

# Capsule Commentary on Kern et al., Healthcare Fragmentation and the Frequency of Radiology and Other Diagnostic Tests: a Cross-Sectional Study

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Higher fragmentation of ambulatory care—indicated by ambulatory visits distributed across a larger number of providers—is associated with poorer care coordination, duplication of services, and acute complications.<sup>1</sup> Building on prior evidence, this study by Kern et al.<sup>2</sup> examined whether fragmented ambulatory care is also associated with more radiology and other diagnostic tests, such as cardiac catheterization (not including laboratory blood or urine tests). Using administrative data from commercially covered adults in a seven-county region in New York state and a seven-category grouping of fragmented ambulatory care, the study found those with most fragmented care had approximately twice the number of radiology and other diagnostic tests compared to those with the least fragmented care. This relationship was robust to accounting for the number of chronic conditions and ambulatory visits.

Methodologically, a valuable contribution of this study is that, as subjects are limited to a small geographic region, confounding from systematic unobserved differences in provider organization and practice patterns is likely limited. The main study finding points to potential reduction in the use of radiology and diagnostic services from reduced fragmentation. However, this finding, as well as the broader evidence base on the relationship between fragmentation and healthcare utilization, is largely built on non-causal models of association using observational data and therefore susceptible to confounding that may misstate potential gains in reduced healthcare spending from reduced fragmentation. For instance, fragmented care and higher healthcare utilization may be simultaneous

outcomes of differences in care-seeking behavior among some subjects, say, through patient-initiated “second opinions” or repeat diagnostics.<sup>3</sup>

In obtaining more rigorous evidence on excess healthcare spending associated with fragmented care, a potential source is data from recent reforms in provision of care, including patient-centered medical homes and accountable care organizations (ACOs). Such reforms may be natural experiments of interventions to improve care coordination and reduce fragmentation and serve as appropriate settings to examine the causal impact of reduction in fragmented care. Early evidence points to only modest reductions in healthcare spending following the introduction of patient-centered medical homes and ACOs.<sup>4,5</sup>

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**Compliance with Ethical Standards:**

**Conflict of Interest:** The author has no conflicts of interest with this article.

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