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THE CONCENTRATION OF HOSPITAL-BASED MEDICAL SPENDING: EVIDENCE FROM CANADA

CIRANO note based on a report written by *Aurélie Côté-Sergent, Damien Échevin and Pierre-Carl Michaud*, October 2015

The growth of health care spending poses important challenges for many countries around the world. Trends in aggregate spending are well-documented. In particular, annual growth in real per capita health spending has largely exceeded what could be accounted for by economic growth and aging in the OECD. Canada is no exception, devoting in 2014 close to 11% of its gross domestic product to health care according to the OECD.

While knowing how aggregate health care spending changes over time is of interest, understanding its dispersion is paramount. Indeed, medical expenditures are often concentrated among "high-spenders" and this group can account for a large share of health care spending.

Because of data limitations, few studies have documented this concentration in Canada. In their paper, the authors present evidence on the concentration of hospital-based medical expenditures in Canada, using longitudinal administrative data from the province of Quebec. For each patient in the database, which covers the period from 1995 to 2012, the paper matches physician payments (to general practitioners and specialists) for in-hospital services they render and general hospital expenditures (for other services such as nurses, consumables, and hospital-administered drugs), the latter allocatted using a relative resource use intensity index. It then documents how this medical spending is concentrated cross-sectionally, over time and finally near the end of life (when death occurs at the hospital).

Authors find that average hospital-based medical expenditures rise rapidly with age, starting around the age of 50, and are concentrated among a small fraction of high-cost users. For example, the top 1% of men and women in terms of hospital-based medical expenditures account for 55.5% and 54.8% of the total, respectively. Persistence among high-users is rather low, however: fewer than 3% of individuals in the top quintile of expenditures remain in that same quintile the following year, while fewer than 5% incur any spending at all the following year. Therefore, most high-cost users likely experience acute episodes of care rather than repeated hospitalizations over a long period of time. Finally, hospital-based medical expenditures for individuals in their last year of life and who die at the hospital can account for only 11% of the total. Most of that end-of-life spending (more than 80%) occurs in the last month of life.

The full study is available on CIRANO's Website at:

http://cirano.qc.ca/files/publications/2015s-41.pdf