

Ambulatory Care Sensitive Condition Admission Rates in Younger and Older Traditional Medicare and Medicare Advantage Populations, 2011–2019



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INTRODUCTION

The Agency for Healthcare Research and Quality's (AHRQ's) Prevention Quality Indicator (PQI) algorithms (www.qualityindicators.ahrq.gov) calculate per-capita ambulatory care sensitive condition (ACSC) admission rates from hospitalization data. ACSC admissions might have been avoided and constitute waste.¹

A 2014 Kaiser Family Foundation review of six studies found that traditional fee-for-service Medicare (TM) enrollees had higher ACSC admission rates than Medicare Advantage (MA) enrollees²; however, none of those studies was national in scope and all used pre-2008 data. Therefore, we sought to calculate national ACSC admission rates for TM and MA enrollees between 2011 and 2019.

METHODS

From the Centers for Medicare and Medicaid Services (CMS), for 2011–2019, we obtained 100% Medicare Provider Analysis and Review (MEDPAR) inpatient data that can be used to run AHRQ's PQI algorithms.

MEDPAR files “contain information for 100% of Medicare beneficiaries using hospital inpatient services” (<https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/MedicareFeeforSvcPartsAB/MEDPAR>). To test reporting thoroughness, we examined MEDPAR admissions each year, and found that 6.2%, 6.0%, 5.3%, and 5.2% of CMS Certification Number–defined hospitals (accounting for 0.66%, 0.60%, 0.57%, and 0.50% of all TM admissions) recorded TM but not MA admissions, respectively. Those hospitals averaged around 300 admissions per year compared to about 4000 admissions per year in hospitals

reporting both TM and MA admissions. This suggests that hospitals without MA admissions are likely to be small, insubstantial, and in low MA penetration areas.

Using the Medicare Beneficiary enrollment file, we assigned beneficiaries living in US States or Washington DC to either TM or MA cohorts according to whether they were enrolled in TM or MA in June of each year and either never (TM) or always (MA) had monthly HMO indicators the entire year. For two age groups (21–64 and 65+), we used AHRQ's PQI algorithms to identify ACSC admissions and calculate ACSC admission rates per 1000 beneficiaries for ten current and relatively high volume ACSC admission types: short-term diabetes mellitus complications (STDM), long-term diabetes mellitus complications (LTDM), uncontrolled diabetes mellitus (UDM), chronic obstructive pulmonary disease (COPD), hypertension, congestive heart failure (CHF), dehydration, community acquired pneumonia (CAP), urinary tract infection (UTI), and perforated appendix (PA).

We had IRB and CMS approval to conduct this study.

RESULTS

Between 2011 and 2019, there were 3,713,349 ACSC admissions in the younger age group and 16,259,867 in the older one.

Excepting UDM, COPD, and PA, younger beneficiaries' ACSC rates always were lower for those enrolled in MA than in TM (Fig. 1).

Excepting STDM in 2019, older beneficiaries' ACSC rates invariably were lower for those enrolled in MA than in TM (Fig. 2). In both age groups, admission rates for UDM, hypertension, and CHF trended upward over time while those for COPD, CAP, UTI, and PA trended downward. Furthermore, for both age groups, differences in TM and MA rates narrowed for COPD, CAP, and UTI but widened for UDM and hypertension.

DISCUSSION

Conducting the first national comparison of per-capita ACSC admission rates for TM and MA populations, we found nearly 20 million Medicare ACSC admissions between 2011 and

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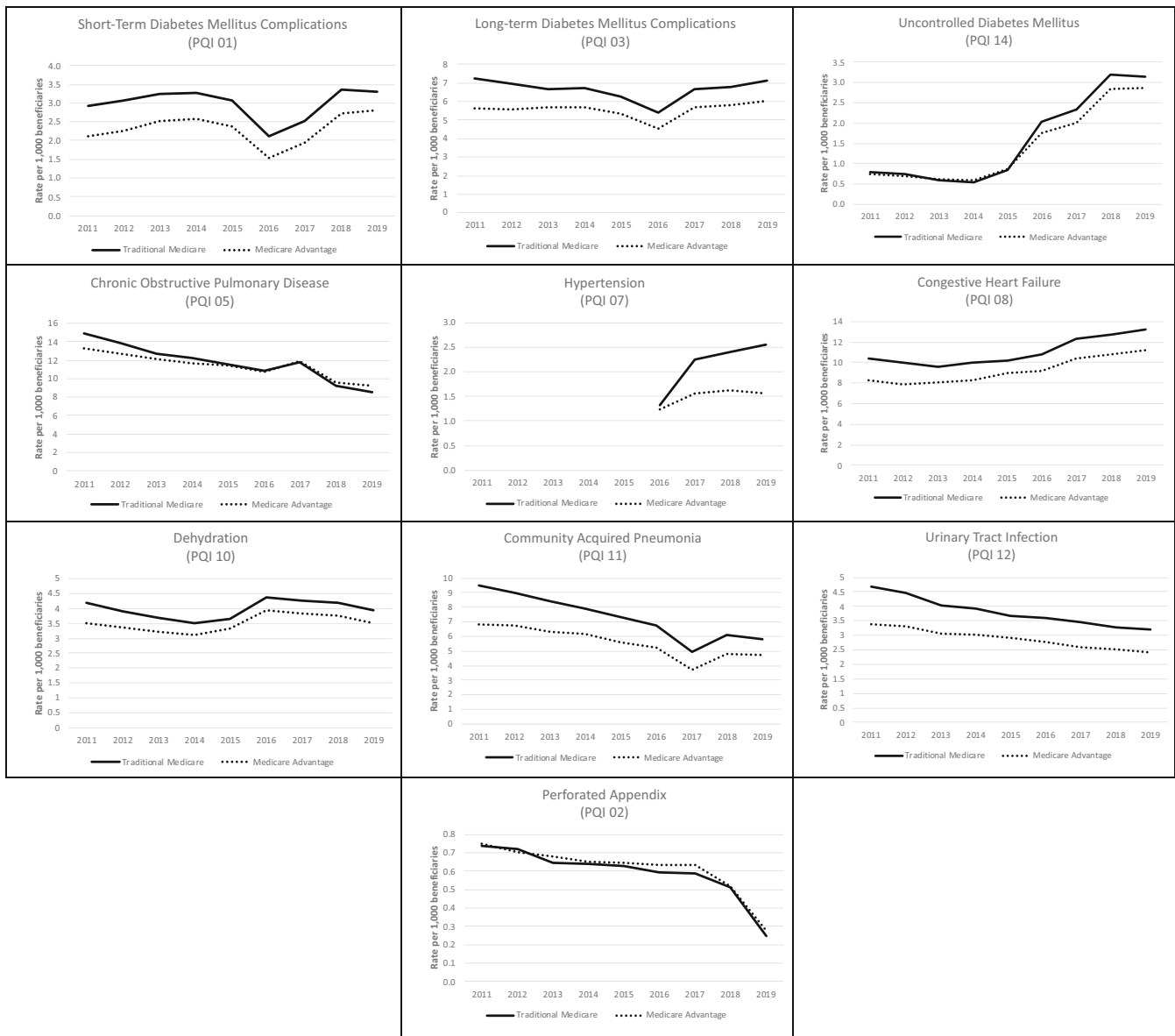


Fig. 1 Admission rates for 10 types of ambulatory care sensitive conditions per 1000 Traditional Medicare or Medicare Advantage enrollees aged 21–64 in 2011–2019 in the USA. The AHRQ Prevention Quality Indicator number follows the ambulatory care sensitive condition diagnosis

2019 and that TM beneficiaries experienced higher ACSC admission rates than MA beneficiaries did.

One possible explanation for the differences we found is that MA plans—where care provision is a cost as opposed to a revenue center—may be better at substituting low cost outpatient primary care for high cost inpatient care, a strategy indicative of better care quality, supported by the literature,¹ and supportive of cost savings generation.³

Our analysis has several limitations. First, not all ACSC admissions are avoidable⁴: differences that we uncovered may not be fully reconcilable. Second, MA plans may simply be better at using intermediary treatment pathways—like admission to observation beds⁵—to avoid ACSC inpatient

admissions. Third, we could not adjust for the fact that MA enrollees tend to be younger and healthier than those enrolled in TM.⁶

While further research is warranted, we recommend against “explaining away” performance differences based on population differences and, instead, focusing on how better to reduce ACSC admissions in both populations. The COVID-19 pandemic has highlighted that hospital beds rapidly can become scarce and that hospitalized patients may be vulnerable to hospital-acquired infections (HAIs). Reducing unnecessary admissions in both populations would expand hospital capacity and reduce unnecessary exposure to HAIs for vulnerable populations.

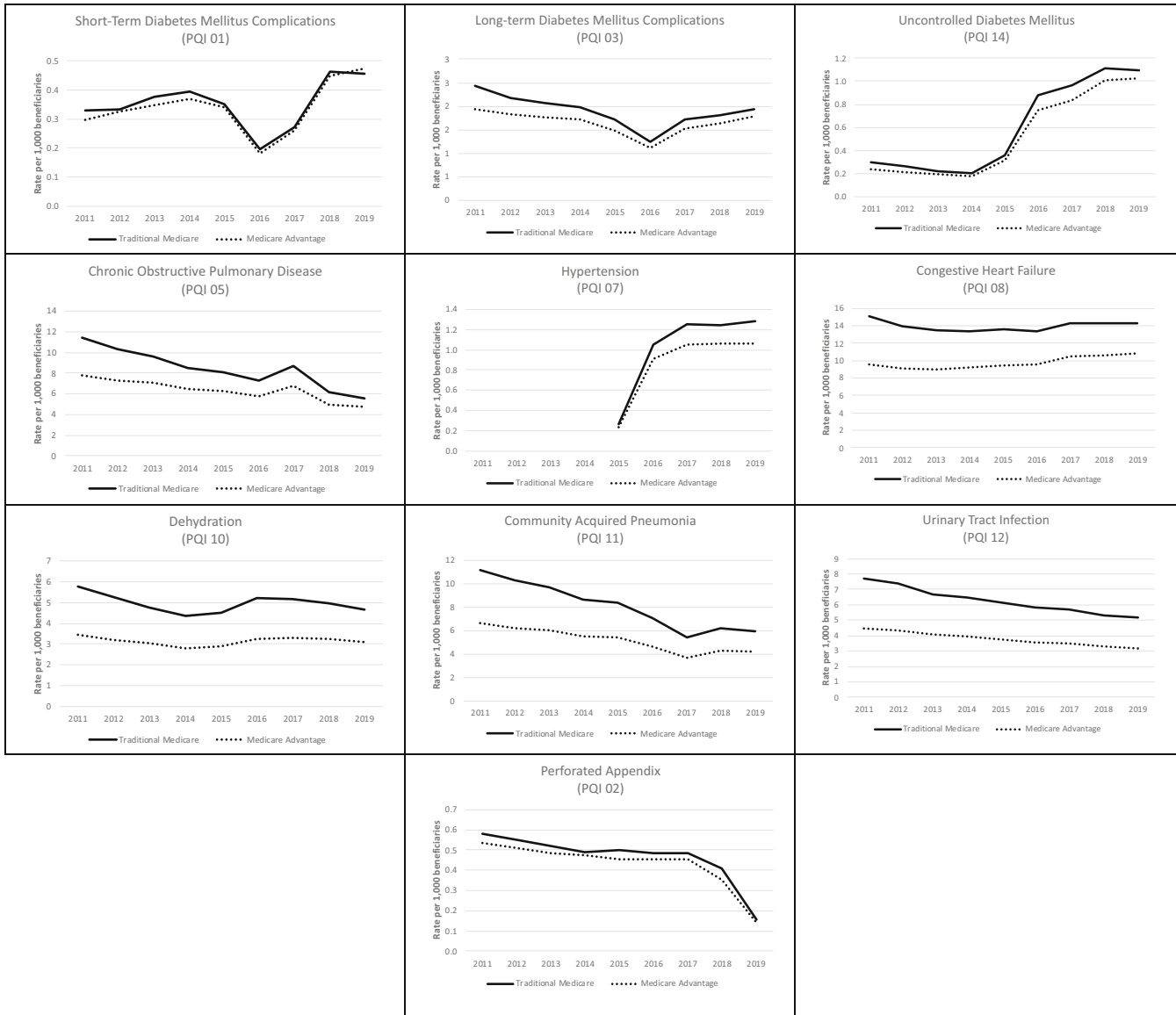


Fig. 2 Admission rates for 10 types of ambulatory care sensitive conditions per 1000 Traditional Medicare or Medicare Advantage enrollees aged 65 and older in 2011–2019 in the USA. The AHRQ Prevention Quality Indicator number follows the ambulatory care sensitive condition diagnosis

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Declarations:

Conflict of Interest: The authors declare that they do not have a conflict of interest.

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