

## OUR COMMUNITY PARTNER

- Ronald McDonald House Charities (RMHC) Bay Area's 123-bedroom Stanford House (RMHS) provides housing and support services for families with critically ill children receiving care at Lucile Packard Children's Hospital Stanford
- <https://rmhcbayarea.org/>
- This project was the first partnership between the Valley Fellowship Program and RMHC Bay Area!

## 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 impact of Ronald McDonald House services on their medical, financial, and psychosocial needs

## OUTCOMES

### METHODS

- Community partner immersion, stakeholder interviews, and project needfinding in the first two quarters of fellowship
- Submitted project materials 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

Table 1: Distribution of stays at Ronald McDonald House Stanford (RMHS) stratified by length of stay quartiles across age of patients at visit and families' distance from home

	Length of Stay Quartiles (by nights)				p-value
	Q1: ≤ 1 night	Q2: 2 – 3 nights	Q3: 4–11 nights	Q4: ≥ 12 nights	
<b>Age of patient at visit</b>					
≤ 1 year old	155 (16.03%)	156 (16.13%)	242 (25.03%)	414 (42.81%)	<.0001
1 – 5 years old	266 (33.54%)	190 (23.96%)	162 (20.43%)	175 (22.07%)	
6 – 10 years old	269 (39.21%)	175 (25.51%)	135 (19.68%)	107 (15.60%)	
≥ 11 years old	555 (33.56%)	422 (25.51%)	403 (24.37%)	274 (16.57%)	
<b>Distance between families' home &amp; RMHS</b>					
Within 50 mile radius	32 (12.96%)	43 (17.41%)	70 (28.34%)	102 (41.3%)	<.001
Within 50 - 100 mile radius	303 (27.75%)	269 (24.63%)	234 (21.43%)	286 (26.19%)	
> 100 miles radius	902 (33.17%)	618 (22.73%)	622 (22.88%)	577 (21.22%)	

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

Theme 1: The emotional, familial, and financial stressors of chronic medical care and relief of housing security	Theme 2: The value of community among families dealing with pediatric illness	Theme 3: The important role of family-centered programs in improving outcomes and access to care
"Ronald McDonald has been a very, very important part of our experience. Without them, our family wouldn't be able to be together...What's beautiful about the House and the organization is that it keeps families together."	"It's an isolating thing to go through...Meeting other families opened up a different world for me, to realize that you're not alone, that there are all these families out there. We know how it feels, we know the frustration and the hardship and the blessings. It's a huge part of care."	"For us, it was a miracle. I don't think we would have been able to access the amazing specialty care that we received at Stanford if it weren't for Ronald McDonald."
"For me, it goes beyond a bed. There's a peace of mind in that too, when I 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 hurting. This extra bonding and friendship that was happening at the House – they're like nothing else you experience."	"I think it's had a great impact on my daughter's healthcare, because we have this security. Our peace of mind makes her relaxed. She recognizes right away when we're stressed or angry even if we don't tell her. I think her knowing we're relaxed helps her in her [healing] process as well."
"It's a relief that we don't have to pay for a regular hotel. That's money that we can put towards other things for her."	"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."	Ronald McDonald was a life saver, and I think if we had not gotten in, we may not have been able to go."
"Being sick is incredibly complicated and difficult. For me at times, it has been backbreaking and crushing – soul-crushing. It's brutal. So what kind of successes are other people having? How are their kids? What's happening to their kids? Our infrastructure is highly flawed."	"I always like to say that my daughter's physicians, nurses, technicians, hospitals – they saved my daughter's life more than once. But it is the therapists, the physical therapists, the psychologists, the child life specialists, and the other patients and their families who have saved my daughter's quality of life."	Staying at the House kept us sane. Without the Ronald McDonald services, it would have affected my mental health, and our family dynamics. We wouldn't have been as supported, so I don't know how strong I could have been for my daughter. Keeping us sane was very helpful for her health."
You just kind of feel helpless, you can't really do anything about your child's diagnosis. They have counseling and that really helped me a lot."	"I'd talk to these parents and hear their child's story and share mine. It's nice to know that these families have been through the same hardships as us. That's really comforting."	"Being able to keep her around her family – her brothers and sisters – was important. She was 2 months old and barely got a feel of what home is before having to stay at the hospital – I think having family was really important for her."

### 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 stressors 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)

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

Primary referring medical department	Total Length of Stay (by nights)				
	<4 nights	4– 14 nights	15 – 30 nights	31– 60 nights	≥ 61 nights
Pregnancy & Newborn Care	56 (19.58%)	72 (25.17%)	60 (20.98%)	55 (19.23%)	43 (15.03%)
Cardiology	383 (44.07%)	251 (28.88%)	125 (14.38%)	64 (7.36%)	46 (5.29%)
Hematology & Oncology	360 (58.16%)	137 (22.13%)	49 (7.92%)	43 (6.95%)	30 (4.85%)
Surgery	86 (45.03%)	79 (41.36%)	21 (10.99%)	3 (1.57%)	2 (1.05%)
Transplant <sup>a</sup>	277 (61.28%)	89 (19.69%)	29 (6.42%)	27 (5.97%)	30 (6.64%)

a. Includes heart, kidney, and liver transplant

## 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