Using the Hybrid Method to Calculate Measures from the Child and Adult Core Sets

Introduction

The Child and Adult Core Sets of health care quality measures for Medicaid and the Children's Health Insurance Program (CHIP) include measures that can be calculated with the hybrid method, which uses a combination of administrative and medical records data to identify services included in the numerator or to determine exclusions from the denominator based on diagnoses or other criteria. Measure developers offer hybrid specifications for situations where administrative data alone may be incomplete or may not capture all the information needed to calculate the measure. In these situations, the hybrid method may yield more accurate rates than administrative data alone. However, because the hybrid method requires a review of medical records, it may be costly for states to implement. This technical assistance (TA) brief presents the rationale for the hybrid method and considerations for using the hybrid method when calculating core set measures.

Child and Adult Core Set Measures That Have Hybrid Specifications

The technical specifications and resource manuals for the Child and Adult Core Sets identify the methods allowed for each measure.[1] Of the 23 measures in the 2014 Child Core Set, 1 requires the hybrid method and 10 specify that either the administrative or hybrid method may be used (Table 1). Of the 26 measures in the 2014 Adult Core Set, 5 require the hybrid method and another 5 offer the option to use the administrative or hybrid method (Table 1). The next section discusses the rationale for using the hybrid method where there is an option.

[1] The technical specifications and resource manuals for the Child and Adult Core Sets are available at http://www.medicaid.gov/License-Agreement.html.

About This Brief

This technical assistance brief discusses the use of the hybrid method in calculating measures for the core sets of Medicaid/CHIP health care quality measures. The hybrid method involves the use of both administrative data (such as claims/encounter data) and medical record review. Although the hybrid method may require additional effort and expense, it may produce more accurate rates than administrative data alone. This brief describes why the hybrid option is offered and factors to consider when deciding whether to use the hybrid method.

Rationale for Considering the Hybrid Option to Calculate the Core Set Measures

The hybrid method is used in situations where administrative data may be incomplete or may not capture all the information needed to calculate a measure. In these situations, the hybrid method may provide a more accurate assessment of performance across states, programs, health plans, or providers. The difference between rates calculated using the hybrid method and those calculated using the administrative method is often called the "hybrid lift."

Pawlson et al. (2007) analyzed differences between administrative and hybrid rates across 15 HEDIS® measures reported by 283 commercial managed care plans and found that hybrid rates were, on average, 20 percentage points higher than the rates for the same measures calculated using the administrative method.[2] The observed difference in rates between the hybrid and administrative methods was smallest for measures of utilization, such as well-child visits, and greatest for measures that relied on clinical data, such as laboratory results and biometric values.

[2] HEDIS® is a registered trademark of the National Committee for Quality Assurance (NCQA).

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Table 1. Child and Adult Core Set Measures That Have Hybrid Specifications

Measure	Measure Steward	Optional Use of the Hybrid Method	Mandatory Use of the Hybrid Method
Child Core Set Measures	.	.	.
Adolescent Well-Care Visit	NCQA	✓	.
Caesarean Section for Nulliparous Singleton Vertex	TJC	.	✓
Childhood Immunization Status	NCQA	✓	.
Developmental Screening in the First Three Years of Life	OHSU	✓	.
Frequency of Ongoing Prenatal Care	NCQA	✓	.
Human Papillomavirus Vaccine for Female Adolescents	NCQA	✓	.
Immunization Status for Adolescent	NCQA	✓	.
Timeliness of Prenatal Care	NCQA	✓	.
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents: BMI Assessment for Children/Adolescents	NCQA	✓	.
Well-Child Visits in the First 15 Months of Life	NCQA	✓	.
Well-Child Visits in the Third, Fourth, Fifth, and Sixth Years of Life	NCQA	✓	.
Adult Core Set Measures	.	.	.
Adult Body Mass Index Assessment[1]	NCQA	✓	.
Care Transition – Timely Transmission of Transition Record[1]	AMA-PCPI	.	✓
Cervical Cancer Screening	NCQA	✓	.
Comprehensive Diabetes Care: Hemoglobin A1c Testing	NCQA	✓	.
Comprehensive Diabetes Care: LDL-C Screening	NCQA	✓	.
Controlling High Blood Pressure[1]	NCQA	.	✓
PC-01: Elective Delivery	TJC	.	✓
PC-03: Antenatal Steroids	TJC	.	✓
Postpartum Care Rate	NCQA	✓	.
Screening for Clinical Depression and Follow-up Plan[1]	CMS	.	✓[2]

Source: CMS Technical Specifications and Resource Manuals for the Child and Adult Core Sets, available at http://www.medicaid.gov/License-Agreement.html.

AMA-PCPI: American Medical Association-Physician Consortium for Performance Improvement; CMS: Centers for Medicare & Medicaid Services; NCQA: National Committee for Quality Assurance; OSHU: Oregon Health and Science University; TJC: The Joint Commission

[1] This measure is also included in the Core Set of Health Care Quality Measures for Medicaid Health Home Programs.

[2] Screening for Clinical Depression and Follow-Up Plan requires medical record review to determine denominator exclusions only.

Angier et al. (2014) examined the effect of using electronic health records (EHRs) to calculate selected Child Core Set measures and found that the rate of Body Mass Index (BMI) Assessment among children ages 3 to 17 increased from 1 percent with administrative claims data alone to 72 percent with EHR data alone or in combination with administrative data.

A substantial difference was also observed for state reporting of the BMI Assessment measure in the FFY 2012 Medicaid/CHIP Child Core Set. For the 15 states using the hybrid method to calculate the BMI measure, the median rate was 45 percent, whereas the median rate was 2 percent for the 12 states that used the administrative method (U.S. Department of Health and Human Services 2013). This differential is likely due in part to how BMI assessment is documented in administrative data; documentation of the BMI percentile is more likely to be noted in medical records than in claims/encounter data.

Factors Affecting the Completeness and Accuracy of Administrative Data

The following factors can affect the completeness and accuracy of rates reported using administrative data:

- **Provider payment structures.** State- or plan-specific provider payment structures, such as use of global payments for specific services, may affect the completeness and accuracy of administrative data. For example, individual dates of service for prenatal or postpartum care may not be captured in claims and encounter data if a state or health plan uses a global fee for maternity services.[3]
- **Medicaid coverage of specific procedures.** When a state or health plan does not directly reimburse providers for specific procedures, administrative data sources are more likely to understate the extent to which the service is provided. In such cases, provider claims data may not reflect the specific codes required to capture the services. For example, for the Developmental Screening measure, some states may not use CPT® procedure code 96110 to pay for screenings for developmental, behavioral, and social delays or the code may cover a broader set of screening tools than specified for the measure.[4] Thus, the hybrid method may help to identify whether screening was conducted using one of the tools specified for the measure.
- **Use of capitation to pay providers.** When a state Medicaid agency pays health plans, laboratories, or other providers a capitation rate to deliver services to Medicaid beneficiaries, encounter data may be incomplete or may not be submitted on a timely basis.
- **Use of lab results or biometric values to indicate a service was provided.** For some core set measures, such as the Well Child Visits and Hemoglobin A1c Testing measures, claims and encounter data are relatively complete because most providers bill (and are paid) for the service when it is provided (Pawlson et al. 2007). Measures that require specific clinical information (such as a lab result) or biometric values (such as BMI) are more likely to be underreported in administrative data.

[3] This consideration may be relevant for three measures included in the Child and Adult Core Sets: Frequency of Ongoing Prenatal Care, Timeliness of Prenatal Care, and Postpartum Care.

[4] CPT® codes copyright 2013 American Medical Association. All rights reserved. CPT is a trademark of the American Medical Association.

Considerations for Using the Hybrid Method to Improve the Accuracy of Reported Rates

While the hybrid method may yield more accurate rates in cases where administrative data are not complete, the hybrid method may also require additional effort and expense for Medicaid/CHIP agencies. For this reason, states should consider the following factors when deciding whether to use the hybrid method to calculate measures that offer a hybrid option.

1. **Check the quality and completeness of the state's administrative data system to support the calculation of each measure.** Administrative data may be incomplete if the state uses capitation or global payments, or if payment is not associated with information required for a measure (such as recording a BMI percentile in the medical record).
2. **Determine whether the claims/encounter data system is designed to capture all types of codes submitted by providers, hospitals, and health plans (such as LOINC® or CPT-II codes).**[5] Other code sets may be submitted, but if the state's system does not capture these codes, associated services may not be counted when determining measure rates.
3. **Assess the timeliness and completeness of encounter data files submitted by providers, hospitals, and health plans.** To determine whether encounter data files exclude substantial numbers or types of claims, states may perform data completeness studies, such as assessing the number of claims per member per month by type of service and health plan, or comparing rates across delivery systems (fee-for-service and managed care) (Byrd et al. 2013).
4. **Assess the magnitude of differences in rates reported by health plans that use the administrative method versus the hybrid method.** Health plans within a state may use different methods to calculate a measure. If health plan rates for a measure are substantially higher using the hybrid method than using the administrative method, consider asking all health plans to use the hybrid method.[6]

[5] LOINC® is a registered trademark of the Regenstrief Institute.

[6] Information on combining rates across health plans to create a state-level rate can be found in the TA brief, "Approaches to Developing State-Level Rates Using Data from Multiple Sources," available at http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Quality-of-Care/Downloads/State-Level-Rates-Brief.pdf

Strategies for Deciding Whether to Use the Hybrid Method

- ✓ *Assess completeness of administrative data sources, including codes that may be under-reported in claims due to provider billing practices or Medicaid payment policies*
- ✓ *Conduct tests on a small sample of data to understand the feasibility and impact of using the hybrid method*
- ✓ *Focus on measures where the use of the hybrid method is likely to have the biggest impact (that is, measures with incomplete administrative data)*

Federal matching payments may be available to support states' use of the hybrid method. States may contract with an External Quality Review Organization (EQRO) to undertake medical record reviews for individuals enrolled in managed care. State costs associated with EQR-related activities may be eligible for a 75 percent match. Child and adult core measures that are validated or calculated by an EQRO qualify for the enhanced match rate. States could expand their existing contracts to conduct ongoing utilization review and data analysis though an administrative contract under Section 1903(a)(7) of the Act and receive a 50 percent federal matching payment. These costs, along with all other Medicaid administrative activities performed by the state must be "necessary for the proper and efficient administration of the state plan."[7]

If states suspect that administrative data may be incomplete for one or more measures, they should consider testing the magnitude of the hybrid lift with a small sample of records. Based on the results of this test, a state may choose to focus additional resources needed for the hybrid method on measures for which the hybrid method leads to more accurate rates, including measures that depend on the use of clinical data (such as BMI). As states are increasingly concerned with documenting and reporting their performance, the hybrid method may offer an advantage in capturing care and services that are incompletely captured in administrative data.

For Further Information

To obtain TA with reporting the Child and Adult Core Set measures, please contact the TA mailbox at **MACQualityTA@cms.hhs.gov**.

[7] More information on federal matching payments to support the hybrid method is available at http://medicaid.gov/Federal-Policy-Guidance/Downloads/CIB-07-24-2013.pdf.

References

Angier, H., R. Gold, C. Gallia, A. Casciato , C. J. Tillotson, M. Marino, R. Mangione-Smith, and J. E. DeVoe. "Variation in Outcomes of Quality Measurement by Data Source." *Pediatrics*, vol. 133, no. 6, June 2014, pp. e1676–e1682.

Byrd, Vivian L.H., and Allison Hedley Dodd. "Assessing the Usability of MAX 2008 Encounter Data for Comprehensive Managed Care." *Medicare & Medicaid Research Review,* vol. 3, no. 1, 2013, pp. E1–E19. Available at http://www.cms.gov/Research-Statistics-Data-and-Systems/Computer-Data-and-Systems/MedicaidDataSourcesGenInfo/Downloads/MAX_IB7_EncounterData_071312.pdf.

Centers for Medicare & Medicaid Services, Center for Medicaid and CHIP Services. "Core Set of Children's Health Care Quality Measures for Medicaid and CHIP: Technical Specifications and Resource Manual for Federal Fiscal Year 2014 Reporting." Baltimore, MD: CMS, July 2014. Available at http://www.medicaid.gov/License-Agreement.html.

Centers for Medicare & Medicaid Services, Center for Medicaid and CHIP Services. "Core Set of Health Care Quality Measures for Adults Enrolled in Medicaid: Technical Specifications and Resource Manual for Federal Fiscal Year 2014 Reporting." Baltimore, MD: CMS, May 2014. Available at http://www.medicaid.gov/License-Agreement.html.

Centers for Medicare & Medicaid Services, Center for Medicaid and CHIP Services. "Approaches to Developing State-Level Rates Using Data from Multiple Sources." Baltimore, MD: CMS, October 2014. Available at . http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Quality-of-Care/Downloads/State-Level-Rates-Brief.pdf.

Pawlson, L. Gregory, Sarah Hudson Scholle, and Anne Powers. "Comparison of Administrative-only Versus Administrative Plus Chart Review Data for Reporting HEDIS® Hybrid Measures." *American Journal of Managed Care*, vol.13, no. 10, October 2007, pp. 553–558.

U.S. Department of Health and Human Services. "2013 Annual Report on the Quality of Care for Children in Medicaid and CHIP." Washington, DC: HHS, September 2013. Available at http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Quality-of-Care/Downloads/2013-Ann-Sec-Rept.pdf.