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## CONFERENCE ABSTRACT

### **Informal Caregiving: Implications for Healthcare Expenditures**

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#### ***Introduction***

Informal caregivers are family, friends, and neighbors who provide assistance to people in need of care without pay. Caregivers play a critical role in patients' care. Care provided by informal caregivers is often seen as a lower cost substitute to formal care and their contributions are assumed to take strain off the care system. Caregivers, however, report significant consequences such as a decline in their health and a higher use of healthcare services due to their caregiving responsibilities. While many studies have explored these outcomes using self-reported measures, use of administrative databases to substantiate such claims is rare. The objective of this study was to examine the impact of caregiving on healthcare utilization amongst informal caregivers.

#### ***Methods***

The outcome was total healthcare expenditures for publicly funded healthcare services in Ontario, Canada. The population consists of Ontarians who a) participated in the 2008/09 Canadian Community Health Survey – Health Aging Supplement Survey (CCHS-HAS) and b) provided consent to link their survey results to health administrative databases. The exposure was measured as self-reported role as a primary caregiver that started within 5 years of the date that the survey was completed; the comparison group was those who did not self-identify as caregivers in CCHS-HAS. Total healthcare costs of caregivers and non-caregivers were compared pre versus post reported caregiving start date using a difference-in-differences design. Both one and two-year periods of healthcare utilization were examined. The study period was 2002 to 2011. Generalized Linear Models is used to model the total healthcare costs. Sensitivity analyses were conducted to test the robustness of the results.

#### ***Results***

The sample consists of 1265 caregivers and 3010 non-caregivers. The average age was 62.6 and 67.7 for caregivers and non-caregivers, respectively. Nearly 60% of caregivers and 54% of the non-caregivers were female. After adjusting for confounders, it was found that while caregivers' costs associated with use of publicly funded services increased over time, caregiving had a negative impact on total costs in comparison to non-caregivers. Caregivers used the healthcare services less than non-caregivers. In the first year after

caregiving this difference was 3% but not statistically significant. This, however, changed with time; the difference increased by 8% to 11% and became statistically significant.

### ***Discussion***

Despite overwhelming self-reported evidence of caregivers' declining health and increased use of health services due to caregiving, we found that use of healthcare services increased by a lesser amount amongst caregivers than for non-caregivers. If caregivers' health has not similarly improved relative to non-caregivers, this suggests that caregivers may not have time to ensure their own medical needs are addressed.

### ***Conclusions***

Our findings suggest the need for careful consideration of caregivers and their needs when designing and implementing healthcare interventions such as integrated care models.

### ***Lessons learned***

By providing an estimation of healthcare expenditure implications of caregiving, we offer an alternative method to be considered in economic evaluations of the healthcare system, evaluation studies, health economics, and caregiving studies.

### ***Limitations***

The main limitation is that caregiver status and timing is based on survey self-report which could incorrectly classify the exposure and bias estimates of cost. Lack of specific data on caregiving characteristics (e.g. hours of care provided) could have introduced bias in our results.

### ***Future research***

More research in different jurisdictions and on different caregiver populations are required to substantiate our findings.