Evolution of HEDIS: 3.0 and Beyond

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History of HEDIS

Employer Issues Leading to HEDIS

The Health Plan Employer Data and Information Set (HEDIS) is a set of standard performance measures designed to provide purchasers and consumers with the information they need to compare the performance of managed healthcare plans. It helps purchasers select health plans that provide their employees with high-quality and cost-effective healthcare. The objectives of HEDIS are to:

- Recognize employers' need to assess performance
- Agree on a baseline of meaningful measures
- Standardize data reporting to employers
- Demonstrate accountability to the public
- Build consensus among networks regarding data system investment

The National Committee for Quality Assurance (NCQA)

The National Committee for Quality Assurance (NCQA) sponsors, supports, and maintains HEDIS. Originated in 1989, NCQA is a nationally recognized accrediting agency for health maintenance organizations (HMOs). As a nonprofit, independent organization, NCQA began accrediting health plans in 1991 and issuing HEDIS measure reports in 1993. NCQA seeks to improve patient care quality and health plan performance in partnership with managed care plans, purchasers, consumers, and the public sector. HEDIS operates as a complement to NCQA's accreditation program and, therefore, is one component of a larger accountability system.

Evolution of HEDIS

HEDIS is the result of efforts by a variety of health plans and employers. Version 1.0 was a draft document completed in September 1991. This draft was given to NCQA for revision. NCQA organized a Performance Assessment Committee (PAC) to revise and refine HEDIS 1.0. This effort began in October 1992, and the result was HEDIS 2.0, which was published in November 1993. After health plans and purchasers had two years of experience in implementing HEDIS reporting, HEDIS released a technical update in January 1996. HEDIS 2.5 incorporated improvements in measure specifications and revisions to data collection methodologies. HEDIS 3.0, released in January 1997, is NCQA's third version of HEDIS. In contrast to earlier versions, HEDIS 3.0 is more outcomes, or results oriented. It looks at how well patients function in their daily lives and thus measures health plans' success at improving functional status.

Methods of Data Collection

HEDIS defines three methods of data collection. The first uses administrative (or claims) data, the second uses medical record reviews, and the third combines the first two methods for a hybrid approach. While earlier versions of HEDIS allowed health plans to chose among the three, HEDIS 3.0 stresses the importance of employing the hybrid methodology because of issues surrounding "pure" claims data or medical record review methodologies (pure medical record review is no longer an option).

For a number of reasons, health plans that rely solely on their claims data are at risk of underreporting members' care. First, many providers submit their bills without appropriate procedure codes. Health plans attempt to educate their providers on the use of nationally recognized coding guidelines, but they are not always successful. Second, health plans receive payment for services using global fee arrangements. These fees may include a number of individual services but not an itemization (e.g., the global fee for normal delivery includes all prenatal care but is submitted with only a CPT-4 procedure code of 59400). Third, health plans that pre-pay their providers using a monthly per-member-per-month fee (capitation) may not have access to

encounter data. Fourth, members often receive services outside of the standard primary care setting and health plans may never see bills for these services (e.g., cholesterol screenings at the mall).

While collecting HEDIS data using the medical record review method is much more complete and accurate, it is time consuming, costly, and difficult.

- Time consuming--for each measure, this method requires the health plan to review a statistically valid sample size of members' medical records (minimum of 411 charts).
- Costly--reviewing medical records requires a technical/clinical employee (often a nurse) at an expensive salary level.
- Difficult--because members change their primary care physicians so often, the medical record review method requires identifying the members' histories of physician choices and requesting medical records from several physicians' offices (e.g., one member may have had as many as 10 different doctors).

Readers should note that HEDIS 3.0 does not allow pure medical record review as a data collection option. Health plans that rely on this method may not be motivated to upgrade their administrative systems to provide an accurate representation of actual service events. The goal is to promote a system validation process across health plans.

The hybrid method of data collection uses claims data and medical record review results to determine the HEDIS rates. For each measure, a sample of members is randomly selected (again a minimum of 411).[1] Members' claims data are searched for the numerator events (e.g., preventive screenings). Medical record reviews are then conducted on members within the sample that did not have a screening according to claims data. The final rate is based on the total number of members within the sample that had the screening, whether identified by a claim or by the medical chart. Using the hybrid methodology ensures the accuracy and completeness of medical record reviews but greatly reduces the required volume, thereby reducing time and associated cost.

The following example calculates the breast cancer-screening rate with the hybrid methodology:

1. Identify the population to be measured. For breast cancer screening, the population is women aged 52 to 69 who were continuously enrolled with the health plan during the reporting year and the preceding year and who were not identified as having had a radical bilateral mastectomy.
2. Of the total population to be measured (as identified above), draw a random sample of 411 members.
3. For women included in the sample, search the health plan's claim system to identify those women who received one or more mammograms during the reporting year or the year prior (e.g., 260 women).
4. Conduct a medical record review on those women in the sample that were not identified using claims as having at least one mammogram (e.g., the remaining 151 women from the sample of 411). Medical records must be physically inspected by the health plan. HEDIS allows the health plan to count the mammogram if the following information appears on the member's medical chart: an author-identified note indicating the date the mammogram was received, the place of the service, and the result of the mammogram (e.g., 15 more women identified through medical record review).
5. The final numerator includes the total number of women identified as having one or more mammograms during the two-year period (e.g., 260 from claims plus 15 from medical charts equals a total numerator of 275).
6. The breast cancer screening rate is calculated by dividing the numerator by the total sample size and multiplying by 100 (275/ 411 x 100 = 67 percent).

Development of HEDIS 3.0

HEDIS 3.0 became available for use in January 1997. HEDIS is distinct from other performance measurement systems because it is widely recognized as a statistically valid measure of health plan performance. Three hundred and thirty health plans in the US have used it. In addition, large employers have used HEDIS to evaluate potential insurers for their employees.

Another distinction is that HEDIS was built to facilitate consumer comparisons. Most other measures are not designed to do so. As the HEDIS 3.0 Executive Summary states,

"While there are many valid reasons for measurement . . . not all measures have the statistical properties needed to detect differences between health plans in order to guide choice-and no other set of measures is designed specifically with that purpose in mind."[2]

Major Changes from Prior Versions
HEDIS 3.0's improvement over previous versions includes the following areas:

Focuses on outcomes and results
For the first time HEDIS requires plans to measure the functional status of their members.

Specific improvements in this area also include the standardization of patient satisfaction surveys across health plans. This allows for comparability in reporting members' improvement in functional status and activities of daily living across health plans.

The combination of process and outcome measures assesses the quality of care and prevention mechanisms. For example, in measuring an at-risk population for access to and use of medical care, it is just as important to track how many women seek prenatal care during the first trimester as it is to show what the health plan is doing to get pregnant women to their caregivers earlier in the pregnancy.

Addresses the full spectrum of healthcare
Measures run the gamut from preventive care (advising smokers to quit) and early detection (breast cancer screening), to more outcomes-based treatment methodologies (beta blocker treatment after a heart attack).

Measures also deal with varied age groups, from children (treating children's ear infections) to seniors (health of seniors using the SF-36, a patient functional status survey).

Brings private sector and public sector measurement efforts together
HEDIS 3.0 offers the ability to combine commercial and Medicaid and Medicare measures without compromising the measures. This achievement has not only increased the measures' efficiency, but will lead to quality comparisons across populations. For example, the previous version of Medicaid HEDIS included a measure for Hepatitis B vaccination, whereas the previous commercial versions of HEDIS (2.0 and 2.5) did not. HEDIS 3.0 combines the commercial and Medicaid immunization measures, which includes Hepatitis B vaccination.

Standardizes measurement across the full range of issues
HEDIS 3.0 creates eight performance domains. These domains encompass a wide range of services health plans provide. They include traditional utilization measures and others such as access to care.

Includes a process for its ongoing improvement
One of HEDIS 3.0's unique features is that it includes possible reporting measures. This allows health plans and purchasers to anticipate future measures and assist in HEDIS's development and improvement. For example, low-birthweight neonates are not required for the 1996 reporting year, although they were included in previous versions. This is due to difficulty in deriving information from administrative data. It is still present in the HEDIS manual in anticipation of its inclusion in future reporting years. The data specifications are listed allowing health plans to critique data collection.

The Process
NCQA's Committee on Performance Measurement (CPM) spearheaded the development of HEDIS 3.0. Its members represent the diverse constituency the measures are intended to serve. Representatives included public and private purchasers, consumers, organized labor, medical providers, public health officials, and health plans.[3] Other members on the committee provided expertise in quality management and measurement science. A Technical Advisory Committee (TAC) assisted CPM members in understanding the intricacies of performance measurement.

The CPM was charged with developing HEDIS 2.5 to the next level. The committee aimed to do this by incorporating the Medicare risk population, Medicaid HEDIS, or both whenever feasible. Next, CPM issued an open call for new measures and

developed a process for evaluating these. For a measure to be selected required the following:

- Relevance--The measure had to address issues that would significantly affect healthcare outcomes. Purchasers and consumers would use the measure in selecting a health plan.
- Scientifically sound--The measure had to be valid, accurate, and achieve the same results when repeated in the same populations and settings.
- Feasible--Health plans would have to be able to report on the measure easily. This did not preclude the CPM from including future measures in HEDIS 3.0. However, it did not require these (e.g., extent of breast cancer at diagnosis, low-birthweight neonates).

Once measures were submitted, they were tested and evaluated by experts in clinical measurement. The Centers for Disease Control and Prevention (CDC), the Agency for Healthcare Policy and Research (AHCPR), the Health Care Financing Administration (HCFA), the RAND Corporation, and other experts assisted with the evaluation.

To improve HEDIS, CPM also brought together several expert panels as part of its HEDIS Users Group (HUG). These included the Technical Modifications Panel (recommendations for the integration of Medicaid HEDIS with HEDIS 2.5), Definitional Panel (interpretation of HEDIS measures), Methodological Panel (examination of sampling and other statistical issues), and the Coding Panel (examination of procedure, diagnosis, and utilization codes).

The result of all this effort is a comprehensive set of performance measures covering eight performance domains (see Table 1).

Table 1—HEDIS 3.0 Performance Domains

Domain	Sample Reporting Measures	Example
1. Effectiveness of Care	• Childhood immunization status • Adolescent immunization status • Advising smokers to quit • Flu shots for older adults • Breast cancer screening • Treating children's ear infections • Beta-blocker treatment after a heart attack • Eye exams for people with diabetes	**Childhood Immunization Status:** Childhood immunizations help prevent serious illnesses such as polio, tetanus, and whooping cough and are a proven and easy way to help a child stay healthy **Measure:** Percent of children in the health plan who received the appropriate immunizations by their second birthday
2. Access/Availability of Care	• Availability of primary care providers • Availability of mental health/chemical dependency providers • Availability of obstetrical and prenatal care providers • Initiation of prenatal care • Low-birthweight deliveries at facilities for high-risk deliveries and neonates • Availability of language interpretation services	**Availability of Primary Care Providers:** It is important that members have a real choice when selecting their primary care physicians, who are responsible for initial diagnosis and referral to specialists. Although health plans provide rosters of primary care physicians to their members, sometimes the practices fill up and physicians no longer accept new members. **Measure:** Report how many primary care physicians are accepting new patients.

3. Satisfaction with Experience of Care	• Member satisfaction survey • Survey descriptive information	**Member Satisfaction Survey:** Plans are required to survey their members using NCQA's Member Satisfaction Survey. This allows for comparability among health plans. (Note: This currently applies to commercial members only.)
4. Health Plan Stability	• Disenrollment • Provider turnover • Years in business/total membership • Indicators of financial stability • Narrative information on rate trends, financial stability, and insolvency protection	**Disenrollment:** Members can use disenrollment rates to compare health plans in the same area. If a plan has a particularly high disenrollment rate, this may be due to member dissatisfaction. **Measure:** Number of members who left a health plan within the reporting year
5. Use of Services	• Well child visits on the third, fourth, fifth, and sixth years of life • Adolescent well care visit • Frequency of selected procedures • Inpatient utilization-general hospital/acute care • Ambulatory care • Inpatient utilization-nonacute care • Discharge and average length of stay-maternity care • Cesarean section and vaginal birth after cesarean (VBAC rate)	Well Child Visits in the Third, Fourth, Fifth, and Sixth Years of Life: Well child visits are particularly important during the preschool years to help children reach their full potential as healthy, successful, and contributing members of society. **Measure:** Percent of members who are 3, 4, 5, and 6 years of age and who received at least one well child visit with a primary care physician during the reporting year
6. Cost of Care	• Rate trends • High-occurrence/high-cost DRGs	**High-occurrence/High-cost DRGs:** DRGs are used to classify certain conditions that commonly require hospitalization and thus add to a plan's medical expenses. These include cerebrovascular, respiratory, and cardiovascular DRGs.
7. Informed Healthcare Choices	• New member orientation/education • Language translation services	**New Member Orientation/Education:** Plans should inform members in an effective fashion about how the plan works. Measure:Description of procedures used to orient and educate new members on how to use the plan's services
8. Health Plan Descriptive Information	• Case management • Utilization management • Risk management • Recredentialing • Preventive care and health promotion • Weeks of pregnancy at time of enrollment in the health plan	**Case Management:** This measures the health plan's ability to care for sick members, in contrast to preventive care and health promotion efforts. Case management is precisely this process of identifying and assisting the management of serious illnesses such as diabetes and AIDS.

HEDIS as an Internal Measurement Tool

Health plans use HEDIS as a tool for internal management and quality improvement. Health plans use it to benchmark results, identify areas for quality improvement, and enhance physician profiling.

Benchmarking

Benchmarking HEDIS results allows health plans to identify strengths, weaknesses, and best practices within their organizations. A health plan can compare its results with (1) national goals such as *Healthy People 2000: National Health Promotion and Disease Prevention Objectives*, (2) industry standards, (3) competitive organizations, (4) internal corporate goals, and (5) geographic regions.

There are a number of important considerations when comparing HEDIS results among health plans. First, HEDIS does not adjust for population differences (age, gender, race, geographic area, and standard of living). NCQA will work towards adjusting HEDIS measures for these differences. This effort, however, will take time. Second, HEDIS rates can vary dramatically due to differences in data collection methods. As discussed earlier, a health plan that relies solely on its claims data may compare unfavorably to another health plan that spends extra resources to conduct medical record reviews. Third, results can vary due to plan design differences-IPA versus staff model HMO, for example. Finally, HEDIS results are not currently audited. HCFA will audit Medicare results of HEDIS 3.0. NCQA recognizes the need for an audit of health plan infrastructure to assure the integrity of HEDIS data. The organization will be developing audit standards for the commercial results of HEDIS 3.0. In the meantime, health plans are on the honor system to follow HEDIS specifications.

Identification of Areas for Quality Improvement

HEDIS provides health plans with vital information about their populations. It has been instrumental in identifying, for example, the need for disease management programs, focused quality management clinical studies, and member outreach programs. HEDIS can increase customer satisfaction by focusing the health plan's initiatives on areas that impact the quality of the care.

Physician Profiling

Many health plans use HEDIS measures to improve the quality of their provider networks. Incorporating HEDIS into physician profiling enables health plans to positively influence physician practice patterns by promoting accepted preventive practices and screening procedures.

In addition, HEDIS helps health plans identify problems with their physicians' coding practices. Health plans can educate physicians on billing accuracy and nationally recognized coding guidelines. The effect of inaccurate coding on HEDIS rates calculated with claims data is truly an eye-opener to physicians, for example, who know that their "real" immunization rate is much higher.

Importance of Data Quality and Coding Accuracy

The Use of Nationally Recognized Coding Guidelines

For true comparability of health plans, both health plans and providers must adhere to national coding guidelines. This especially holds true when organizations use the hybrid method of reporting HEDIS measures, which includes a strong component of administrative data. For example, hospitals are generally required to submit two separate records or UB-92 claims: one for the mother and one for the newborn. Coding guidelines stipulate that the mother's record should have a V27.x code to identify outcome of delivery, while the newborn claim must provide a V30.xx code as principal diagnosis. Some organizations combine these records. This practice inadvertently excludes one of these codes (usually the V27.x code). This code is the best way of measuring live births, and HEDIS measures specify that maternity-related care is qualified based on the number of live births.

Uniform Data Collection Practices

Uniform data collection practices have benefits beyond HEDIS. Not all health plans collect all the information included on the UB-92 form, yet many HEDIS measures use revenue codes as identifiers in addition to ICD-9 and CPT-4 codes. As health plans begin reporting HEDIS measures using the same combination of identifiers, the easier it will be to compare them. This will lay the groundwork for future population studies. To achieve this, the same type of information must be collected.

The Contribution of the Health Information Management Professional

The health information manager's involvement in HEDIS reporting clearly benefits health plans. As health data content experts, HIM professionals improve data collection practices, retrieval and interpretation of information, and translation of data to HEDIS measures.

Occupancy rates, length of stay, C-section rates-these are all performance measures that HIM professionals work with regularly. Health plans view global health issues beyond the acute care setting, so HIM experience in ambulatory care settings offers particular value. Expertise in statistics and data analysis also enhances health information managers' ability to assist in HEDIS reporting and interpretation.

Notes

1. NCQA's minimum sample size of 411 is for purposes of statistical validity. It applies to all health plans regardless of size.

2. NCQA. "Executive Summary." *HEDIS 3.0, Volume I.* Washington, DC: NCQA, 1996, p. 3.

3. Ibid., p. 7.

Reference

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