A Prospective Study of a New Rounding Structure and its Effects on Learner Perceptions of Rounds

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Disclosures

• No disclosures
Introduction

• The American Academy of Pediatrics (AAP) supports family-centered care (policy statements in 2003 and 2012)
• Family-centered rounds (FCR) supports and facilitates such care
• Benefits of FCR:
  – Improved patient and family satisfaction, shorter hospital stays.\(^1\)
  – Delays in discharge attributable to poor communication among the healthcare team.\(^2\)
  – Increased nursing satisfaction when included and involved in FCR\(^{1,3,4}\)
  – Oshimura et al found a 7% increase in earlier discharges.\(^2\)
  – Cox et al found that family perceptions of staff communication, a measure of patient safety, significantly increased.\(^5\)
Introduction

• No standardized FCR format exists
  – FCR varies between institutions, with differences in personnel attending rounds, location, and trainees participation.\textsuperscript{1,5,7}
  – Sisterhen et al (2007) described FCR as being “bedside rounds in which the patient and family share in the control of the management plan.”\textsuperscript{6}

• Overall, there has been a decline in bedside rounding across multiple medical disciplines.\textsuperscript{8}

• PRIS network study (2010) of rounding structure\textsuperscript{7}
  – 44% of participants conducted FCR in the patient’s room
  – 24% conducted hallway rounds
  – 21% conducted sit-down rounds
    • Sit-down rounds tended to be shorter in duration
Introduction

- Commonly-cited barriers to effective FCR include:
  - Attending’s personal approach to rounds, resident discomfort, and student discomfort \(^7,9,10\)
  - Senior residents cite a perceived lack of autonomy with increased family participation.\(^{10}\)
    - Setting pre-rounds expectations can help increase perceived resident autonomy.\(^{11}\)
  - Room size and the size of the rounding team is also perceived to be a hindrance to FCR\(^7\)
Introduction

• Rounds try to delicately balance task-related duties with resident and medical student education

• The aim of our study was to compare traditional hallway rounds with a new conference room rounding style with regards to learner perceptions of rounds
Methods

- All students and residents participating in 4th and 6th floor hospitalist rounds were included in this study.
- In November 2017, a conference room rounding model involving families was developed on 4th floor with multidisciplinary key stakeholders.
  - Remained multidisciplinary (nursing, pharmacy, social work, case management, dietician, residents, students, subspecialists if available)
  - Families were brought to the conference room for FCR
  - Rounding order established in AM by senior resident
    - Interesting patients could be examined as a group after FCR, though was at the team’s/attending’s discretion
- 6th floor continued to utilize hallway rounds.
Methods

All Med/Surg Teams Utilize Hallway FCR

November 2017 Implementation

4th Floor Med/Surg Team: Conference Room FCR

6th Floor Med/Surg Team: Hallway FCR
Methods

- Surveys conducted from December 2017 – April 2018
  - Independent surveys were constructed for students, residents, nursing, and families
  - 9-point Likert scale (1=strongly disagree, 9=strongly agree)
  - Surveys assessed comfort when presenting, learner confidence, educational value, learner value, preparedness, efficiency, communication, disruptions and family engagement
- The independent sample t-test was used to compare 4th floor and 6th floor responses for students and residents separately.
- P < 0.05 was considered statistically significant.
Methods

4th Floor Medical Students (n=37)
- Excluded: unable to survey, schedule changes (n=7)
- Excluded: had already participated on the other floor (n=12)

4th Floor Medical Students Surveyed (n=18)

6th Floor Medical Students (n=48)
- Excluded: unable to survey, schedule changes (n=12)
- Excluded: had already participated on the other floor (n=13)

6th Floor Medical Students Surveyed (n=23)
Methods

48 Residents on 4th or 6th Floor

Excluded: unavailable to survey, previously surveyed

4th Floor Residents (n=15) and 6th Floor Residents (n=9) Surveyed
# Results

## Students, Comparison of Floor 4 and Floor 6

<table>
<thead>
<tr>
<th>What floor are you on?</th>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>Std Dev</th>
<th>Median</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>4th Floor</td>
<td>1. I feel comfortable presenting on family centered rounds</td>
<td>18</td>
<td>7.67</td>
<td>0.97</td>
<td>8.00</td>
<td>5.00</td>
<td>9.00</td>
</tr>
<tr>
<td></td>
<td>2. I feel confident talking to families about medical decisions</td>
<td>18</td>
<td>6.89</td>
<td>1.13</td>
<td>7.00</td>
<td>4.00</td>
<td>9.00</td>
</tr>
<tr>
<td></td>
<td>3. I find family centered rounds educational</td>
<td>18</td>
<td>8.00</td>
<td>0.97</td>
<td>8.00</td>
<td>6.00</td>
<td>9.00</td>
</tr>
<tr>
<td></td>
<td>4. I feel like a valuable member of the team on family centered rounds</td>
<td>18</td>
<td>7.11</td>
<td>1.02</td>
<td>7.00</td>
<td>5.00</td>
<td>9.00</td>
</tr>
<tr>
<td></td>
<td>5. I felt prepared to participate in family centered rounds</td>
<td>18</td>
<td>7.56</td>
<td>1.20</td>
<td>7.50</td>
<td>4.00</td>
<td>9.00</td>
</tr>
<tr>
<td>6th Floor</td>
<td>1. I feel comfortable presenting on family centered rounds</td>
<td>23</td>
<td>6.65</td>
<td>1.47</td>
<td>7.00</td>
<td>3.00</td>
<td>9.00</td>
</tr>
<tr>
<td></td>
<td>2. I feel confident talking to families about medical decisions</td>
<td>23</td>
<td>6.52</td>
<td>0.99</td>
<td>6.00</td>
<td>4.00</td>
<td>8.00</td>
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<tr>
<td></td>
<td>3. I find family centered rounds educational</td>
<td>23</td>
<td>6.13</td>
<td>1.69</td>
<td>7.00</td>
<td>3.00</td>
<td>9.00</td>
</tr>
<tr>
<td></td>
<td>4. I feel like a valuable member of the team on family centered rounds</td>
<td>23</td>
<td>6.30</td>
<td>1.66</td>
<td>7.00</td>
<td>1.00</td>
<td>8.00</td>
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<tr>
<td></td>
<td>5. I felt prepared to participate in family centered rounds</td>
<td>23</td>
<td>6.43</td>
<td>1.31</td>
<td>7.00</td>
<td>4.00</td>
<td>9.00</td>
</tr>
</tbody>
</table>

### Variable

1. I feel comfortable presenting on family centered rounds  
2. I feel confident talking to families about medical decisions  
3. I find family centered rounds educational  
4. I feel like a valuable member of the team on family centered rounds  
5. I felt prepared to participate in family centered rounds

### p-value

- 0.016*  
- 0.28  
- <0.0001*  
- 0.064  
- 0.0075*
## Results

### Residents, Comparison of Floor 4 and Floor 6

<table>
<thead>
<tr>
<th>What floor are you on?</th>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>Std Dev</th>
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<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>4th Floor</td>
<td>1. Family centered rounds are efficient</td>
<td>15</td>
<td>6.53</td>
<td>1.77</td>
<td>7.00</td>
<td>3.00</td>
<td>9.00</td>
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<tr>
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<td>2. Family centered rounds are educational</td>
<td>15</td>
<td>6.47</td>
<td>1.73</td>
<td>7.00</td>
<td>4.00</td>
<td>9.00</td>
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<td>3. Family centered rounds improve communication between the team</td>
<td>15</td>
<td>7.53</td>
<td>1.30</td>
<td>8.00</td>
<td>4.00</td>
<td>9.00</td>
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<tr>
<td></td>
<td>4. I am often paged during family centered rounds</td>
<td>15</td>
<td>4.93</td>
<td>1.53</td>
<td>5.00</td>
<td>2.00</td>
<td>7.00</td>
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<tr>
<td></td>
<td>5. Family centered rounds effectively engage patients and their families</td>
<td>15</td>
<td>7.73</td>
<td>0.80</td>
<td>8.00</td>
<td>6.00</td>
<td>9.00</td>
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<tr>
<td>6th Floor</td>
<td>1. Family centered rounds are efficient</td>
<td>9</td>
<td>4.89</td>
<td>2.47</td>
<td>4.00</td>
<td>2.00</td>
<td>9.00</td>
</tr>
<tr>
<td></td>
<td>2. Family centered rounds are educational</td>
<td>9</td>
<td>5.78</td>
<td>1.99</td>
<td>6.00</td>
<td>2.00</td>
<td>9.00</td>
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<td>3. Family centered rounds improve communication between the team</td>
<td>9</td>
<td>6.56</td>
<td>1.88</td>
<td>7.00</td>
<td>4.00</td>
<td>9.00</td>
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<tr>
<td></td>
<td>4. I am often paged during family centered rounds</td>
<td>9</td>
<td>6.22</td>
<td>1.92</td>
<td>6.00</td>
<td>4.00</td>
<td>9.00</td>
</tr>
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<td></td>
<td>5. Family centered rounds effectively engage patients and their families</td>
<td>9</td>
<td>5.89</td>
<td>1.90</td>
<td>7.00</td>
<td>4.00</td>
<td>9.00</td>
</tr>
</tbody>
</table>

### Variable p-value

- 1. Family centered rounds are efficient: 0.07
- 2. Family centered rounds are educational: 0.38
- 3. Family centered rounds improve communication between the team: 0.15
- 4. I am often paged during family centered rounds: 0.083
- 5. Family centered rounds effectively engage patients and their families: 0.020*
Results

• Among students:
  – Statistically significant differences between 4th and 6th floor regarding:
    • Perceived comfort presenting (p=0.016; mean 4th floor response = 7.67, mean 6th floor response = 6.65)
    • Educational value (p<0.0001; mean 4th floor response = 8.00, mean 6th floor response = 6.13)
    • Preparedness (p=0.0075; mean 4th floor response = 7.56, mean 6th floor response = 6.43)

• Among residents:
  – Statistically significant difference between floors regarding:
    • Perceived family engagement (p=0.020; mean 4th floor response = 7.73, mean 6th floor response = 5.89).
Discussion

• When compared to hallway rounds, students perceived conference room rounds to be more educational while feeling more prepared to round and more comfortable presenting.

• Residents perceived conference room rounds to provide more family engagement.
  – A place to sit down provides a quiet, distraction-free space
  – Learners may feel less intimidated in such a space
  – Time available for preparation prior to family
  – Nursing presence was near 100% for sit-down rounds
Discussion

• Comments include:
  – “Much more private”
  – “More of an atmosphere for teaching”
  – “Allows for a controlled environment that allows everyone to focus on the discussion”
  – “It is easier to hear everyone”
  – “Everyone feels comfortable saying something, especially the parents”

  – “I feel very uncomfortable talking in the hallway about certain issues”
  – “I do not feel confident in my presentation skills” (referring to hallway rounds)
Limitations

- Small sample size, especially residents
- Generalizability
- Varied attending styles
- Differing patient populations between teams
- Some survey responses may be influenced by students advancing through third year
Conclusions

• Some component of conference room rounds may be beneficial to learner education while continuing to participate in multidisciplinary, family-centered care.

• Further studies across the rounding continuum are necessary to optimize learner education, patient safety and family involvement.
Future Directions

- Analysis of family and nursing data
- Thematic analysis of comments from residents and students
- Future QI project related to emerging themes from comments?
References

Questions?