scores vary in SS2020 hospitals with room for improvement
• Hospitals will benefit from SS2020’s emphasis on building both *clinical* and *leadership* capacity
• Endline assessment to be conducted following complete 1-year intervention package
• Final results will:
  • Assess SS2020’s capacity to improve surgical performance
  • Provide compelling evidence to scale SS2020 for greater impact
Thank you!

Questions?