

Advancing Digital Quality Reporting Using Regulated Endpoints

Overview

Industry leaders agree it's critical in quality reporting to demonstrate improved timeliness, reduced errors, and minimized costs. In addition, the broad consensus is that the road map to achieving these goals is to increase the use of open standards based on near real-time transactions, leveraging Fast Healthcare Interoperability Resources (FHIR®) maintained by Health Level Seven (HL7®) International. There is considerably less agreement, however, on the technical path to implementation.

To address this issue, Leavitt Partners, the National Committee for Quality Assurance (NCQA), and the Digital Quality Implementers Community (DQIC) conducted a feasibility study using standardized APIs required under §170.315(g)(10) and United States Core Data for Interoperability (USCDI) v3 data elements mandated for certified Health IT based on analysis drawing on previous eCQM testing and experience in the field. The study found a high probability that 50 measures—covering all screening measures and 42.7 percent of the universal foundation—can be reported today using current USCDI v3 data. In addition, adding just ten targeted data elements would enable reporting for 35 more measures, reaching nearly 80 percent of the universal foundation.

We recommend that the Centers for Medicare & Medicaid Services (CMS) lead a collaborative pilot with accountable care organizations (ACOs) and certified vendors to validate these findings in live environments and generate evidence to guide future policy. Assuming this live testing supports the feasibility study, we recommend that the Assistant Secretary of Technology Policy/Office of the National Coordinator (ASTP/ONC) and CMS take the following actions:

- ASTP: Allow the use of United States Core Data for Interoperability (USCDI)—without requiring USCDI+ quality for quality reporting as an approved use of certified Health IT if the benchmarks can be shown to have acceptable data quality.
- CMS: Update quality reporting submission requirements to accept USCDI-based data as an interim step to full digital quality measures (dQMs) or electronic clinical quality measures (eCQMs).

Advancing Digital Quality Reporting Using Regulated Endpoints

Problem Statement

Transitioning to HL7® FHIR® for digital quality reporting has proven challenging. Although Electronic Clinical Quality Measures (eCQMs) are high-quality specifications that support reporting, in many cases, they also require data that extends beyond currently committed system capabilities. Continued reliance on existing batch file standards like the Quality Reporting Data Architecture (QRDA) results in manual abstraction, high operational burdens, increased costs, and opportunities for fraud.

One approach that both ACOs and technology vendors suggested was to investigate the opportunity to leverage data sourced directly from the endpoints exposed by certified Health IT vendors as part of the § 170.315(g)(10) ("Standardized API for Patient and Population Services") as well as data exposed by payers as part of the implementation of CMS-9115 ("CMS Interoperability and Patient Access Final Rule") and CMS-0057 ("CMS Interoperability and Prior Authorization Final Rule"). This approach is already being successfully deployed in the transition to digital quality measures for Healthcare Effectiveness Data and Information Set (HEDIS®) and has been used for some Medicare Clinical Quality Measures (CQMs).

Key Findings

Based on our analysis, 50 measures can be reported today using USCDI v3 without any modification, which represents 42.7 percent of all measures across all programs (see Table 1, Appendix A). The numbers dramatically increase when inpatient measures are excluded or specific program criteria are used. In addition, ten specific USCDI data elements (see Table 2, Appendix A) would enable another 35 measures (see Table 3, Appendix A) and make most inpatient hospital reporting possible. Of these data elements, the "medication administration" data element will enable the largest number of measures to be run.

Implications

While these findings are encouraging, Leavitt Partners proposes collaborative testing in real-world clinical data by comparing results obtained by running using existing CQM or eCQM measure specification versus results using USCDI v3 and FHIR®-based reporting. Early tests from the industry that followed this path (using Medicare CQM definitions using only data obtained from existing g(10) endpoints) showed no statistically significant difference between data collected using traditional methods and data reported leveraging the g(10) endpoints and USCDI v3. These findings suggest that the data did not degrade, indicating more detailed data elements in eCQM measure specifications may be unnecessary (e.g., date of screening versus date/time of screening).

Opportunity

Should these findings be validated through testing, CMS and ASTP could advance digital quality reporting through coordinated efforts to offer technical guidance on how to use FHIR/USCDI for CMS CQM reporting, as well as to adjust CQM measure specifications to align with USCDI v3.

Advancing Digital Quality Reporting Using Regulated Endpoints

Completing Quality Measures Beyond USCDI v3

This change will affect how quality measures are created. For the 32 clinical measures that cannot use the current dataset, and for other clinical measures outside the universal foundation, we recommend that experts in digital measure development check whether the available data have elements that are functionally equivalent. If such equivalencies cannot be established, it is recommended that a group of cross-functional stakeholders—including measure developers and reporters such as providers and payers—collaborate to identify strategies for providing the necessary data. This collaboration should address not only quality measurement needs, but also critical use cases like patient access, prior authorization, and care coordination. It is essential that this process be managed carefully so that any new data elements introduced are thoughtfully considered and broadly beneficial across the health care ecosystem.

APPROACH AND FINDINGS

Approach

We mapped the current CQM numerator, denominator, and exclusions descriptions to logical data elements included in USCDI v3, which is currently required for ASTP certified health technology. We did not consider data quality or the improvement in data element specificity in eCQM specifications. We opted for this approach for two reasons:

1. Certified Health IT vendors and payers are committed to providing FHIR APIs to support CMS-0057 and the existing Certified Health IT Program. In addition, the USCDI v3 specification is recognized as having enough maturity to support clinical decision support.
2. Current specifications for quality reporting are widely used and generally accepted since the quality data model (QDM) has not been updated since 2021.

We used the CMS Measure Inventory, which catalogs quality measures used across CMS clinician reporting programs (e.g., the Merit-based Incentive Payment System [MIPS], Medicare Shared Savings Program [MSSP], and ACO models), facility reporting programs (e.g., Hospital Inpatient Quality Reporting [IQR], Outpatient Quality Reporting [OQR], Skilled Nursing Facility [SNF] QRP), and payer-, state-, and Innovation Center-reported measures.

Of the 857 measures in CMS' measure inventory, 157 measures were identified as Universal Foundation measures or screening measures (screening measures were included in response to the current administration's emphasis on prevention at the most recent CMS Quality Conference.). **Of those 157 measures, 117 measures were classified as clinical measures** (defined as those captured in a care setting, where the electronic health record [EHR] is the “system of record”). We mapped the descriptions of the current CQM numerator, denominator, and exclusions to logical data elements included in USCDI v3. We used this approach rather than analyzing eCQM specifications because most of the industry has yet to adopt these enhanced eCQM specifications.

Advancing Digital Quality Reporting Using Regulated Endpoints

Detailed Findings

We found that USCDI v3 can fully support 50 measures. With the addition of just ten elements to USCDI v3, the number of supported measures increases to 85. Table 1 (Appendix A) lists measures that are currently possible with USCDI v3. Table 2 (Appendix A) lists the data elements to be added to USCDI v3 that will enable additional measures; those measures are listed in Table 3 (Appendix A). Efficiencies are gained because some measures are used in multiple programs (e.g., Clinical Depression Screening and Follow-Up is used in 12 programs and is counted as 12 measures). Appendix B provides more detail on the specifications for the new data elements.

Next Steps: Collaborative Testing to Verify Results

The next critical step to advancing policy is for private sector entities to demonstrate what is feasible under the current version of USCDI v3 and to identify any challenges in aggregating, deduplicating, and validating data shared through FHIR®-based APIs.

Leavitt Partners proposes a collaborative testing session focused on verifying whether these measures can be calculated in real-world clinical data by comparing results of running existing measures using typical CQM approach versus reporting using USCDI v3 and FHIR-based endpoints. The focus will be on participants in the MSSP.

Before the testing event, Leavitt Partners will work with participants to prioritize 15–20 measures for testing. Measures will be selected from the 79 measures previously included in HL7® Connectathons using QI-

Core profiles where the data have been inherited from U.S. Core 6.0.0. This approach will ensure data conformance will be highly likely to succeed. During the testing session, vendors/providers will work together, using their own test data in their own testing environments, which will allow organizations to compare the testing results against results reported to CMS through their existing process.

Leavitt Partners will identify participants using criteria in the accompanying text box. As observers, CMS and ASTP will get direct insights into the issues that need to be resolved to advance digital quality reporting in line with CMS' overall framework for interoperability.

Criteria for Participating in Testing Event

- Have a consolidated HL7® FHIR® clinical repository—not direct HL7® FHIR® APIs from electronic health records (EHR).
- Have an API Gateway to expose standard g(10) endpoints using the bulk FHIR® specification.
- Report results for the full eligible measure population where possible with no manual abstraction.
- Use Inferno for FHIR® conformance testing.
- Use the Patient Improvement Quality Information (PIQI) framework for minimum data quality assessment and to ensure that data meets minimal quality scores.
- Report at least three measures using standard HL7®FHIR® endpoints and alternate methods, reflecting a foundational commitment to the program's goals.
- Commit to mutually agreed upon deadlines and will support CMS testing for submission.

Advancing Digital Quality Reporting Using Regulated Endpoints

Policy Opportunities

Should these findings be validated through testing, CMS and ASTP have the opportunity to advance digital quality reporting through coordinated efforts. Statutes and regulations require CMS to use certified Health IT (where applicable) for certain reporting programs (e.g., Promoting Interoperability), and policy language emphasizes that quality reporting should allow fair comparisons across care settings. ASTP has determined that FHIR®-based Application Programming Interfaces (APIs) can be certified technology, thus satisfying the first requirement. The testing would help determine whether FHIR-based reporting would allow for fair comparisons across settings that use existing methods for reporting. CMS and ASTP could work with the industry to develop a FHIR implementation guide for CMS Clinician and Facility quality measures (similar to NCQA's HEDIS FHIR IG) that would explain how organizations can use FHIR for quality reporting and update measures specification as needed to reference USCDI v3 data elements.

Policy Actions Needed to Advance Digital Quality Reporting

Necessary CMS Actions

1. Revise measure specifications to reference USCDI elements.
2. Align implementation timelines across CMS quality reporting and value programs (HVBP, HIQR, HACRP, MIPS, MSSP, Innovation Center models).
3. Coordinate with post-acute assessment instruments (MDS, OASIS, LCDS, IRF-PAI).
4. Update quality reporting submission requirements to accept USCDI-based data.

Necessary ASTP Actions

1. Add seven new data elements across USCDI versions.
2. Update EHR certification requirements to include new data elements.
3. Identify applicable vocabulary standards and value sets.
4. Develop detailed technical specifications and implementation guides.

Advancing Digital Quality Reporting Using Regulated Endpoints

APPENDIX A

Table 1. Existing Clinical Quality Measures (CQMs) That Can Be Reported Using USCDI v3 and g(10) Endpoints (NOTE: These are NOT eCQMs.)

Measure Name	CMIT Measure ID	Program	eCQM Measures Tested in HL7® Connectathons with FHIR® input ¹
Adolescent Well-Care Visits	24	<ul style="list-style-type: none">Medicaid: Child Core Set	No
Adult Immunization Status	26	<ul style="list-style-type: none">Merit-based Incentive Payment System ProgramMarketplace Quality Rating SystemMedicaid: Adult Core SetMedicare Shared Savings ProgramMedicare Part C Star Rating	No
Appropriate Follow-Up Interval for Normal Colonoscopy in Average Risk Patients	71	<ul style="list-style-type: none">Ambulatory Surgical Center Quality ReportingHospital Outpatient Quality ReportingMerit-Based Incentive Payment System Program	No
Breast Cancer Screening	93	<ul style="list-style-type: none">Medicaid: Adult Core SetMarketplace Quality Rating SystemMedicare Part C Star RatingMerit-Based Incentive Payment System ProgramMedicare Shared Savings Program	Yes
Cervical Cancer Screening	118	<ul style="list-style-type: none">Medicaid: Adult Core SetMarketplace Quality Rating SystemMerit-based Incentive Payment System ProgramMarketplace Quality Rating System	Yes
Cesarean Section	508	<ul style="list-style-type: none">Hospital Inpatient Quality ReportingMedicare Promoting Interoperability Program	No
Child and Adolescent Well-Care Visits (WCV)	123	<ul style="list-style-type: none">Marketplace Quality Rating System	No

¹ The Clinical Reasoning project in HL7® has been testing eCQMs with HL7® FHIR® since 2023 (but never implemented in production). Measures marked as “yes” are those that have a corresponding eCQM, which has been tested using HL7 FHIR as input, making them good candidates for acceleration.

Advancing Digital Quality Reporting Using Regulated Endpoints

Measure Name	CMIT Measure ID	Program	eCQM Measures Tested in HL7® Connectathons with FHIR® input ¹
Clinical Depression Screening and Follow-Up	672	<ul style="list-style-type: none"> Marketplace Quality Rating System Merit-Based Incentive Payment System Program Medicare Shared Savings Program End-Stage Renal Disease Quality Incentive Program Medicaid: Adult Core Set Medicaid: Health Home Core Set Merit-Based Incentive Payment System Program Medicare Shared Savings Program Medicaid: Child Core Set Maryland Total Cost of Care Model (MDTCOC) Integrated Care for Kids Model (InCK) 	Yes
Colorectal Cancer Screening	139	<ul style="list-style-type: none"> Merit-Based Incentive Payment System Program Medicare Shared Savings Program Marketplace Quality Rating System Medicare Part C Star Rating Medicaid: Adult Core Set Medicaid: Health Home Core Set Primary Care First Model (PCF) 	Yes
Controlling High Blood Pressure (CBP)	167	<ul style="list-style-type: none"> Medicaid: Adult Core Set Million Hearts Merit-Based Incentive Payment System Program Marketplace Quality Rating System Medicare Shared Savings Program Merit-Based Incentive Payment System Program Medicare Shared Savings Program Medicaid: Health Home Core Set Maryland Total Cost of Care Model (MDTCOC) Primary Care First (PCF) Model 	Yes
Diabetes Care for People with Serious Mental Illness: Hemoglobin A1c (HbA1c) Poor Control (>9.0%) (HPCMI)	196	<ul style="list-style-type: none"> Medicaid: Adult Core Set 	Yes
Diabetes: Eye Exam	203	<ul style="list-style-type: none"> Merit-Based Incentive Payment System Program Marketplace Quality Rating System Medicare Part C Star Rating 	No
Diabetes: Hemoglobin A1c (HbA1c) Poor Control (> 9%)	204	<ul style="list-style-type: none"> Merit-Based Incentive Payment System Program Medicare Shared Savings Program 	Yes

Advancing Digital Quality Reporting Using Regulated Endpoints

Measure Name	CMIT Measure ID	Program	eCQM Measures Tested in HL7® Connectathons with FHIR® input ¹
Documentation of Current Medications in the Medical Record	219	<ul style="list-style-type: none"> • Merit-Based Incentive Payment System Program • Maryland Total Cost of Care Model (MDTCOC) 	Yes
Driver of Health Screen Positive Rate	1662	<ul style="list-style-type: none"> • End-Stage Renal Disease Quality Incentive Program • Hospital Inpatient Quality Reporting 	No
Driver of Health Screening Rate	1664	<ul style="list-style-type: none"> • End-Stage Renal Disease Quality Incentive Program • Hospital Inpatient Quality Reporting • Merit-Based Incentive Payment System Program 	No
HIV Screening	324	<ul style="list-style-type: none"> • Merit-Based Incentive Payment System Program 	Yes
Influenza Immunization	386	<ul style="list-style-type: none"> • Medicare Shared Savings Program • Inpatient Psychiatric Facility Quality Reporting 	No
Prenatal and Postpartum Care: Postpartum Care (PPC)	581	<ul style="list-style-type: none"> • Medicaid: Adult Core Set • Medicaid: Child Core Set • Marketplace Quality Rating System 	No
Preventive Care and Screening: Body Mass Index (BMI) Screening and Follow-Up Plan	594	<ul style="list-style-type: none"> • Merit-Based Incentive Payment System Program • Medicare Shared Savings Program • Maryland Total Cost of Care Model (MDTCOC) 	Yes
Preventive Care and Screening: Screening for High Blood Pressure and Follow-Up Documented	595	<ul style="list-style-type: none"> • Merit-Based Incentive Payment System Program 	Yes
Preventive Care and Screening: Tobacco Use: Screening and Cessation Intervention	596	<ul style="list-style-type: none"> • Million Hearts • Merit-Based Incentive Payment System Program • Medicare Shared Savings Program 	Yes
Preventive Care and Screening: Unhealthy Alcohol Use: Screening & Brief Counseling	597	<ul style="list-style-type: none"> • Merit-Based Incentive Payment System Program 	No
Statin Therapy for the Prevention and Treatment of Cardiovascular Disease	701	<ul style="list-style-type: none"> • Million Hearts 	No

Advancing Digital Quality Reporting Using Regulated Endpoints

Measure Name	CMIT Measure ID	Program	eCQM Measures Tested in HL7® Connectathons with FHIR® input ¹
Use of High-Risk Medications in the Elderly (DAE)	744	<ul style="list-style-type: none">• Merit-Based Incentive Payment System Program• Guiding an Improved Dementia Experience (GUIDE) Model	No
Weight Assessment and Counseling for Nutrition and Physical Activity for Children and Adolescents	760	<ul style="list-style-type: none">• Medicaid: Child Core Set• Marketplace Quality Rating System	No
Well-Child Visits in the First 30 Months of Life (W30)	761	<ul style="list-style-type: none">• Marketplace Quality Rating System• Medicaid: Child Core Set	No

Advancing Digital Quality Reporting Using Regulated Endpoints

Table 2. Data Elements that Could be Added to USCDI v3 to Enable Additional Measures

USCDI Data Element	USCDI Class	Notes
Care Plan – Follow-Up Action	Assessment and Plan of Treatment	New element: Currently this is entirely text. If metadata is captured as structured data, it enables multiple uses.
Communication – Discharge Summary Sent to Patient or Caregiver (NOTE: this is an indicator)	Communications	Available in USCDI+. There is a discharge note in USCDI but no current element that indicates discharge summary has been delivered.
Clinical Assessment – Instrument Score	Clinical Tests	Available in USCDI 4 but does not explicitly define the type of assessment (via Clinical Test Result/Report).
Functional Status – Standardized Score (Section GG)	Health Status Assessments	Available in USCDI V3 , but this score is not called out anywhere.
Depression Screening – PHQ-9 Total Score	Health Status Assessments	Available in USCDI V3 , but this tool is not called out anywhere.
Laboratory – Blood Culture Collected Indicator	Laboratory	New element: Not collected—lab standard.
Medication Reconciliation – Verified Medication List	Medications	New element: A list of medications is available but not a “reconciliation” attestation, which leads to complex logic.
Medication Administration	Medications	Available in USCDI+ Quality: Requested by multiple organizations.
Specialist Report Received Indicator	Referrals	New element: Indication of a closed loop referral—The HL7® Clinical Order Workflow specification may close this loop.
Device Days	Medical Devices	New element: A lot of waste, fraud, and abuse occurs on device days. Additionally, most also require prior auth, so days approved and days used could be valuable.

Advancing Digital Quality Reporting Using Regulated Endpoints

Table 3. Measures Enabled by Adding Ten Data Elements to USCDI v3

CMIT ID	Program-Specific Measure Name	Program	Calculation Required	USCDI Data Elements Used
00727-02-C-IPFQR	Transition Record with Specified Elements Received by Discharged Patients (Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of Care)	Inpatient Psychiatric Facility Quality Reporting	None	Clinical Notes: Discharge Summary Note; Communication – Discharge Summary Sent to Patient or Caregiver [†] ; Medications: Medication Reconciliation – Verified Medication List [†] ; Provenance: Author Time Stamp; Encounter Information: Encounter Disposition
00727-03-C-HHQR	Transfer of Health Information to Patient - Post-Acute Care	Home Health Quality Reporting	None	Clinical Notes: Discharge Summary Note; Communication – Discharge Summary Sent to Patient or Caregiver [†] ; Medications: Medication Reconciliation – Verified Medication List [†] ; Provenance: Author Time Stamp; Encounter Information: Encounter Disposition
00727-05-C-LTCHQR	Transfer of Health (TOH) Information to the Patient Post-Acute Care (PAC)	Long-Term Care Hospital Quality Reporting	None	Clinical Notes: Discharge Summary Note; Communication – Discharge Summary Sent to Patient or Caregiver [†] ; Medications: Medication Reconciliation – Verified Medication List [†] ; Provenance: Author Time Stamp; Encounter Information: Encounter Disposition
00727-06-C-SNFQRP	Transfer of Health (TOH) Information to the Patient Post-Acute Care (PAC)	Skilled Nursing Facility Quality Reporting	None	Clinical Notes: Discharge Summary Note; Communication – Discharge Summary Sent to Patient or Caregiver [†] ; Medications: Medication Reconciliation – Verified Medication List [†] ; Provenance: Author Time Stamp; Encounter Information: Encounter Disposition

[†] New USCDI element to support reporting.

Advancing Digital Quality Reporting Using Regulated Endpoints

CMIT ID	Program-Specific Measure Name	Program	Calculation Required	USCDI Data Elements Used
00672-02-C-MIPS	Screening for Clinical Depression and Follow-Up Plan	Merit-based Incentive Payment System Program	Determine if follow-up plan created within 2 days of positive screening (score ≥ 10)	Health Status Assessments: Depression Screening – PHQ-9 Total Score†; Patient Summary and Plan: Care Plan – Follow-Up Action†; Provenance: Author Time Stamp; Patient Demographics: Date of Birth
00672-02-C-MSSP	Screening for Clinical Depression and Follow-Up Plan	Medicare Shared Savings Program	Determine if follow-up plan created within 2 days of positive screening (score ≥ 10)	Health Status Assessments: Depression Screening – PHQ-9 Total Score†; Patient Summary and Plan: Care Plan – Follow-Up Action†; Provenance: Author Time Stamp; Patient Demographics: Date of Birth
00672-03-C-ESRDQIP	Screening for Clinical Depression and Follow-Up Plan	End-Stage Renal Disease Quality Incentive Program	Determine if follow-up plan created within 2 days of positive screening (score ≥ 10)	Health Status Assessments: Depression Screening – PHQ-9 Total Score†; Patient Summary and Plan: Care Plan – Follow-Up Action†; Provenance: Author Time Stamp; Patient Demographics: Date of Birth
00672-07-E-MACS	Clinical Depression Screening and Follow-Up	Medicaid: Adult Core Set	Determine if follow-up plan created within 2 days of positive screening (score ≥ 10)	Health Status Assessments: Depression Screening – PHQ-9 Total Score†; Patient Summary and Plan: Care Plan – Follow-Up Action†; Provenance: Author Time Stamp; Patient Demographics: Date of Birth
00672-07-E-MHHCs	Clinical Depression Screening and Follow-Up	Medicaid: Health Home Core Set	Determine if follow-up plan created within 2 days of positive screening (score ≥ 10)	Health Status Assessments: Depression Screening – PHQ-9 Total Score†; Patient Summary and Plan: Care Plan – Follow-Up Action†; Provenance: Author Time Stamp; Patient Demographics: Date of Birth
00672-07-E-MIPS	Screening for Clinical Depression and Follow-Up Plan	Merit-based Incentive Payment System Program	Determine if follow-up plan created within 2 days of positive screening (score ≥ 10)	Health Status Assessments: Depression Screening – PHQ-9 Total Score†; Patient Summary and Plan: Care Plan – Follow-Up Action†; Provenance: Author Time Stamp; Patient Demographics: Date of Birth

Advancing Digital Quality Reporting Using Regulated Endpoints

CMIT ID	Program-Specific Measure Name	Program	Calculation Required	USCDI Data Elements Used
00672-07-E-MQRS	Screening for Clinical Depression and Follow-Up Plan	Marketplace Quality Rating System	Determine if follow-up plan created within 2 days of positive screening (score ≥ 10)	Health Status Assessments: Depression Screening – PHQ-9 Total Score†; Patient Summary and Plan: Care Plan – Follow-Up Action†; Provenance: Author Time Stamp; Patient Demographics: Date of Birth
00672-07-E-MSSP	Screening for Clinical Depression and Follow-Up Plan	Medicare Shared Savings Program	Determine if follow-up plan created within 2 days of positive screening (score ≥ 10)	Health Status Assessments: Depression Screening – PHQ-9 Total Score†; Patient Summary and Plan: Care Plan – Follow-Up Action†; Provenance: Author Time Stamp; Patient Demographics: Date of Birth
00672-13-C-MCCS	Clinical Depression Screening and Follow-Up	Medicaid: Child Core Set	Determine if follow-up plan created within 2 days of positive screening (score ≥ 10)	Health Status Assessments: Depression Screening – PHQ-9 Total Score†; Patient Summary and Plan: Care Plan – Follow-Up Action†; Provenance: Author Time Stamp; Patient Demographics: Date of Birth
00728-04-C-SNFQRP	Transfer of Health Information to Provider - Post-Acute Care	Skilled Nursing Facility Quality Reporting	Link discharge date to information transfer date; verify transfer completion	Clinical Notes: Discharge Summary Note; Medications: Medication Reconciliation – Verified Medication List†; Provenance: Author Time Stamp; Encounter Information: Encounter Disposition; Care Team: Care Team Member Identifier
00728-05-C-HHQR	Transfer of Health Information to Provider - Post-Acute Care	Home Health Quality Reporting	Link discharge date to information transfer date; verify transfer completion	Clinical Notes: Discharge Summary Note; Medications: Medication Reconciliation – Verified Medication List†; Provenance: Author Time Stamp; Encounter Information: Encounter Disposition; Care Team: Care Team Member Identifier

Advancing Digital Quality Reporting Using Regulated Endpoints

CMIT ID	Program-Specific Measure Name	Program	Calculation Required	USCDI Data Elements Used
00728-08-C-LTCHQR	Transfer of Health (TOH) Information to the Provider Post-Acute Care (PAC)	Long-Term Care Hospital Quality Reporting	Link discharge date to information transfer date; verify transfer completion	Clinical Notes: Discharge Summary Note; Medications: Medication Reconciliation – Verified Medication List†; Provenance: Author Time Stamp; Encounter Information: Encounter Disposition; Care Team: Care Team Member Identifier
00459-01-C-HACRP	NHSN Catheter Associated Urinary Tract Infection (CAUTI) Outcome Measure	Hospital-Acquired Condition Reduction Program	Hospital-onset determination; catheter presence; lab criteria; device-infection temporal linkage; standardized infection ratio (SIR) calculation	Laboratory: Tests, Values/Results (urine culture)†; Problems: Problems Urinary Tract Infection (UTI) diagnosis; Device Days† (urinary catheter); Encounter Information: Encounter Time (admission date)
00459-01-C-HVBP	NHSN Catheter Associated Urinary Tract Infection (CAUTI) Outcome Measure	Hospital Value-Based Purchasing	Hospital-onset determination; catheter presence; lab criteria; device-infection temporal linkage; SIR calculation	Laboratory: Tests, Values/Results (urine culture)†; Problems: Problems (UTI diagnosis); Device Days† (urinary catheter); Encounter Information: Encounter Time (admission date)
00459-01-C-LTCHQR	NHSN Catheter Associated Urinary Tract Infection (CAUTI)	Long-Term Care Hospital Quality Reporting	Hospital-onset determination; catheter presence; lab criteria; device-infection temporal linkage; SIR calculation	Laboratory: Tests, Values/Results (urine culture)†; Problems: Problems (UTI diagnosis); Device Days† (urinary catheter); Encounter Information: Encounter Time (admission date)

Advancing Digital Quality Reporting Using Regulated Endpoints

CMIT ID	Program-Specific Measure Name	Program	Calculation Required	USCDI Data Elements Used
00459-01-C-PCHQR	NHSN CAUTI Outcome Measure	Prospective Payment System—Exempt Cancer Hospital Quality Reporting	Hospital-onset determination; catheter presence; lab criteria; device-infection temporal linkage; SIR calculation	Laboratory: Tests, Values/Results (urine culture)†; Problems: Problems (UTI diagnosis); Device Days† (urinary catheter); Encounter Information: Encounter Time (admission date)
00460-01-C-HACRP	NHSN Central Line Associated Blood Stream Infection (CLABSI) Outcome Measure	Hospital-Acquired Condition Reduction Program	Hospital-onset determination; central line presence; lab criteria; device-infection temporal linkage; SIR calculation	Laboratory: Tests, Values/Results (blood culture)†; Problems: Problems (bloodstream infection); Device Days† (central line); Encounter Information: Encounter Time (admission date)
00460-01-C-HVBP	NHSN CLABSI Outcome Measure	Hospital Value-Based Purchasing	Hospital-onset determination; central line presence; lab criteria; device-infection temporal linkage; SIR calculation	Laboratory: Tests, Values/Results (blood culture)†; Problems: Problems (bloodstream infection); Device Days† (central line); Encounter Information: Encounter Time (admission date)
00460-01-C-PCHQR	NHSN CLABSI Outcome Measure	Prospective Payment System—Exempt Cancer Hospital Quality Reporting	Hospital-onset determination; central line presence; lab criteria; device-infection temporal linkage; SIR calculation	Laboratory: Tests, Values/Results (blood culture)†; Problems: Problems (bloodstream infection); Device Days† (central line); Encounter Information: Encounter Time (admission date)

Advancing Digital Quality Reporting Using Regulated Endpoints

CMIT ID	Program-Specific Measure Name	Program	Calculation Required	USCDI Data Elements Used
00462-01-C-HACRP	NHSN Facility-wide Inpatient Hospital-onset Clostridium difficile Infection (CDI) Outcome Measure	Hospital-Acquired Condition Reduction Program	Hospital-onset determination; exclusion logic; patient days denominator; SIR calculation	Laboratory: Tests, Values/Results (C. diff toxin test)†; Problems: Problems (C. diff diagnosis); Encounter Information: Encounter Time (admission date)
00462-01-C-HVBP	NHSN Facility-wide Inpatient Hospital-onset CDI Outcome Measure	Hospital Value-Based Purchasing	Hospital-onset determination; exclusion logic; patient days denominator; SIR calculation	Laboratory: Tests, Values/Results (C. diff toxin test)†; Problems: Problems (C. diff diagnosis); Encounter Information: Encounter Time (admission date)
00462-01-C-LTCHQR	NHSN Facility-wide Inpatient Hospital-onset CDI Outcome Measure	Long-Term Care Hospital Quality Reporting	Hospital-onset determination; exclusion logic; patient days denominator; SIR calculation	Laboratory: Tests, Values/Results (C. diff toxin test)†; Problems: Problems (C. diff diagnosis); Encounter Information: Encounter Time (admission date)
00462-01-C-PCHQR	NHSN Facility-wide Inpatient Hospital-onset CDI Outcome Measure	Prospective Payment System-Exempt Cancer Hospital Quality Reporting	Hospital-onset determination; exclusion logic; patient days denominator; SIR calculation	Laboratory: Tests, Values/Results (C. diff toxin test)†; Problems: Problems (C. diff diagnosis); Encounter Information: Encounter Time (admission date)
00463-01-C-HACRP	NHSN Facility-wide Inpatient Hospital-onset Methicillin-Resistant Staphylococcus Aureus (MRSA) Bacteremia Outcome Measure	Hospital-Acquired Condition Reduction Program	Hospital-onset determination; lab confirmation; patient days denominator; SIR calculation	Laboratory: Tests, Values/Results (blood culture with MRSA)†; Problems: Problems (MRSA bacteremia); Encounter Information: Encounter Time (admission date)

Advancing Digital Quality Reporting Using Regulated Endpoints

CMIT ID	Program-Specific Measure Name	Program	Calculation Required	USCDI Data Elements Used
00463-01-C-HVBP	NHSN Facility-wide Inpatient Hospital-onset MRSA Bacteremia Outcome Measure	Hospital Value-Based Purchasing	Hospital-onset determination; lab confirmation; patient days denominator; SIR calculation	Laboratory: Tests, Values/Results (blood culture with MRSA)†; Problems: Problems (MRSA bacteremia); Encounter Information: Encounter Time (admission date)
00463-01-C-PCHQR	NHSN Facility-wide Inpatient Hospital-onset MRSA Bacteremia Outcome Measure	Prospective Payment System—Exempt Cancer Hospital Quality Reporting	Hospital-onset determination; lab confirmation; patient days denominator; SIR calculation	Laboratory: Tests, Values/Results (blood culture with MRSA)†; Problems: Problems (MRSA bacteremia); Encounter Information: Encounter Time (admission date)
00001-01-C-MIPS	Perioperative Care: Surgical Site Infection (SSI)	Merit-Based Incentive Payment System Program	Infection depth classification; timing logic; mapping; risk adjustment; SIR calculation	Procedures: Procedures (surgical procedure); Problems: Problems (infection diagnosis); Laboratory: Tests, Values/Results (culture if obtained); Encounter Information: Encounter Time (surgery date)
00001-02-C-HACRP	ACS-CDC Harmonized Procedure Specific SSI Outcome Measure	Hospital-Acquired Condition Reduction Program	Infection depth classification; timing logic; mapping; risk adjustment; SIR calculation	Procedures: Procedures (surgical procedure); Problems: Problems (infection diagnosis); Laboratory: Tests, Values/Results (culture if obtained)†; Encounter Information: Encounter Time (surgery date)

Advancing Digital Quality Reporting Using Regulated Endpoints

CMIT ID	Program-Specific Measure Name	Program	Calculation Required	USCDI Data Elements Used
00001-02-C-HVBP	ACS-CDC Harmonized Procedure Specific SSI Outcome Measure	Hospital Value-Based Purchasing	Infection depth classification; timing logic; mapping; risk adjustment; SIR calculation	Procedures: Procedures (surgical procedure); Problems: Problems (infection diagnosis); Laboratory: Tests, Values/Results (culture if obtained) [†] ; Encounter Information: Encounter Time (surgery date)