

The Dartmouth Atlas of Health Care 2018 Data Update

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Introduction

The Dartmouth Atlas of Health Care: 2018 Data Update, published in 2021 from 2018 Medicare claims, examines geographic variation in spending, service use, readmissions, end-of-life care, primary care, and selected preventive services. Its most important methodological feature is that it focuses heavily on fee-for-service Medicare beneficiaries and geographic units such as hospital referral regions rather than treating every state resident as one comparable population (Bronner et al., 2021). This distinction matters when interpreting New Jersey because patients often cross state and regional boundaries for specialized care. The Atlas is best used to identify patterns that deserve investigation rather than to label a state broadly as efficient or inefficient. Higher spending may reflect greater treatment intensity, higher local prices, or more complex patients, while lower spending can reflect either efficiency or unmet need. Claims data also show what services were billed, not whether care matched patient preferences or produced better outcomes. A rigorous interpretation therefore combines utilization measures with outcomes, equity, patient experience, and local clinical context.

What the 2018 Update Measures

The Atlas analyzes Medicare administrative data to compare how healthcare resources are used across hospital referral regions, hospital service areas, and individual institutions. Hospital referral regions are especially important because they approximate markets for major procedures and specialty care and can cross political boundaries. Nationally, the report found that inflation-adjusted fee-for-service Medicare reimbursements excluding Part D changed relatively little between 2011 and 2018, while some of the highest-spending regions moved closer to the national distribution (Bronner et al., 2021). The Dartmouth Atlas Project also notes that its historical Medicare series adjusts many measures for factors such as age, sex, race, and regional prices so that comparisons better reflect differences in utilization rather than simply local input costs (Dartmouth Atlas Project, 2026). These adjustments do not eliminate every source of confounding. Population health, referral patterns, provider supply, coding practices, and Medicare Advantage enrollment can still influence observed differences. For that reason, each comparison should identify its population, denominator, year, and adjustment method before drawing policy conclusions.

Spending, Site of Care, and Coordination

One major national change between 2011 and 2018 was a shift in the composition of Medicare spending. The share associated with inpatient hospitals and [skilled nursing facilities](#) declined, while outpatient facility spending increased (Bronner et al., 2021). This pattern can reflect successful movement of appropriate services into less intensive settings, but it can also reflect changes in billing, facility fees, and the organization of care. A lower inpatient share is therefore not automatically evidence of better value. Coordination is equally important. Among chronically ill Medicare decedents, the number of different physicians involved in care increased nationally, and several New Jersey hospital referral regions were among those with a particularly high share of patients seeing ten or more physicians. Specialist involvement can be clinically necessary, especially for complex illness, yet a larger number of clinicians can increase the risk of duplicated testing, conflicting recommendations, medication problems, and unclear responsibility. The policy question is therefore whether care is well coordinated, not simply whether many physicians are involved.

End-of-Life Care and New Jersey Patterns

The 2018 update documented national movement away from some forms of hospital-centered end-of-life care. Hospice use among chronically ill Medicare decedents increased, hospital deaths declined, and average inpatient days during the last six months of life fell between 2011 and 2018 (Bronner et al., 2021). New Jersey also appeared in several high-intensity hospital examples, including relatively high intensive-care use at selected institutions. These findings should be interpreted cautiously. Claims can show where care occurred and how intensively services were used, but they cannot reveal whether patients wanted aggressive treatment, whether referral centers cared for unusually complex cases, or whether timely palliative services were available. Greater hospice use may support comfort and family needs when enrollment is timely, while very late enrollment can provide limited benefit. Likewise, intensive care can be appropriate for reversible conditions even near the end of life. The most useful response to a high-intensity pattern is local review of goals-of-care documentation, palliative access, communication, and care coordination rather than an assumption that every additional hospital day was unnecessary.

Readmissions, Primary Care, and Prevention

The Atlas reported a modest national decline in thirty-day readmission after medical discharge between 2011 and 2018, with larger reductions for some conditions targeted by the federal Hospital Readmissions Reduction Program. Current CMS policy continues to use condition-specific readmission measures and payment adjustments to encourage hospitals to improve transitions and follow-up (Centers for Medicare & Medicaid Services, 2026). Readmission is useful but imperfect because some returns are clinically necessary and social conditions outside the hospital influence whether patients

can recover safely. The report also found slight improvement in the proportion of Medicare beneficiaries receiving ambulatory primary-care visits, while regional variation remained substantial. Selected preventive measures showed similarly uneven geographic patterns. These indicators should not be maximized mechanically. Screening and primary care are valuable when they are appropriate to age, risk, current guidelines, and patient preference. A region with fewer recorded visits may have access problems, but claims can also be affected by alternative payment arrangements or where services are billed. Interpretation therefore requires supporting evidence rather than a single percentage.

What Claims Data Can and Cannot Establish

Medicare claims are valuable because they cover large populations consistently, but they were created primarily for payment rather than for complete clinical evaluation. They may omit patient preferences, functional status, social circumstances, severity details, informal caregiving, and some services delivered outside traditional fee-for-service billing. Changes in Medicare Advantage enrollment can also alter the composition of the population remaining in fee-for-service data. Observed geographic variation consequently identifies association rather than proving why care differs. Wennberg's broader work on practice variation showed that local supply, professional norms, and treatment intensity can influence utilization, yet individual measures still require careful interpretation (Wennberg, 2010). A high-spending region can contain both appropriate specialty care and avoidable intensity, just as a low-spending region can contain efficient delivery and unmet need at the same time. For New Jersey, the Atlas should therefore be combined with all-payer claims, Medicaid and commercial data, patient outcomes, equity indicators, workforce measures, and qualitative evidence from clinicians and patients before statewide policy is changed.

Using the Atlas for Policy and Quality Improvement

The most constructive use of the Dartmouth Atlas is to convert unexplained variation into specific questions. New Jersey hospitals and accountable-care organizations can review whether patients with serious chronic illness have timely palliative-care access, consistent medication lists, documented goals, and one clinician or team clearly responsible for coordinating across specialists. Readmission outliers can be examined for discharge communication, pharmacy access, transportation, primary-care follow-up, and community support. Geographic spending differences can be separated into price, intensity, and population factors before interventions are chosen. Public reporting should also avoid rankings that imply certainty when differences are small or driven by different referral patterns. Historical Atlas data are particularly useful for showing how practice changed over time, but they should be treated as one component of a contemporary evidence system rather than a complete picture of current performance. Quality improvement is strongest when local institutions validate the data, involve frontline clinicians and patients, and test targeted changes while monitoring for unintended effects such as delayed necessary care or reduced access.

Conclusion

The Dartmouth Atlas 2018 update remains an important historical source for understanding geographic variation in Medicare care, but its findings require precise interpretation. The report describes specific fee-for-service populations, hospital referral regions, and service categories rather than the entire healthcare experience of every New Jersey resident. Nationally, it documented relatively stable inflation-adjusted Medicare spending, movement toward outpatient care, lower hospital use near the end of life, modestly reduced [Hospital Readmissions](#), and continuing regional variation (Bronner et al., 2021). New Jersey's prominent results involving multiple physicians and intensive-care use should therefore be treated as signals for local investigation rather than statewide verdicts. Claims data cannot determine by themselves whether care was necessary, coordinated, equitable, or aligned with patient goals. The strongest policy approach combines Atlas measures with current outcomes, all-payer information, patient preferences, workforce data, and local organizational evidence. In that role, the Atlas is most valuable not because it supplies simple answers, but because it reveals where apparently similar patients receive strikingly different patterns of care.

References

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