# Scientific Session IV

**Scientific Session IV**
**Clinical Care and Quality Improvement**
**Saturday, May 2, 10:30 a.m. – 11:30 a.m.**

## 28

### IMPLEMENTATION OF A PEDIATRIC SURGICAL QUALITY IMPROVEMENT (QI)-DIRECTED M&M CONFERENCE

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**Purpose:**
For decades, our traditional pediatric surgical M&M conference primarily categorized failures as surgical technical error or natural progression of patient disease, but failure mode categories were never precisely captured, action items rarely assigned, nor loop closure accomplished. In 2013 we developed a QI-directed M&M conference, allowing for implementation of directed actions with the intent of improving quality of care and outcomes.

**Methods:**
A classification, derived from a taxonomy of failure modes provided with permission by Healthcare Performance Improvement LLC, was developed to enhance analysis of complications presented during M&M conference. Complications are logged and presented by pediatric surgery fellows in the multidisciplinary conference. Each complication is categorized as an individual or system failure with sub-categorization of root cause, a level of preventability assigned, and action items with the responsible party and due dates designated. The pediatric surgery QI coordinator tracks all action items to ensure timely completion. Determinations from 11/2013-9/2014 were reviewed to evaluate the distribution of failure modes and action items.

**Results:**
One-hundred ninety-eight cases were reviewed (see Table). There were 96 (78.7%) individual failures and 26 (21.3%) system failures identified. One-hundred twenty-five action items were implemented including education initiatives, optimizing communication, establishing criteria for interdisciplinary consultation, resolving equipment inadequacies, removing high risk medications from procedure protocols, modifying order sets, restructuring physician handoffs, and individual practitioner counseling/training.

**Conclusion:**
Development of a QI-directed M&M conference allowed us to categorize complications beyond individual surgical or patient disease categories, ensuring added focus on system solutions and reliable loop closure for assigned interventions intended to address failures. We believe this has led to improvements in the processes of patient care.

# Scientific Session IV (cont.)

| Level of Preventability | (n,%) | Distribution of Failure Modes (n,%) | | | |
|---|---|---|---|---|---|
| | | Individual Failure (96, 78.7) | | System Failure (26, 21.3) | |
| **Level 1 - expected M or M appropriately dealt with.** Even though a complication occurred, actions were taken to prevent the complication, it was recognized in a timely fashion, and it was managed correctly. | 139 (70.2) | **Competency**<br>• Uniformed Skills<br>• Inadequate Knowledge | (78, 63.9)<br>(61, 50)<br>(17, 13.9) | **Structure**<br>• Resource allocation<br>• Collaboration mechanisms | (3, 2.5)<br>(0, 0)<br>(3, 2.5) |
| **Level 2 - unexpected M or M, but no identifiable opportunity for improvement.** | 24 (12.1) | **Consciousness**<br>• Inattention<br>• Distraction | (4, 3.3)<br>(4, 3.3)<br>(0, 0) | **Culture**<br>• Non-collaboration<br>• Normalized deviance | (5, 4.1)<br>(5, 4.1)<br>(0, 0) |
| **Level 3 - unexpected M or M, potentially avoidable with possibility to improve care.** | 33 (16.7) | **Communication**<br>• Incorrect assumption<br>• Misinterpretation | (7, 5.7)<br>(6, 4.9)<br>(1, 0.8) | **Process**<br>• Inadequate interface<br>• Inadequate checks | (4, 3.3)<br>(2, 1.6)<br>(2, 1.6) |
| **Level 4 - unexpected M or M with high likelihood to improve care.** Also, a morbidity that would have been Level 1, but actions not taken to prevent complication, event not recognized in a timely fashion, event managed incorrectly. | 2 (1.0) | **Critical thinking**<br>• Failure to validate/verify<br>• Tunnel vision | (7, 5.7)<br>(5, 4.1)<br>(2, 1.6) | **Policy & Protocol**<br>• Lacking or informal<br>• Usability<br>• Understandability | (12, 9.8)<br>(12, 9.8)<br>(0, 0)<br>(0, 0) |
| | | **Compliance**<br>• Shortcut<br>• Overconfident<br>• Reckless | (0, 0)<br>(0, 0)<br>(0, 0)<br>(0, 0) | **Technology & Environment**<br>• Arrangement<br>• Environment<br>• Human capability | (2, 1.6)<br>(0, 0)<br>(1, 0.8)<br>(1, 0.8) |

**Notes:**