CODING CREEP OR CODING SLEEP?: EVIDENCE ON THE PERSISTENCE OF CODING INTENSITY IN MASSACHUSETTS

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INTRODUCTION

Between 2013 – 2018, analyses have demonstrated that while some acuity measures for inpatient discharges such as Diagnostic Related Group (DRG) weights increased, other metrics (i.e., average length of stay, average number of intensive care days) held flat or decreased.[1] It was found after examining other health data that coding intensity was the main contributor to these trends, rather than worsening health states of hospital patients.

The HPC estimated that excessive coding activities consume administrative time, interfere with risk-adjusted performance measures, and increased commercial and Medicare spending by an additional $300 million in inpatient care spending. This can be seen both in Massachusetts and nationally. It is estimated that the Centers for Medicare and Medicaid Services (CMS) overpaid Medicare Advantage plans $106 billion from 2010 – 2019 due to coding intensity[2], and that over the next decade the total amount could rise to $200 billion in overpayment.[3]

Experts have predicted that increases in coding intensity would level off as the "low-hanging fruit" had been plucked. However, there is increasing industry focus on coding as a vehicle for revenue maximization and increasing investment in these efforts.

OBJECTIVES

- The goal for this study is to update coding intensity trends in Massachusetts through 2021 for inpatient discharges to determine whether coding intensity increased, leveled off, or decreased.
- During the COVID-19 pandemic, starting in 2020 through 2021, this study addresses what effects COVID-19 cases have had on acuity and in the context of a health care environment in which coding intensity was already taking place.
- This study considers both potential coding of inpatient stays into higher severity levels but also shifting to higher-paying diagnosis categories such as sepsis.

STUDY DESIGN

The HPC examined changes in inpatient acuity using the Massachusetts Hospital Inpatient Discharge Database (HIDD) from 2013-2021. Acuity was defined using several metrics for robust comparisons:

- Medicare system diagnosis related groups (MS-DRG) weights
- MassHealth (Medicaid) all-payer refined diagnosis related groups (APR-DRG) weights
- Patient severity of illness (SOI) on a four-level severity scale, with 4 being the highest acuity
- Complications or comorbidities (CC) on a three-level severity scale

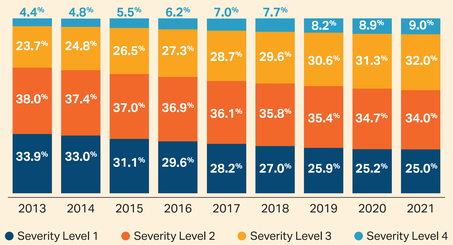
Utilization metrics used:

- Average length of stay (LOS)
- Intensive care days per discharge (ICU/CCU), defined using intensive care unit days per discharge combined with cardiac intensive care unit days per discharge.

This study comprised of all medical inpatient stays at acute care hospitals for Massachusetts residents, excluding behavioral health stays and extremely long length of stay because these cases are usually not paid based on DRGs. Other exclusions include transfers, patients that died, patients who went to Shriners Hospital for Children (Springfield and Boston), and discharges with some APR coding restrictions based on discrepancies with CMS major diagnostic categories. COVID-19 cases were defined as any inpatient stay with U071 for the primary or secondary diagnosis code.

RESULTS

Figure 1. Proportional Composition of Inpatient Discharges by Patient Severity of Illness without COVID-19 Cases, 2013 to 2021

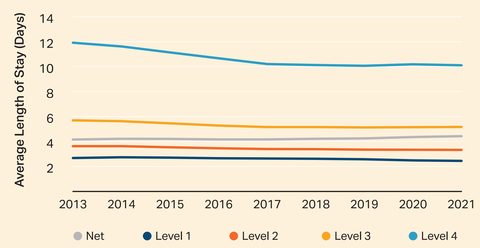


The HPC concluded that coding intensity continued to increase in Massachusetts after 2018, through 2021.

In Figure 1, the two highest severity levels (3 and 4) combined comprised 28% of all discharges in 2013, 38% in 2018, and 43% of discharges in 2021 (41% excluding COVID-19 cases).

Other indicators of severity do not show these same continued acuity increases: without COVID-19 cases, average LOS was 4.16 in 2013, 4.22 in 2018 and 4.32 in 2021 while the average number of ICU and CCU days was 0.37, 0.33, and 0.30, respectively.

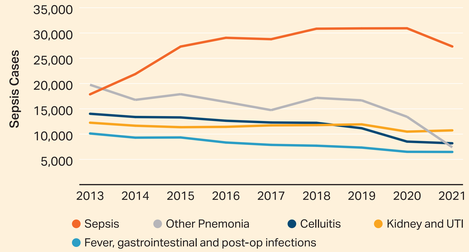
Figure 2. Average LOS by Severity Level for Each Inpatient Discharge Including COVID-19 Cases, 2013 to 2021



As displayed in Figure 2, between 2013 and 2021, including COVID-19 cases, the average length of stay for a level 4 severity discharge decreased by 15%. The average number of ICU/CCU days for a level 4 discharge decreased by 46%.

Very short stays, considered as 20% or shorter than the mean length of stay for a DRG and a metric for coding intensity[4], have also increased. Including COVID-19 cases, by 2021 these very short stays had increased by 155%, from approximately 8,000 cases in 2013 to over 20,000 cases in 2021. The percentage of total discharges that are very short stays increased by 5.4 percentage points to 31%. The percentages of total discharges that are very short stays grew for coded heart failure (4.5), pneumonia (13.8), and renal failure (4.5) as well.

Figure 3. Number of Inpatient Discharge Cases of Sepsis and Comparable Conditions, 2013 to 2021



In Figure 3, sepsis-coded cases increased by 72% between 2013 and 2018, and have remained steadily high, only decreasing by 0.5 percentage points by 2021 as a proportional share of all cases. Chronic obstructive pulmonary disease (COPD) coding intensity continued during this time period as well. For COPD, the average LOS decreased by 7% between 2013 and 2021, and ICU/CCU days decreased by 17%. However, average APR weights increased by 22% and MS-DRG weights increased by 5%.

Proportional severity levels by acuity category have also increased. In 2013, COPD cases that were level 3 and 4 severity level compromised 40% of cases. In 2021, they compromised 73% of discharges, which is not accurately supported by LOS and ICU/CCU acuity measures.

CONCLUSIONS

- Even in the context of the COVID-19 pandemic, the trends observed in the data do not indicate a true corresponding rise in acuity, but instead, the continued presence of coding intensity in Massachusetts.
- Trends that were previously observed in prior coding intensity analyses have continued: patients have continued to be coded into higher severity levels on average, while more high-reimbursement conditions like sepsis have been increasing in volume while similar conditions like pneumonia are decreasing.
- In aggregate, some measures such as the average LOS (5.0%) or the average ICU/CCU days (1.0%) per discharge have increased since 2018. When removing COVID-19 cases from 2018 to 2021, the average LOS has increased 2.2 percent, while average ICU/CCU days has decreased 7.9 percent. However, any increases for these measures are generally much smaller than the increases observed in recorded acuity. From 2018 to 2021, the average APR-DRG and MS-DRG per discharge increased by 8.4% and 7.0%, respectively, and 6.7% and 5.7% without COVID-19 cases.
- Within a given severity level, the average LOS and ICU/CCU days has been steadily decreasing over time, even with COVID-19 cases included, while overall LOS and ICU/CCU days have been relatively flat. This pattern suggests continued coding of 'borderline' cases into higher severity levels.

POLICY IMPLICATIONS

- The persistence of coding intensity causes increasing spending, increased administrative efforts toward coding, and inaccurate risk adjustment performance and accountability measures.
- Higher spending and costs associated with further emphasis on coding statewide can drive up total health care spending in Massachusetts, which can ultimately be collected from patients through either higher priced services or increased insurance costs such as premiums, deductibles, or coinsurance.
- Those who pay for care and strive for accountability should seek to adjust payment and performance measurement to curtail the influence of excessive coding efforts.

CONTACT

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