

About the ACO ADLS Illustrative Data

As a shared savings program, ACOs create an incentive for health care providers to improve simultaneously quality and overall efficiency of care. Each ACO's performance will be gauged against benchmarks that reflect utilization patterns, costs, and patient characteristics in the states and communities from which it draws patients. Ultimately, the benchmark against which an ACO will measure its performance will be derived from the historical pattern of utilization and spending for the population that is aligned with it. ACOs will need to acquire claims and expenditure data for the aligned population from purchasers, combine those financial data with clinical and other data from ACO-partners, analyze both overall patterns of care and patterns for specific subgroups within the aligned population, and set specific goals for both improvements based on those patterns.

There is, of course, no substitute for in-depth analysis of the actual data for the population aligned with an ACO. However, that kind of analysis will be possible only after the population aligned with an ACO has been identified. In the meantime, an ACO can develop a better understanding of what is involved in analyzing and developing goals by examining publicly available sources of data. One valuable resource was recently made available by the Institute of Medicine as a part of a project to examine geographic variation in health care utilization, quality, and expenditures. These data may be found on the IOM's website at:

<http://www.iom.edu/Activities/HealthServices/GeographicVariation/Data-Resources.aspx>

We have drawn on these data to develop the attached Excel workbook. Detailed information on the data sources and methods, along with definitions of the quality and other indicators, may be found on the IOM website given above. We have made two modifications to the version of these data that you can download from the IOM website. First, we have created a summary report, the ADLS Sample Report, that includes a limited set of the 300+ indicators included on the HRR Level Reports published by the IOM. We have also formatted this summary report to provide a high-level summary picture of utilization and expenditure patterns for an HRR. This new summary sheet allows a user to display indicators for up to three Hospital Referral Regions side-by-side. Second, we have included the state-level summary data in the same workbook so that users can compare National, State and HRR-level data.

Overview of IOM data

To support its research on geographic variation in health care utilization and spending, earlier this year the Institute of Medicine (IOM) requested state-level and hospital referral region (HRR)-level data from CMS. The data we present here are a subset of the more than 300 indicators included in that February 2011 report.¹ This section briefly describes what these indicators are measuring and how the data were compiled.

The indicators comprise four broad categories: demographics, costs, utilization and quality. Data for the first three categories come from CMS's enrollment and claims databases; quality indicators come from CMS's Hospital Compare (HC) data as well as software from the Agency for Healthcare Research and Quality (AHRQ).

¹ Data were updated in April. Complete versions of the spreadsheets and associated documentation can be found at <http://www.iom.edu/Activities/HealthServices/GeographicVariation/Data-Resources.aspx>.

Indicators based on Medicare claims data were developed using the 2008 CMS Chronic Conditions Warehouse², which includes 100 percent of claims data for individuals enrolled in fee-for-service Medicare, Parts A and B. Individuals were excluded if they became eligible after January 2008, spent any time enrolled in Medicare Advantage, or spent any time enrolled in only Part A or Part B, but not both. These exclusions ensure a full year of claims data for every person in the sample. Additional exclusions omit individuals who qualify for Medicare based on disability or ESRD status, because their utilization and cost patterns differ from beneficiaries who qualify for Medicare based on their age alone. Taken together, these exclusions reduce the population from 47.9 million total Medicare beneficiaries in 2008 to 25.8 million from whom these data were calculated.

The omission of disabled and ESRD beneficiaries means that these data describe only the aged population from which an ACO's aligned population would be drawn. The ACO's aligned population will, however, include both disabled and ESRD beneficiaries. The average expenditures per year of these beneficiaries, particularly ESRD beneficiaries, are substantially higher than the average annual expenditures of aged beneficiaries. Even without the disabled and ESRD beneficiaries, however, these data do provide insight into geographic variations in practice patterns, which is their principal purpose.

Hospital Referral Regions (HRRs)

Because of the local nature of most health services, we present the indicator data at the HRR level. Variation across geographic areas reflects different challenges for health care providers, and comparing the costs, performance, or outcomes for providers in different regions is impossible without adjusting for patient mix as well as other local characteristics.

HRRs identify geographic areas with broad similarities that can be used to benchmark the performance of individual hospitals. This level of detail offers a compromise between state-level data, which often include health care markets with little in common, and hospital service areas (HSA), most of which contain only one hospital and thus are too small to generate meaningful statistics.

The Dartmouth Atlas of Health Care³ has identified 306 HRRs based on where Medicare patients are admitted for tertiary care. Each HSA – essentially, each zip code – is assigned to an HRR based on where most of its residents receive major cardiovascular procedures. HRR boundaries are adjusted to ensure geographic contiguity and a minimum total population of 120,000. Note that many HRRs cross state lines, reflecting local referral patterns.

The data in this report assign each claim to the HRR where the beneficiary *lives*, rather than the HRR in which the patient actually *received care*. This means that these data have a perspective similar to that of an ACO, which will be accountable for the expenditure of the population with which it is aligned regardless of where those beneficiaries obtain service. Patients who live within an HRR generally receive the vast majority of their care from providers located in the HRR. The IOM notes that 83 percent of Medicare expenditures occur in the same HRR where the beneficiary lives. Thus, while the HRR data will likely differ substantially from the data for the population that is actually aligned with an ACO, they

² See <http://ccwdata.org/index.php>.

³ <http://www.dartmouthatlas.org/>.

may provide those responsible for formation of the ACO with an idea of what to expect when data for their aligned population become available. The data are intended only to provide a useful starting point for framing the follow-up questions that any kind of aggregate data describing overall utilization or expenditures inevitably raise.

Please note that the data presented here are NOT the benchmarks or standards on which the Medicare Shared Savings Program will base its payments to ACOs. These figures are intended solely as a starting point for providers to assess their own utilization, costs, and quality relative to others within a relevant geographic region.

Suggested Use

It is suggested that each ACO team that is participating in the ADLS select up to three Hospital Referral Regions, and the state, from which their ACO is expected to draw its aligned population. (There are simple drop-down menus provided on the ADLS Sample Report for this purpose. You may need to “enable” these features of the workbook.) For example, an ACO based in Chicago may anticipate drawing its aligned population from the City of Chicago and the northern and western suburbs. It would select the Chicago, Evanston, and Melrose Park HRRs. It would also select Illinois as the State. The Dartmouth Atlas website defines and maps the HRRs here:

<http://www.dartmouthatlas.org/data/region/>.

Then review the data, making note of differences across indicators, beginning with the differences in the underlying demographic characteristics and patterns of disease prevalence, working through differences in the use of covered services, utilization rates for those services, and expenditures, and quality indicators. Ask yourself:

- What are the prevalent chronic conditions that might be a focus for improved care processes?
- Where are there indications of gaps in quality?
- Where are there opportunities to reduce the overall cost of care by improving quality or reducing duplicative or otherwise unnecessary care?

You might also choose to compare patterns of care in your local area to patterns of care in other parts of the country that have markedly different patterns of utilization or quality to begin formulating goals for “achievable” improvements in care quality, outcomes, and population expenditure. However, when making these comparisons keep in mind that the data presented in the ADLS Sample Report have not been adjusted for differences in risk across areas (although an average risk score is provided to help you gauge the contribution of risk differences) or for geographic differences in wages and other input prices.

Indicators

The ADLS Sample Report is divided into 10 sections, presented on 8 pages.

- Page 1 shows summary *demographic* and *disease prevalence* indicators
- Page 2 shows the *percent of beneficiaries using* types of covered services (benefits)
- Page 3 shows *utilization rates* for types of covered services and selected *readmission & emergency department visit rates*

- Page 4 shows the *average per capita cost* incurred for types of covered services
- Page 5 shows the average cost incurred by a user of a type of covered service
- Page 6 shows performance indicators from Hospital Compare
- Page 7 shows a selection of AHRQ prevention quality indicators
- Page 8 shows a selection of AHRQ patient safety indicators

Demographics. The specific demographic indicators included on the attached reports are:

1. Average age
2. Percentage male/female
3. Percentage eligible for Medicaid
4. Average HCC score⁴

These indicators are given on page 1 of the report.

Disease Prevalence. The specific demographic indicators included on the attached reports are:

1. The percent of beneficiaries who have had a heart attack
2. The percent of beneficiaries with atrial fibrillation
3. The percent of beneficiaries with chronic kidney disease
4. The percent of beneficiaries with chronic obstructive pulmonary disease
5. The percent of beneficiaries with depression
6. The percent of beneficiaries with diabetes
7. The percent of beneficiaries with heart failure
8. The percent of beneficiaries with ischemic heart disease
9. The percent of beneficiaries with breast cancer
10. The percent of beneficiaries with colorectal cancer
11. The percent of beneficiaries with lung cancer
12. The percent of beneficiaries with prostate cancer

Specific definitions for these measures may be found in the Documentation tab of the workbook and on the IOM website.

Utilization. Two utilization measures are generally included on the attached report: the percentage of beneficiaries using specified categories of covered services (benefits); and the rate of service utilization for many (but not all) of those categories of covered service. For inpatient services, utilization rates are expressed in terms of both admissions and days per 1,000 beneficiaries. For many outpatient services, utilization is expressed in terms of “service events” per 1,000 beneficiaries. Obviously, meaningful planning and goals will require more refined measures of utilization, and more narrowly defined categories of service. However, these data may provide a useful starting point for that discussion. The specific categories of service that are used in these reports are:

⁴ The HCC score reflects the effect of demographic characteristics such as age and sex, as well as the prevalence of chronic conditions, on the expected expenditure of beneficiaries residing in the HRR.

1. Inpatient (IP) hospital care, including acute inpatient care paid under the DRG-based inpatient prospective payment system, care provided in Critical Access Hospitals, and other inpatient care.
2. Post-acute care (PAC), including care provided in inpatient rehabilitation facilities (IRF), long-term care hospitals (LTCH), skilled nursing facilities (SNF), and home health agencies (HH).
3. Hospital outpatient services (OP), which includes more generally “institutional” outpatient services, i.e., services not provided in physician offices or ambulatory surgical centers.
4. Evaluation & Management (E&M) services, including physician office visits, physician E&M services provided to hospital inpatients, and E&M services provided in other settings.
5. Procedures (PROC), including surgical procedures and diagnostic procedures other than imaging procedures.
6. Imaging procedures (IMG), including routine imaging procedures and advanced imaging procedures such as CT, MRI, and PET.
7. Laboratory tests (LABTEST).
8. Other diagnostic tests (OTHTST).
9. Ambulatory surgical center (ASC) procedures, which does not include outpatient surgery performed in physician offices or hospital outpatient departments.
10. Durable medical equipment (DME).
11. Part B drugs (DRUG), which includes only those drugs that are covered by Part B of Medicare not prescription drugs covered by a Part D prescription drug plan.
12. Other (OTHER) covered services not included in one of the outstanding categories.

A second set of utilization indicators is also provided in this section of the ADLS Sample Report. These describe acute hospital readmissions and emergency department (ED) utilization rates

Expenditures. The ADLS Sample Report shows, for each of the categories of covered service described above, the average per capita cost and the average cost per user of service. These expenditure data reflect the actual amounts paid by Medicare to providers for services received by the beneficiaries living in the HRR. They do not include cost sharing amounts (i.e., inpatient deductible amounts or coinsurance for physician office and outpatient services).

The per capita cost data describe the overall expenditure for all aged Medicare beneficiaries living in the HRR. The per user cost data describe the level of spending incurred by a beneficiary who uses a specific type of benefit. For example, the national average expenditure for an inpatient hospital stay is reported in these data as \$9,103. Among patients with at least one hospital admission, the average number of admissions per year is approximately 1.6. For these patients, therefore, the average amount incurred for inpatient hospital care was \$14,858. However, only 21.5% of beneficiaries had an inpatient hospital stay in 2008, so the average inpatient cost for all beneficiaries, including those who incur no inpatient claims, is \$3,192.

Quality. The ADLS Sample Report shows a large number of quality indicators from the Hospital Compare indicator set, the AHRQ Prevention Quality Indicator (PQI) set, and the AHRQ Patient Safety Indicator (PSI) set. Definitions may be found on the Documentation tab or on the IOM website.