

Is More Better?

Elective Surgery, Paid and Unpaid Work Amongst Older Adults

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Abstract

One of the most contentious topics in health care policy is whether high levels of spending and treatment intensity improve patient outcomes. Previous research suggests that as much as 30 % of health care provided through the Medicare program does not provide *medical* benefit to patients. However, this work has focused on a limited number of patient outcomes observable in claims data such as mortality. Administrative data provide rich detail about intensity and quality of care, but lack information about many important post-treatment patient outcomes. While greater treatment intensity may not extend patients' lives, there are likely important and currently unappreciated consequences of additional treatments for patient well-being. This paper contributes to the treatment intensity literature by analyzing economic rather than health outcomes. Specifically, I use panel data from the Health and Retirement Study (HRS) linked to Medicare claims data to examine the effect of elective surgery to treat chronic conditions on employment, informal care, grandchild care and volunteering.

HRS data include biennial interviews with a nationally representative sample of older adults on topics including health, paid and unpaid work and retirement. I use 5 waves of HRS data from 2000 - 2008 to study respondents who self-report several chronic conditions including heart conditions, osteoarthritis, and back pain. These conditions may limit paid and unpaid work, but can be potentially mitigated through medical care. The study includes two conditions where elective surgery is viewed as a highly effective way to improve patient outcomes (heart conditions and osteoarthritis) and one condition where surgery provides little additional medical benefit for patients (back pain). Rates of these elective procedures vary considerably across regions of the U.S., and these patterns are typically interpreted as evidence of over-utilization in some areas. However, it is unknown whether these observed differences reflect over or under-utilization, particularly since existing assessments fail to account for economic returns to treatment intensity.

I analyze the effect of elective surgery on several relevant economic outcomes for older adults in the years following initial diagnosis. Since patients who receive surgery are likely to be unobservably sicker in unobservable ways that may bias estimates of the economic effects towards 0, I use a difference-in-difference type approach to compare post-diagnosis treatment of patients in areas with high rates of surgical interven-

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tion, where treatment reflects both condition acuity and treatment style to patients in low-intervention areas. Comparing patients in high-utilization and low-utilization areas allows inference about the effects of elective surgery for patients with different clinical thresholds for treatment. I assume that conditional on a detailed set of observable respondent health, demographic and disability characteristics, the average surgical patient in a low-intensity region has greater clinical need for intervention, while those in high intensity regions receive surgery at lower levels of acuity. I use 100% national Medicare claims and denominator file to calculate hospital referral region (HRR) level rates of elective hip replacements per 1,000 Fee-for-Service enrollees for the two-year periods corresponding to HRS waves.¹ HRRs are classified into quartiles of utilization for each wave of data. This approach separately identifies the effects of discretionary and more medically necessary surgical intervention.

Findings indicate a response to discretionary, elective medical care on the extensive margin that increases rates of participation in both paid and unpaid work. Results are statistically and economically significant. I find that patients in the highest intensity HRRs, who receive the most discretionary joint replacements, increase labor force participation by 2.5 percentage points post-surgery. Similarly, these patients increase informal caregiving by 6.1 percentage points and volunteering by 9.4 percentage points. Conditional on (paid or unpaid) working, I do not find evidence that elective surgery leads to a reduction or increase in hours. Models will be reestimated for the remaining clinical conditions. All analyses will be duplicated amongst respondents with linked Medicare claims data who do not report surgery prior to age 65 to test the robustness of findings to the addition of administrative health and utilization controls.

Findings have important implications for policymakers considering changes to the Medicare program. Reductions in availability of discretionary treatments designed to save money may be costly in the long-term if they reduce labor supply from older adults or their adult children whose labor force decisions are tied to parents' provision of informal care and grandchild care.

¹Rates of elective surgery are calculated for each condition using discharges with the relevant operation as the primary procedure and primary diagnosis of the underlying condition. Procedures following an acute event (i.e. hip replacement after hip fracture and CABG after a heart attack) are excluded.