Community Economic Distress and Changes in Medicare Patients' End-of-Life Care Costs

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Dear Editor:

Real reductions in decedents' per-capita Medicare fee-for-service (FFS) spending accounted for most of Medicare's cost growth mitigation between 2009 and 2014.¹ Decedents' spending reductions immediately followed the Great Recession of 2007–2009, which accounted for 14% of the decline in overall Medicare spending growth between 2009 and 2012.² Since Medicare patients living in lower income areas spend more at the end of life (EOL),³ we sought to explore whether local economic distress levels were associated with decedents' spending.

Methods

From the Dartmouth Atlas Project, we obtained Hospital Referral Region (HRR) level: (1) mean 2008–2014 total Medicare Parts A and B age/sex/race/price-adjusted expenditures on all FFS Medicare beneficiaries and those who died and (2) number of FFS Medicare enrollees and deaths.

From the Economic Innovation Group (EIG), we obtained 2017 Distressed Communities Index scores at the ZIP code level: these were calculated by aggregating seven measures of economic distress (including change in number of jobs and employers, proportion of adults without a high school diploma, unoccupied housing, poverty level, and relative income) obtained from 2011 to 2015 U.S. Census data and normalized to create an index that ranks ZIP codes from least (0) to most (100) economically distressed.⁴ We aggregated population-weighted ZIP code scores to create HRR-level scores and assigned HRRs to quintiles of economic distress.

For each year and economic distress quintile, we calculated crude mortality rates and mean total Parts A and B expenditures attributable to survivors and decedents in 2014 dollars (using previously described methods¹).

Results

Crude mortality rates declined across all economic distress quintiles, although mortality rates for those living in the most economically distressed communities consistently were higher than those living in the least (Fig. 1, top).

In 2009, survivors' mean per-capita Medicare expenditures were highest for those living in the most economically distressed HRRs; however, by 2014, survivors' economic distress-related spending gaps vanished (Fig. 1, middle). Although decedents' Medicare expenditures dropped considerably between 2009 and 2014, expenditures remained substantially higher for Medicare beneficiaries who had lived in the most economically distressed HRRs (Fig. 1, bottom).

Comment

Medicare FFS decedents from more economically distressed communities had persistently higher crude mortality rates and per-capita spending than those from less economically distressed communities; differences in survivors' mean annual per-capita care costs across economic distress levels evaporated between 2008 and 2014.

Although this cross-sectional study is limited by its focus on the FFS Medicare population and use of 2011–2015 data to determine economic distress levels for relatively large geographic units, it begs the question of why socioeconomic based inequities in per-capita Medicare FFS spending among survivors decreased, whereas those among decedents persisted, after the Great Recession. That decedents' real spending declines were parallel across economic distress levels suggests that the lingering impact of the recession or changes in care patterns at the EOL were insensitive to community economic distress. However, our findings raise the possibility that socioeconomic factors influence decedents' Medicare spending pattern more than survivors'. Given the persistently higher mortality rates in economically distressed communities, the impact of targeting economically disenfranchised communities with interventions designed to reduce EOL spending disparities could be fruitful.

Acknowledgments

The data used in this analysis were obtained from The Dartmouth Atlas, which is funded by the Robert Wood

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FIG. 1. Crude mortality rates (top) and per-capita Medicare total Part A and Part B spending attributable to survivors (middle) and decedents (bottom) for 2008–2014, by local economic distress quintile.

Johnson Foundation and the Dartmouth Clinical and Translational Science Institute, under award number UL1TR001086 from the National Center for Advancing Translational Sciences (NCATS) of the National Institutes of Health (NIH).

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