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Rural and Urban Caregiver Experiences of Financial Strain and Food Insecurity During Pediatric Hospitalizations

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Describe role of Submitting/Presenting Trainee in this project (limit 150 words):

Involved in biweekly discussions throughout data collection process, data analysis and synthesis, and abstract creation.

Background, Objectives/Goal, Methods/Design, Results, Conclusions limited to 500 words

Background: Stress is common among caregivers of hospitalized children. In addition to stress related to their child's illness, caregivers experience stress related to financial strain and food insecurity during their child's hospitalization. The burden of financial strain and food insecurity related to pediatric hospitalizations may vary between rural and urban populations.

Objectives/Goal: To identify financial strain and food insecurity experienced by caregivers of hospitalized children and to describe differences between rural and urban populations.

Methods/Design: A prospective cross-sectional survey enrolled a random sample of caregivers of hospitalized children between 8/31/2021 and 12/2/2022 at a single children's hospital. Demographic information was collected and caregivers were surveyed about financial strain and food insecurity during their child's hospitalization. Bivariate analyses were used to determine statistically significant differences between rural and urban populations. Caregiver free text responses were analyzed to identify themes for primary stressors, exacerbators of stress, and alleviators of stress; in this analysis, we investigated the subthemes of financial strain and food insecurity.

Results: 170 caregivers, (47.7% rural) participated in the study (Table 1). A greater proportion of rural caregivers were white (70.8% vs. 80.2%; $p=0.027$) and reported lower levels of income (33.7% vs. 56.8% income <\$50,000 per year; $p=0.031$). More than two-thirds of all caregivers (69.4%) reported skipping meals during their hospitalization with 30.6% of all respondents reporting skipping meals secondary to cost. Over one-quarter (25.9%) of caregivers reported concerns of job loss and 53% were unable to use paid leave during the hospitalization (Table 2). Apart from travel costs, rural and urban caregivers reported similar rates of skipped meals, concerns regarding job loss, lack of access to paid leave, lost wages, meal costs, and other costs associated with the hospitalization. Financial strain and food insecurity themes were categorized into subthemes (Figure 1). Numerous caregivers reported a primary stressor of financial strain, including lost wages, job insecurity, insurance concerns, out of town expenses, and cost of medical care related to their child's hospitalization (Table 3). Many reported similar subthemes as factors that exacerbated their stress. Several individuals reported a primary stressor or stress exacerbated secondary to difficulty affording or obtaining food (Table 4). Only a few participants reported factors related to finances and food that alleviated their stress, including free parking/amenities, food vouchers, and food availability.

Conclusions: Pediatric hospitalizations may lead to multifactorial financial burdens for families including lost wages, and increased food and transportation costs in addition to medical costs. We describe that in-hospital food insecurity and financial strain exists for caregivers, regardless of rurality. Financial strain and in-hospital food insecurity were also often primary stressors or factors exacerbating stress during their child's hospitalization which may limit the ability for caregivers to participate in care delivery. Since they are a primary member of care teams, in-hospital supports for caregivers aimed at reducing food insecurity and financial strain should be considered an essential component of pediatric hospital care.

Table 1: Demographic Characteristics of Hospitalized Children by Location of Residence

	Overall	Non-Rural	Rural	p-value
N	170	89 (52.4)	81 (47.7)	
Age, Median (IQR)	33 [28, 39]	33 [30, 38]	33 [27, 41]	0.715
Sex, N (%)				
Female	121 (71.2)	62 (69.7)	59 (72.8)	0.648
Male	49 (28.8)	27 (30.3)	22 (27.2)	
Race, N (%)				
American Indian/Alaskan Native	1 (0.6)	0 (0)	1 (1.2)	0.027
Asian	1 (0.6)	1 (1.1)	0 (0)	
Native Hawaiian/Pacific Islander	1 (0.6)	1 (1.1)	0 (0)	
Black	15 (8.8)	13 (14.6)	2 (2.5)	
White	128 (75.3)	63 (70.8)	65 (80.2)	
More than One Race	11 (6.5)	3 (3.4)	8 (9.9)	
Prefer Not to Answer	12 (7.1)	8 (9)	4 (4.9)	
Ethnicity, N (%)				
Hispanic	27 (15.9)	14 (15.7)	13 (16)	0.287
Non-Hispanic	134 (78.8)	72 (80.9)	62 (76.5)	
Prefer Not to Answer	8 (4.7)	2 (2.2)	6 (7.4)	
Education, N (%)				
Did not Graduate High School	17 (10)	9 (10.1)	8 (9.9)	0.565
Graduated High School	41 (24.1)	21 (23.6)	20 (24.7)	
Attended Some College	45 (26.5)	20 (22.5)	25 (30.9)	
Bachelor's Degree	45 (26.5)	28 (31.5)	17 (21)	
Advanced Degree	22 (12.9)	11 (12.4)	11 (13.6)	
Family Income, N (%)				
\$25,000 or less	35 (20.6)	14 (15.7)	21 (25.9)	0.031
\$25,001 - \$50,000	41 (24.1)	16 (18)	25 (30.9)	
\$50,001 - \$100,000	52 (30.6)	29 (32.6)	23 (28.4)	
\$100,001 - \$150,000	27 (15.9)	18 (20.2)	9 (11.1)	
\$150,001 or greater	13 (7.6)	10 (11.2)	3 (3.7)	
Employment, N (%)				
Full-time	118 (69.4)	66 (74.2)	52 (64.2)	0.100
Part-time	20 (11.8)	12 (13.5)	8 (9.9)	
None	31 (18.2)	11 (12.4)	20 (24.7)	

Table 2. Financial Stress and Food Insecurity of Hospitalized Children by Location of Residence

	Overall	Non-Rural	Rural	p-value
Skipped meals, N (%)				
No	52 (30.6)	30 (33.7)	22 (27.2)	0.355
Yes	118 (69.4)	59 (66.3)	59 (72.8)	
Skipped meals due to cost, N (%)				
No	118 (69.4)	63 (70.8)	55 (67.9)	0.683
Yes	52 (30.6)	26 (29.2)	26 (32.1)	
Concerns about losing job, N (%)				
No	126 (74.1)	68 (76.4)	58 (71.6)	0.475
Yes	44 (25.9)	21 (23.6)	23 (28.4)	
Able to use paid leave, N (%)				
No	89 (53)	44 (50)	45 (56.3)	0.418
Yes	79 (47)	44 (50)	35 (43.8)	
Lost wages or tips, Median \$ (IQR)				
	200 [0, 675]	155 [0, 687.5]	250 [0, 650]	0.662
Cost of travel to and from hospital, Median \$ (IQR)				
	100 [50, 200]	100 [50, 150]	110 [70, 250]	0.003
Cost of meals at the hospital, Median \$ (IQR)				
	60 [30, 117.5]	75 [30, 150]	50 [25, 100]	0.113
Cost of additional childcare, Median \$ (IQR)				
	0 [0, 0]	0 [0, 0]	0 [0, 0]	0.695
Other costs, Median \$ (IQR)				
	0 [0, 100]	0 [0, 100]	10 [0, 100]	0.643

Figure 1: Financial and Food Insecurity Subthemes Identified as the Primary Stressor, Exacerbating Stressor, or Alleviating Stressor

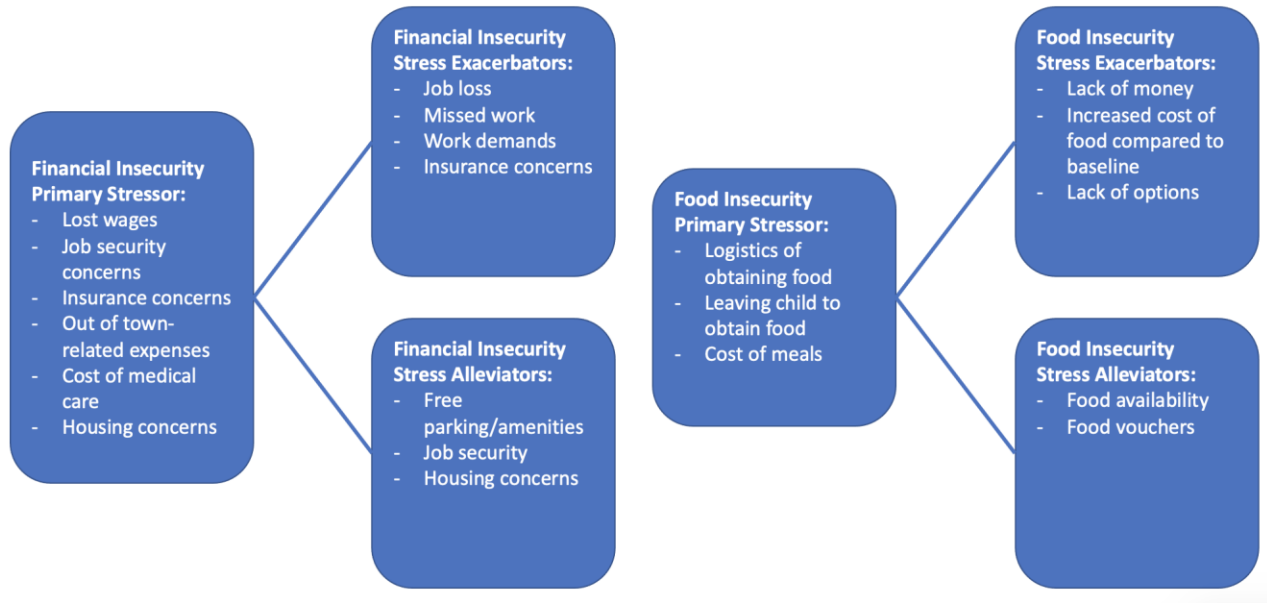


Table 3: Subthemes of Financial Insecurity Recognized as a Primary Stressor with Associated Caregiver Quotes

Lost wages	"Wondering how I will pay the bills since I've missed work without pay."
	"Taking off work, and not having PTO to compensate for my time off."
	"Work has been understanding but I did not have enough PTO to cover these days being paid."
	"Not sure how all of our books are going to get paid with not working."
Job security	"Concerns about treatment after we leave the hospital and my job security."
	"...4. Stress regarding having to leave my job to care for him, 5. Stress over meeting his caregiving needs."
Insurance	"This is a new insurance company and we don't know what they cover."
	"Finding out my child had no insurance."
Out of town-related expenses	"The expense of being out of town, meals not expected to have to prepare for out of town, making accommodations for members at home, etc."
	"The severity of my child's condition, the unknown cause of illness, being able to care for my other child from afar, and the gas prices with multiple trips."
Cost of medical care	"The wellbeing of my child and the associated cost for a hospital stay and ambulance transfer."
	"Cost of hospitalization."
	"Also, just the cost that we incur with this visit (though I would pay any amount for my child to be okay and have been happy with her care here)."
Questionable housing	"Not knowing if I have a place to stay and how am I going to make it and stay strong for my child."

Table 4: Subthemes of Food Insecurity-Related Stressors and Stress Alleviators with Associated Caregiver Quotes

Primary stressor	
Logistics of obtaining food	“Not being able to be home with my other child, figuring out childcare at home, figuring out food for my stay, being able to leave the room to get food, not getting a lot of sleep.”
	“The expense of being out of town, meals not expected to have to prepare for out of town, making accommodations for members at home, etc.”
Leaving child	“Leaving my child alone to go downstairs to get meals.”
Cost of food	“Costly meals.”
Worsened stress	
Lack of money	“Lack of money. Lack of food.”
Increased food cost	“Having to spend more money on gas and food than I'm used to.”
Lack of options	“Not having a decent reasonably priced place to eat close by. The cafeteria here does not have palatable options.”
Alleviated stress	
Food availability	“The staff were communicative, would interact warmly with child (ie offering to show a procedure on a stuffed animal), availability of food/items on site.”
	“Constant advice, educational videos from hospital, food available, safety precautions and overall environment.”
Vouchers	“Food vouchers for breastfeeding so I'm not stressing about spending \$30-\$40 a day on food.”
	“The nurses, my husband, and the food vouchers.”