NHIN Trial Implementations

Use Case Requirements Document

Use Case Title: Quality Detailed Use Case – Scenario1 and 2, Flow #4

Workgroup: Population Perspective Workgroup

Version: V.4

Description:

- Generally describe the Workgroup's understanding and assumptions in analyzing the use case priority information exchanges.

  The Quality Use Case subcommittee of the Population Perspective WG proceeds with an understanding based upon current analysis that Priority Flows #1, #4, and #9 of Scenarios 1 and 2 of the Quality Use Case may be considered functionally equivalent. This assumption seems to be supported by review of data, events, actions, conditions, and gaps, etc. for both hospital-based (Scenario 1) and clinician-based (Scenario 2) quality information collection and reporting; however, it may not be possible to realize the full implications of this assumption until requirements are driven to specifications and implementation processes, particularly with standards for a number of priority exchanges undefined.

  Quality reporting requirements are defined based on the measure set(s) used by entities that require quality performance reporting – e.g. CMS, Joint Commission, State surveillance, payors, internal tracking/monitoring – and other clinician/system-defined needs. Two primary yet divergent uses of quality measures are for patient care and reporting. At the patient-level, quality measures can serve as a point-of-care reminder for clinical care due (or received) by patients who are eligible for the specified care. Summarized or aggregated quality measures are reported at the clinician, hospital, site, or system level as required by accrediting, government, pay-for-performance, and other entities. As per HITSP, patient-level quality data analysis and aggregation may occur at one or more of the local care delivery locations, at an intermediate site (such as an HIE, HISP, or quality organization), or at the location of the intended recipient of patient-level quality data.

  Assumptions:

  - Patient, clinician, facility identification is standardized throughout the system
  - Information shared among facilities and clinicians in medical practice area is at the patient level to assure appropriate record linkage for patient at point of care
  - Information shared outside the actual provision of care is patient de-identified and 'rolled up' to the required level for reporting out.
  - Feedback to clinician includes all measures for which patient is eligible, due date, and latest result, if applicable
  - Prompts for new patients if eligible for (at least) preventive services – i.e., prompts care even though not able to be fully included in some reportable quality measures
  - It is unlikely that real-time feedback to clinician will occur in time for the demonstration, but at some point in the future this feedback will include all measures for which patient is eligible, due date, and latest result, if applicable.

- Include general interpretations that the Workgroup made to support the priority information exchanges between HIEs and between an HIE and other actors in the exchange. See above

Priority Information Exchanges:

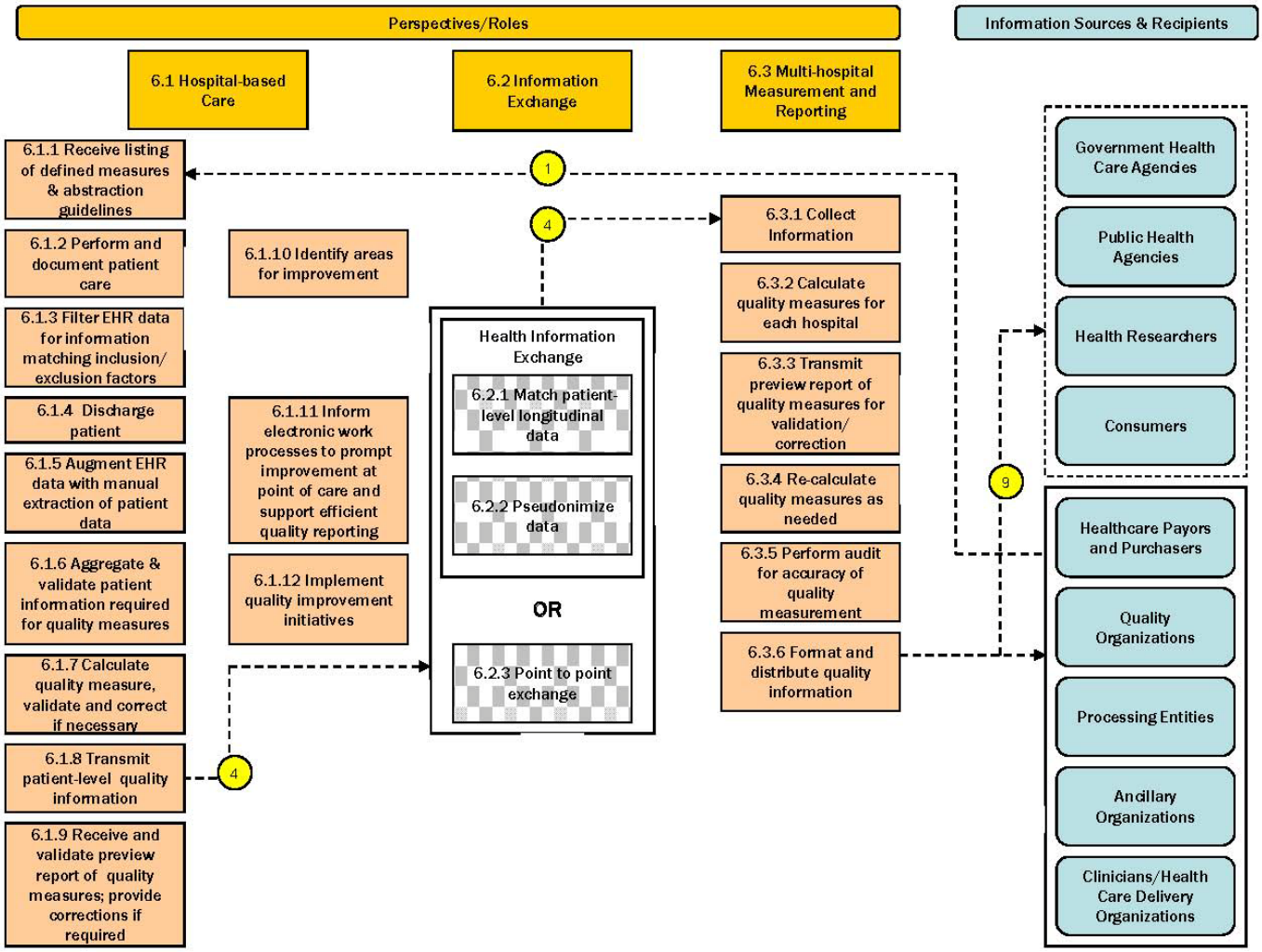
- Scenario 1 Hospital-based Care Quality Information Collection and Reporting (as above, excluded from further specific requirements analysis; subsumed by Scenario 2)

Priority Info. Exchanges	Use Case Description
Information Exchange #1	Defined quality measurement specifications to be reported are sent to hospitals.
Information Exchange #4	Hospital quality data is sent either via an intermediate entity or point-to-point for onward transmission to the Multi-Hospital Measurement and Reporting entity (patient-level – identifiable).
Information Exchange #9	Distributed data is available to users (aggregate hospital-level data).

- Diagram of the priority information exchanges of Hospital-based Quality Information Collection and Reporting

6.0 Hospital-based Care Quality Information Collection and Reporting

Figure 6-1. Hospital-based Care Quality Information Collection and Reporting Flow



- Scenario 2 Clinician Quality Information Collection and Reporting

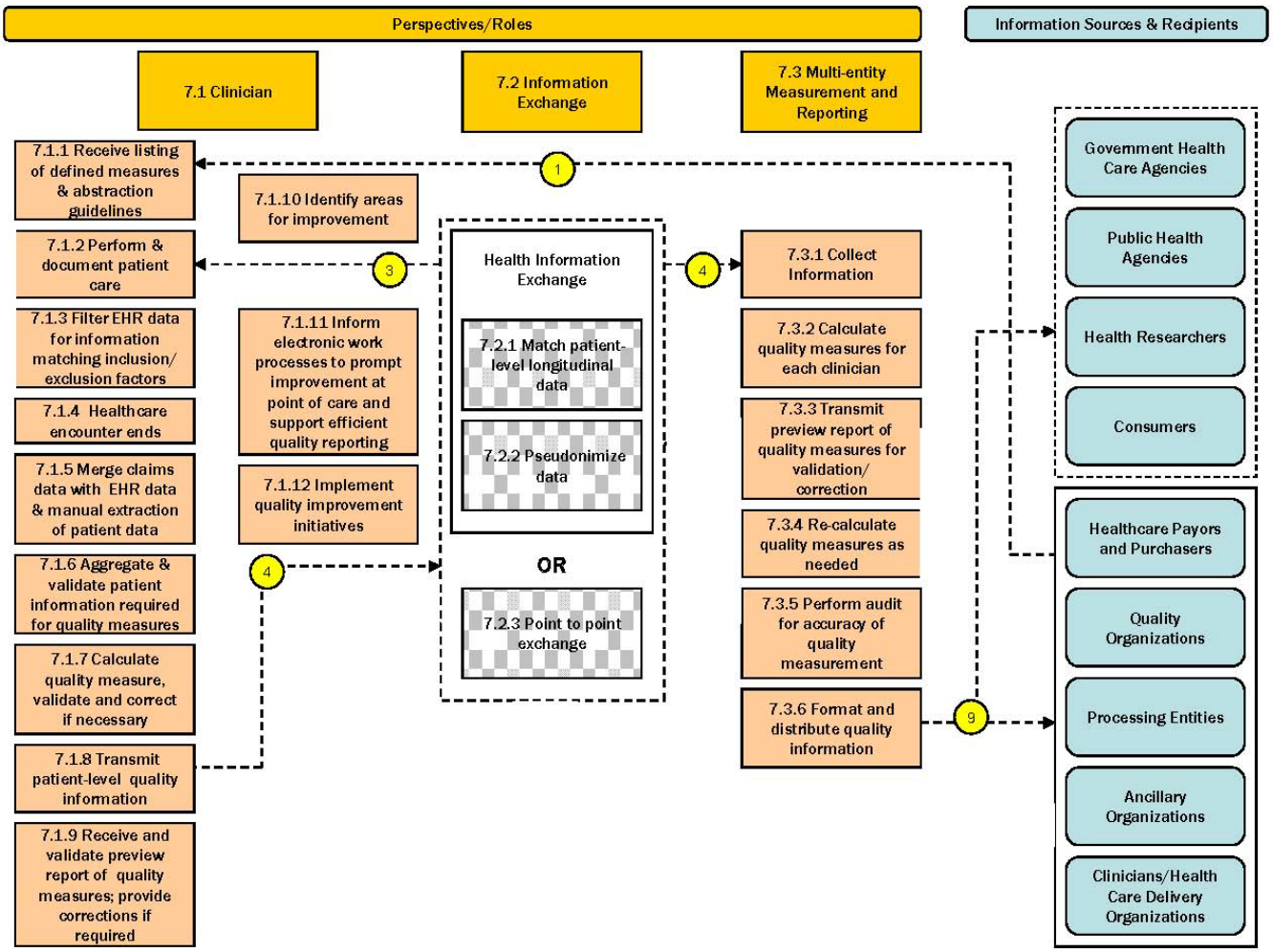
Priority Info. Exchanges	Use Case Description
Information Exchange #1	Defined quality measurement specifications to be reported are sent to clinicians.
Information Exchange #3	Longitudinal health information held in associated repositories is forwarded by the HIE (patient-level – identifiable).
Information Exchange #4	Clinician quality data is sent either via an intermediate entity or point-to-point for onward transmission to the Multi-entity Feedback and Reporting entity (patient-level – identifiable).

Information Exchange #9	Distributed data is available to users (aggregate clinician-level data).

- Diagram of the priority information exchanges of Clinician Quality Information Collection and Reporting

7.0 Clinician Quality Information Collection and Reporting

Figure 7-1. Clinician Quality Information Collection and Reporting Flow



Requirements:

Use Case Scenario: 7.0 Clinician Quality Information Collection and Reporting

Information Exchange: 4. Clinician quality data is sent either via an intermediate entity or point-to-point for onward transmission to the Multi-entity Feedback and Reporting entity (patient-level – identifiable)

1 Information Exchange Workflow

1.1 Workflow Steps and Description

[Describe the workflow steps in the identified use case information exchanges, including the functional capabilities of the exchanges and the actors involved.]

At the point of care, the office/hospital requests patient-level data elements from the HIE and uses these data to check patient quality information for patients seen. Data are provided for the calculation of quality measures selected/required by the clinician/hospital – i.e., measures specifications vary among entities that require reporting (e.g., CMS, Joint Commission, pay-for-performance). Data from the clinician/hospital that are used for quality measures are transmitted via the HIE to the Multi Entity Measurement and Reporting Entity (push out). The MEME performs quality checks to ensure that all submitted data meet specifications and confirms the transfer and data completeness - e.g. all patients submitted have numerators and denominators. Clinician/hospital identifiers are included.

1.2 Use Case References (e.g. Events/Actions)

[Cite applicable references to the use case (e.g. assumptions, events, actions, etc.) as well as the **rationale to justify interpretations** of the use case priority information exchanges.]

7.1.8 Event: Transmit patient-level quality information

7.1.8.1 Action: Patient-level data are transmitted to a multi-entity measurement and reporting entity consistent with all privacy restrictions and limitation and transmission security standards.

7.3.1 Event: Collect Information

7.3.1.1 Action: Patient-level quality data as defined by measure specifications are received from the clinician or from contracted vendor

Assumptions

- Patient identification is standard throughout the system
- Data from the clinician/hospital that are used for quality measures are in one of three forms:
    1. Detailed patient-level clinical and administrative data – e.g., A1C=10 on a specific date
    2. Patient-level quality measure status – e.g., 250 patients with diabetes during specific time period, 240 eligible for dilated eye exam, 200 who received eye exam, 10 excluded due to blindness
    3. Summary data – e.g., 80% site A eligible patients had a mammogram; 85% of of Dr A's and 77% of Dr. B's patients had mammograms.

- The accuracy of quality measures is dependent on the quality of the data
- Missing data (and source) are flagged
- At some time in the future, multiple quality measures may be transmitted via a single process. In that case, measures are flagged for specified reporting bodies – e.g., may report same measures with somewhat different parameters depending on reporting requirements

1.3 Key Assumptions

[Provide key assumptions the Workgroup used in interpreting the priority information exchanges, as well as the rationale.]

- Patient, clinician, facility identification is standard throughout the system
- Systems have the ability to calculate the same measure several ways for specific reporting requirements
- In the future, the multi-entity measurement and reporting entity must have the capability to cross-reference measures definitions with each entity requiring reports, and ascribe reported measures appropriately
- Requesting (not required) reporting entities use measures specifications as originally defined in Flow 1, and cannot revise the request midway through the process
- Patient-level or summary data are transmitted through an HIE or point-to-point from the facility to the multi-entity measurement and reporting entity
- Data received from the clinician/hospital that are used for quality measures are in one of three forms:
    1. Detailed patient-level clinical and administrative data – e.g., A1C=10 on a specific date
    2. Patient-level quality measure status – e.g., 250 patients with diabetes during specific time period, 240 eligible for dilated eye exam, 200 who received eye exam, 10 excluded due to blindness
    3. Summary data – e.g., 80% site A eligible patients had a mammogram; 85% of of Dr A's and 77% of Dr. B's patients had mammograms.
- Missing data (and source) are flagged
- At some time in the future, multiple quality measures may be transmitted via a single process. In that case, measures are flagged for specified reporting bodies – e.g., may report same measures with somewhat different parameters depending on reporting requirements

2 Information Exchange Requirements

2.1 Triggers

[The applicable user and system-driven activities that initiate the information exchange. For example, this could describe how a particular query and retrieval, routing of information, etc. are initiated.]

- A trigger can originate from the clinician/hospital based on a timed prompt in the system (end of year reporting, for example) to "push" data to HIE or point-to-point facility, or
- Originate from the clinician/hospital prior to a timed prompt to accommodate QA (flows 5 and 6), or
- Based on a request from one of the Information Recipients, such as Government Heath Care Agencies, Health Researchers, Quality Organizations, or Healthcare Payers and Purchasers

2.2 Data Content Requirements

[The type of data needed in the exchange and when that data should conform to a specification, and (if available) identified gaps in existing NHIN or HITSP specifications that need to be addressed for the information exchange.]

Data may be received as detailed patient-level clinical or administrative data for algorithm calculation by the MEMR, patient-level quality status, or summary data at the clinician or hospital level.

The following fields are required for patient-level clinical/administrative data:

- Measure ID
- Measure name
- Measure description (including definition of terms)
- Instructions on reporting including frequency, timeframes, and applicability
- Topic type
- Measure developer / IP Holder
- Date sent
- Version
- Approved by
- Date of original approval
- Adoption by regulatory bodies and programs used by the regulatory bodies
- Rationale (includes Clinical area)
- Improvement notation (expected outcome includes Clinical area))
- Version changes
- Measurement start date (reporting period start)
- Measurement end date (reporting period end)
- Contact (not in the collaborative import data)
- Date of version (effective date of the version not in the collaborative import data)
- Level of analysis (who should adopt this)
- Demographics, insurer, identifiers
- Denominator inclusion flags
- Procedures and diagnostic tests, including date
- Medications ordered, obtained, administered including dates
- Lab orders and results, including dates
- Symptoms related to quality indicators
- Allergies (exclusion/contraindication criteria)
- Side effects (exclusion/contraindication criteria)
- Other exclusion criteria as defined in measures specifications
- Principal, admission, secondary diagnoses

The following fields are required for quality status and summary data:

- Measure ID
- Measure name
- Measure description (including definition of terms)
- Instructions on reporting including frequency, timeframes, and applicability
- Topic type
- Measure developer / IP Holder
- Date sent
- Version
- Approved by
- Date of original approval
- Adoption by regulatory bodies and programs used by the regulatory bodies
- Rationale (includes Clinical area)
- Improvement notation (expected outcome includes Clinical area))
- Version changes
- Measurement start date (reporting period start)
- Measurement end date (reporting period end)
- Contact (not in the collaborative import data)
- Date of version (effective date of the version not in the collaborative import data)
- Level of analysis (who should adopt this)
- Counts for the numerator and denominator
- Exclusion count(s)
- Visit time, date
- Treating/referring clinician
- Site identifier
- System identifier, if appropriate
- Validation data
- Linkage identifier to associate patient-level data with the specific aggregate reports that they comprise

2.3 Other unique requirements

[Identify the functionality or interoperability capabilities that will be needed to support the information exchange.]