Understanding the impact of Ronald McDonald House: Length of stay and family-centered supportive services across patient, family and demographic factors

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PROJECT IMPACT

• Our research highlights the substantive need for housing and supportive services filled by Ronald McDonald House during pediatric hospital stays
• Our findings reaffirm the profound impact of social services on patients and families and the crucial role of community partners in medical care

FUTURE DIRECTIONS
• This work will inform RMHC Bay Area in anticipating LOS for families requesting and planning to stay
• Our project serves as the first steps into analysis of RMHC Bay Area’s data collection, which will support ongoing quality improvement projects, fundraising efforts, and expansion of services at RMHS
• Our team intends to translate this study’s methods and framework to support ongoing impact assessments in the global network of nearly 400 RMHC chapters

LESSONS LEARNED
• Working on research that reaches outside of your medical school is a wonderful learning experience, as the reality of medical care similarly extends beyond healthcare institutions
• Before launching into a community-engaged research project, dedicate time and energy to learning about the community and/or organization’s history, workflows/practices, various stakeholders, and existing resources

MOTIVATION

• Our project was motivated by several key questions:
  • How does length of stay at RMHC, and consequently length of medical services needed, impact a critically ill child and their family’s needs, and what can RMHC do to better meet these differing needs?
  • How might the needs and utilization of RMHC services differ for families when their children are receiving care over varying lengths of time?

PROJECT DESCRIPTION

• This mixed-methods study 1) evaluated the range of stays at RMHS; 2) analyzed patient and family factors associated with LOS; and 3) interviewed families on the family factors associated with LOS; 2) analyzed patient and family factors using univariate mixed effect logistic regression models

METHODS

• Community partner immersion, stakeholder interviews, and project needfinding in the first two quarters of fellowship
• Submitted project methods for IRB review and created data use agreement for dataset transfer
• Qualitative: Semi-structured interviews with 7 RMHS families with varying LOS and thematic analysis of family needs and program impact
• Quantitative: Mapped LOS distributions and assessed association with patient- and family-factors using univariate mixed effect logistic regression models

RESULTS

• Between 1/1/2018-12/31/2019, RMHS housed 2,092 families and 2,128 patients across 4,145 distinct stays
• Families for the youngest patients and families farthest from home were significantly associated with longer LOS (Table 1)
  • Most clinical departments provided care that require shorter stays (<4 nights) except pregnancy & newborn care (Table 2)
• Family interviews identified several themes on the stessors of chronic medical care, value of community among families facing pediatric illness, and the role of RMHS in improving outcomes and access to care (Table 3)

OUTCOMES

• plunge into a community partnership, vulnerable to the needs and needs of the families they serve...

Table 1: Distribution of stays at Ronald McDonald House Stanford (RMHS) stratified by length of stay

<table>
<thead>
<tr>
<th>Age of patient at visit</th>
<th>Length of Stay (by nights)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Q2: 1-2 night</td>
</tr>
<tr>
<td></td>
<td>Q3: 2-3 nights</td>
</tr>
<tr>
<td></td>
<td>Q4: 3-12 nights</td>
</tr>
<tr>
<td></td>
<td>P-value</td>
</tr>
</tbody>
</table>

- 0-1 year old: 155 (26.09%) 156 (26.13%) 242 (25.07%) 444 (42.81%) 4.0001
- 1-5 years old: 266 (33.54%) 190 (23.96%) 162 (20.46%) 375 (20.07%)
- 6-10 years old: 269 (29.21%) 175 (20.52%) 159 (18.69%) 377 (16.52%)
- 11-15 years old: 333 (29.56%) 422 (35.57%) 403 (34.27%) 724 (16.57%)

Distance between families and RMHS
- Within 50 miles radius: 23 (11.82%) 41 (21.47%) 70 (38.29%) 142 (41.39%)<0.0001
- Within 100 miles radius: 303 (27.97%) 289 (26.64%) 246 (22.67%) 586 (26.99%) 0.125
- 100-100 miles radius: 902 (32.17%) 418 (22.27%) 623 (22.88%) 1,721 (22.22%)

Table 2: Distribution of stays at Ronald McDonald House Stanford (RMHS) stratified by length of stay for common referring medical departments

<table>
<thead>
<tr>
<th>Primary referring medical department</th>
<th>Total Length of Stay (by nights)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>4 nights</td>
</tr>
<tr>
<td>Pregnancy &amp; Newborn Care</td>
<td>56 (19.58%)</td>
</tr>
<tr>
<td>Cardiology</td>
<td>383 (44.07%)</td>
</tr>
<tr>
<td>Hematology &amp; Oncology</td>
<td>360 (58.16%)</td>
</tr>
<tr>
<td>Surgery</td>
<td>86 (45.03%)</td>
</tr>
<tr>
<td>Transplant</td>
<td>277 (53.29%)</td>
</tr>
</tbody>
</table>

Table 3: Major themes from qualitative interviews on the impact of Ronald McDonald House Stanford (RMHS) on the family and patient experience

- “Ronald McDonald House has been a very important part of our experience. Without them, our family wouldn’t have been able to be together... What’s beautiful about the House and the organization is that families become family.”
- “For me, it’s more than a bed. It’s a place of mind that is too, when we have to pack our bags and come to the hospital, to take that worry off the plate. I know that we have a place to land at the end of the day.”
- “For your child, they get to know other kids who go through similar things. It might not be the same thing, but they’re struggling, they’re away from home, they’re having surgeries, they’re in nursing. The bonding and friendship that was happening at the House — they’re like nothing else you experience.”
- “Even if we go to the hospital for a visit, she always asks if Ronald McDonald House is open so she can go play with her friends.”
- “Working on research that reaches outside of your medical school is a wonderful learning experience, as the reality of medical care similarly extends beyond healthcare institutions
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