

# Review of: "Hospitalizations and emergency department visits trends among elderly individuals in proximity to death: a retrospective population-based study"

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As the population ages and people live longer with one or more chronic conditions, it is increasingly important to consider the varying patterns of healthcare across different end-of-life trajectories. Palliative care is typically initiated late in the illness trajectory and mostly for people with cancer.<sup>1</sup> There are notable differences in patterns of decline and health care needs between cancer and non-cancer trajectories.<sup>1-3</sup> For many people, there is evidence of recognizable decline at least a year before death,<sup>4,5</sup> necessitating comprehensive care in the community.<sup>6</sup>

In their recent study, Dr. Barbiellini Amidei and colleagues demonstrate the unique potential of studying healthcare administrative data to inform healthcare service planning in the context of an aging population.<sup>7</sup> The study provides a population-based description of patterns of hospitalization and emergency department use among people in the later stage of life, for the region of Friuli-Venezia Giulia, Italy. They examined outcomes of hospitalization and emergency department visits among people age 65 years and older in a decedent cohort (2000-2014) according to sex, age at death (65-74, 75-84, 85-94, 95+) and main cause of death (cancer, cardiovascular, respiratory disease). Most studies of end-of-life healthcare utilization examine shorter time periods, or if over longer periods, they do not examine trends over time. A novel aspect of this study was the use of change point analysis over the last two years of life to identify inflection points where the use of acute hospital services increased dramatically.

The authors note that previous studies have found younger age, presence of respiratory conditions and an absence of palliative care influence the use of hospital and emergency departments near the end of life, but that most studies have been restricted to the last few months to weeks of life. They also found that people who died of respiratory diseases were most likely to access acute hospital services in the last month of life. However overall, there was greater use of acute hospital services among younger decedents and decedents with cancer, and the intensification of these services occurred earlier (approximately 6-7 months prior to death for cancer) compared to cardiovascular and respiratory causes of death (approximately 3-4 months prior to death).

These new insights into the drivers of escalating acute hospital services would be expected to help in planning supportive services in the community such as palliative care and primary care. This study was unable to determine the comorbidities of decedents or the type of healthcare they were receiving, which are likely important factors influencing use of acute healthcare. Nevertheless, this study has provided further evidence for tailoring palliative approaches to population needs according to specific illness trajectories.

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