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Almost one-third of families of children with cancer have unmet basic needs during treatment

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Almost one-third of families whose children were being treated for cancer faced food, housing or energy insecurity and one-quarter lost more than 40 percent of household income, according to a new study from Dana-Farber/Boston Children's Cancer and Blood Disorders Center. The study follows emerging research in pediatric oncology finding that low-income status predicts poor adherence to oral chemotherapy and decreased overall survival.

The results, which were published today in *Pediatric Blood & Cancer*, were culled from surveys of 99 Dana-Farber/Boston Children's patients taken within a month of diagnosis and six months later. The findings surprised researchers, who expected lower levels of need at a major center that provides psychosocial support for each patient and has resource specialists to help families facing financial difficulties.

"What it says is that even at a well-resourced, large referral center, about a third of families are reporting food, housing or energy insecurity six months into treatment," says lead author Kira Bona, MD, MPH, a pediatric oncologist at Dana-Farber/Boston Children's. "If anything, the numbers in our study are an underestimate of what might be seen at less well-resourced institutions, which was somewhat surprising to us."

In addition to providing a window into the financial pressures - from work disruption to added expenses - that families face when a child is

being treated for cancer, the new study utilizes an alternative measure of economic need. By focusing on specific material hardships, which can be addressed through governmental or philanthropic supports, the researchers hope they have identified variables that are easier for clinicians to ameliorate than overall income. Subsequent research, Bona says, will examine whether material hardship has the same effect on outcomes as low-income status.

"If household material hardship is linked to poorer outcomes in pediatric oncology, just like income is, then we can design interventions to fix food, housing and energy insecurity," Bona says. "It's not clear what you do about income in a clinical setting."

Researchers defined low-income as 200 percent of the federal poverty level. Other findings include:

- At diagnosis, 20 percent of families were low-income; six months later an additional 12 percent suffered income losses that pushed their income below 200 percent of the federal poverty level.
- By six months after diagnosis, most (56 percent) of adults who supported their families experienced a disruption of their work. This included 15 percent of parents who either quit their jobs or were laid off as a result of their child's illness. An additional 37 percent cut their hours or took leaves of absence. Only a third (34 percent) were paid during their leave.
- At six months after diagnosis, 29 percent of families reported at least one material hardship - up from the 20 percent who reported material hardship at the time of diagnosis. Six months after their child's diagnosis, 20 percent of families reported food insecurity, 17 percent reported energy insecurity, and 8 percent reported housing insecurity.

"Household material hardship provides a quantifiable and remediable measure of poverty in pediatric oncology," the study concludes. "Interventions to ameliorate this concrete component of poverty could benefit a significant proportion of pediatric oncology families."

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