# Defining Avoidable Hospital Care Among Adults with Cancer

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Nearly all provider groups in Medicare's five-year Oncology Care Model alternative payment program expressed a goal to reduce hospital use by cancer patients, but very few achieved this. Identifying potentially avoidable hospital care for cancer patients using diagnosis codes is difficult: depending on the definition used, 20-60% of hospital visits may be avoidable.

A leading diagnosis code-based definition is the chemotherapy outpatient quality measure (OP-35), which collects emergency department (ED) and inpatient admissions with ~300 discharge diagnosis codes into 10 avoidable conditions. Unlike similar measures of avoidable hospital care for general patients, OP-35 has not yet been clinically validated. While OP-35 allows payers to compare groups of providers, two issues limit its usefulness to cancer providers: 1) Clinicians might agree that some OP-35 conditions (e.g. nausea/vomiting) are treatable in an outpatient or urgent care setting, but that others, such as hematemesis (bloody vomiting), would be difficult to evaluate outside of a hospital. 2) OP-35 reports only a percentage of hospital visits to each provider group, obscuring what exactly is driving avoidable hospital use. Despite data available in electronic medical records (EMR), there is little clarity on how to operationalize these data into usable practice-level insights. Based on preliminary work, we will develop a classification system of actionable scenarios leading to hospital care (e.g. patient required non-emergent procedure; patient did not call for triage help beforehand) so that cancer providers can better design ways to reduce this frequent, disruptive, and costly aspect of treatment.

We are assembling an integrated dataset from tumor registry, EMR, and regional health information exchange data, for a diverse sample representing a range of cancers across all insurance types, including the uninsured. This dataset of ~53,000 individuals treated at our academic medical center and county safety-net health system will identifiably link >75% of all hospital visits in a 100-mile radius of Dallas, TX, and to the EMR of three large health systems in the region (academic medical center, county safety-net, large community hospital network). Our aims are:

Aim 1: Clinically validate diagnosis code-based measures of avoidable hospital care (including OP-35) with clinician EMR review; re-categorize hospital visits into actionable scenarios; and specify a new measure for oncology urgent care-treatable conditions. H1: Most OP-35 defined avoidable visits will not be avoidable based on clinician review. H2: Actionable categories of clinical scenarios will be identifiable in the EMR, and can be further specified by a measure that identifies conditions treatable in an urgent care setting.

Aim 2: Prospectively validate our actionable categories and new oncology urgent care-treatable conditions measure with patients and ED clinicians using post-discharge interviews. H1: Patients and ED clinicians will largely agree with our categorizations, with some refinements.

Aim 3: Conduct a national survey of cancer provider groups to assess the feasibility and applicability of our new definitions for avoidable hospital care, in the context of their acute symptom management capabilities. H1: A broad range of cancer providers will find our definitions feasible and useful. Findings from our study will advance quality measurement and data-driven care improvement and will be especially useful to participants in Medicare's Enhancing Oncology Model payment program.