

TITLE: **Tracking and Preventing Outpatient Procedural Complications**

[Include your abstract according to the headings below. Abstract body in Arial, font 12. Limit to 500 words, including text in tables and figures.]

Introduction

Ambulatory care is one of the fastest growing segments in healthcare. This growth includes procedures, with an estimated 70% being performed in the outpatient setting (2017, CMS)¹. Quality and patient safety outcomes following elective procedures performed in the hospital outpatient departments (HOPD), ambulatory surgical centers (ASC) or within physician's offices have been a blind spot to health systems, payors and regulators. To date the only available information comes from CMS OQR measure 36 for admissions 7 days after day surgery, through *Hospital Outpatient Quality Reporting*² or various counts of approximately 11 complications related to ASCs.³ Each proceduralist may have anecdotal information of those with a post procedural complication however these results are not detailed nor aggregated at a national level.

Methods

We used over 17 million Medicare fee-for-service patients claims data from 2009-2021 to assess relative frequency of hospital based ambulatory procedures and 30-day This methodology evaluates almost 3000 procedures determined to have some risk and divides them into 115 Procedure Subgroups (PSG)s. Additionally, approximately 1200 unique complications separated into 59 complications group are evaluated in conjunction with these procedures to identify when and where potentially preventable complications are occurring. Complications were associated with procedures based on clinical relation, and timing window up to 30 days post procedure.

Results

After evaluating 17M Medicare Fee-for-Service, HOPD claims, we found an overall complication rate of 2%, with some, like hepatobiliary procedures having up to 18.52 % complication rates, and some, such as cataract procedures, as low as 0.20%. We saw a wide variation in complication rates across hospitals, not explained even after accounting for procedure complexity and patient demographics. In addition to variation by procedures and sites of service, other findings of note include reduction in infection rates associated with the pandemic, overall increase in ambulatory procedure volumes, and sweeping increases in orthopedic procedure volumes as cases were removed from the Inpatient Only (IPO) list. Identifying these ambulatory procedures and their potentially preventable complications has resulted in actionable data available to clinicians for quality and safety improvements.

Discussion

Complication rates for routine outpatient procedures were higher than generally expected. Until now there was no way of knowing how many and what type of complications were occurring following an outpatient procedure. We believe this research could assist with policies concerning safety and quality in an area of increasing concern.

1. 2017, CMS Financial Report FY 2017, https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/CFOReport/Downloads/2017_CMS_Financial_Report.pdf
2. 2022, CMS *Hospital Outpatient Quality Reporting Specifications Manual Release Notes Version: 16.0* [QualityNet Home \(cms.gov\)](#)
3. 2022, CMS.Gov [Ambulatory Surgical Center Quality Reporting \(ASCQR\) Program Measures \(cms.gov\)](#)