Preparing for Measurement with EHR and HIE Data

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Outline of Presentation

- Creating eMeasures
- Developing new eMeasures
- Update process

Current Measurement and Data Environments

- ## Measurement setting and characteristics
  - Retrospective review (after clinical services)
  - Single point in time or over set time period
  - Single threshold (BP < 140/90)
  - Multiple levels (plan, MD, hospital) require multiple versions of same measure due to data sources

- ## Current Data Sources
  - Claims (visit, procedure, lab, pharmacy)
  - Electronic lab results (sometimes)
  - Clinical data
    - lab and radiology results, CPT-II codes
    - Medical records (Paper chart review)
  - Patient survey data from paper or phone surveys

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The Future

- **Measurement setting and characteristics**
  - Concurrent with clinical services
  - Linked to use of "real time" clinical decision support tools
  - Same data sources available across settings (MD, site, group, hospital, plan)
  - More clinically relevant measures
    - change over time
    - actual levels (not thresholds)
    - average of multiple values
    - treatment intensification

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The Future

- **Data sources**
  - Claims-combined from multiple health plans
  - Lab, radiology--more complete capture
  - Electronic medical records
  - Electronic patient surveys
  - Personal health records
- **Dream environment**
  - Claims data from all plans and electronic clinical data from all providers
    - Linked to rich clinical decision support environment
    - No one there yet- Kaiser research data warehouse and Indiana-Reigenstrief probably closest
  - All web-based or e-survey data collection

What is Needed from Measure Developers and Evaluators?

- ## Measurement
  - Conversion of existing measures into measures that can be used in all electronic environment
  - Creation of new measures that fully capitalize on full range of electronic data

- ## Evaluation
  - Move to evaluation models based on use of electronic data collection (like PCMH) and outcome measures

Issues to be Addressed

- What formats for EHR-based measures?
  - Where to "look" for data (what field)
  - Hierarchy for data searches (does the problem list trump medication list, or claims?)
  - What code sets should be used? (SnoMED, LOINC, RxNorm)
- Concurrent or retrospective or both
- Visit- or population-based or both
- Updating process (measures, codes, etc)

Meaningful Use Process

Traditional Measure Development

- Review of evidence
- Develop clinical logic
- Identify needed data sources
- Evaluate feasibility based on access to limited data sources
- Field test with plans or providers
- Develop specifications based on field test
- Specs vary based on implementation

Meaningful Use Measure Development

- Review of evidence
- Develop clinical logic
- Identify needed data elements, source codes, locations in EHR
- Put into XML format (HQMF)
- Test with EHRs
- Provide vendors standardized and encoded measure specifications (machine-ready)

New process for specific implementation

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eMeasure or HQMF

- Proposed HL7 draft standard
  - Sponsored by NQF, based on work of AMA/NCQA/EHRA Collaborative
- Structured representation of performance measures, using XML to tag elements
- Will enable import of data elements and measure logic into EHRs

Example XML Translation

FROM THIS

→

TO THIS

Measure #1: Hemoglobin A1c Poor Control in Type 1 or 2 Diabetes Mellitus

DESCRIPTION:
Percentage of patients aged 18 through 75 years with diabetes mellitus who had most recent hemoglobin A1c greater than 9.0%

INSTRUCTIONS:
This measure is to be reported a minimum of once per reporting period for patients with diabetes mellitus seen during the reporting period. The performance period for this measure is 12 months. The most recent quality code submitted will be used for performance calculation. This measure may be reported by clinicians who perform the quality actions described in the measure based on the services provided and the measure-specific denominator coding.

This measure is reported using CPT Category II codes:
ICD-9 diagnosis codes, CPT E/M service codes, G-codes, and patient demographics (age, gender, etc.) are used to identify patients who are included in the measure's denominator. CPT Category II codes are used to report the numerator of the measure.

When reporting the measure, submit the listed ICD-9 diagnosis codes, CPT E/M service codes or G-codes, and the appropriate CPT Category II code **OR** the CPT Category II code **with** the modifier. The reporting modifier allowed for this measure is: 8P- reasons not otherwise specified.

NUMERATOR:
Patients with most recent hemoglobin A1c level > 9.0%

Numerator Instructions: This is a poor control measure. A lower rate indicates better performance (e.g., low rates of poor control indicate better care)

Numerator Coding:
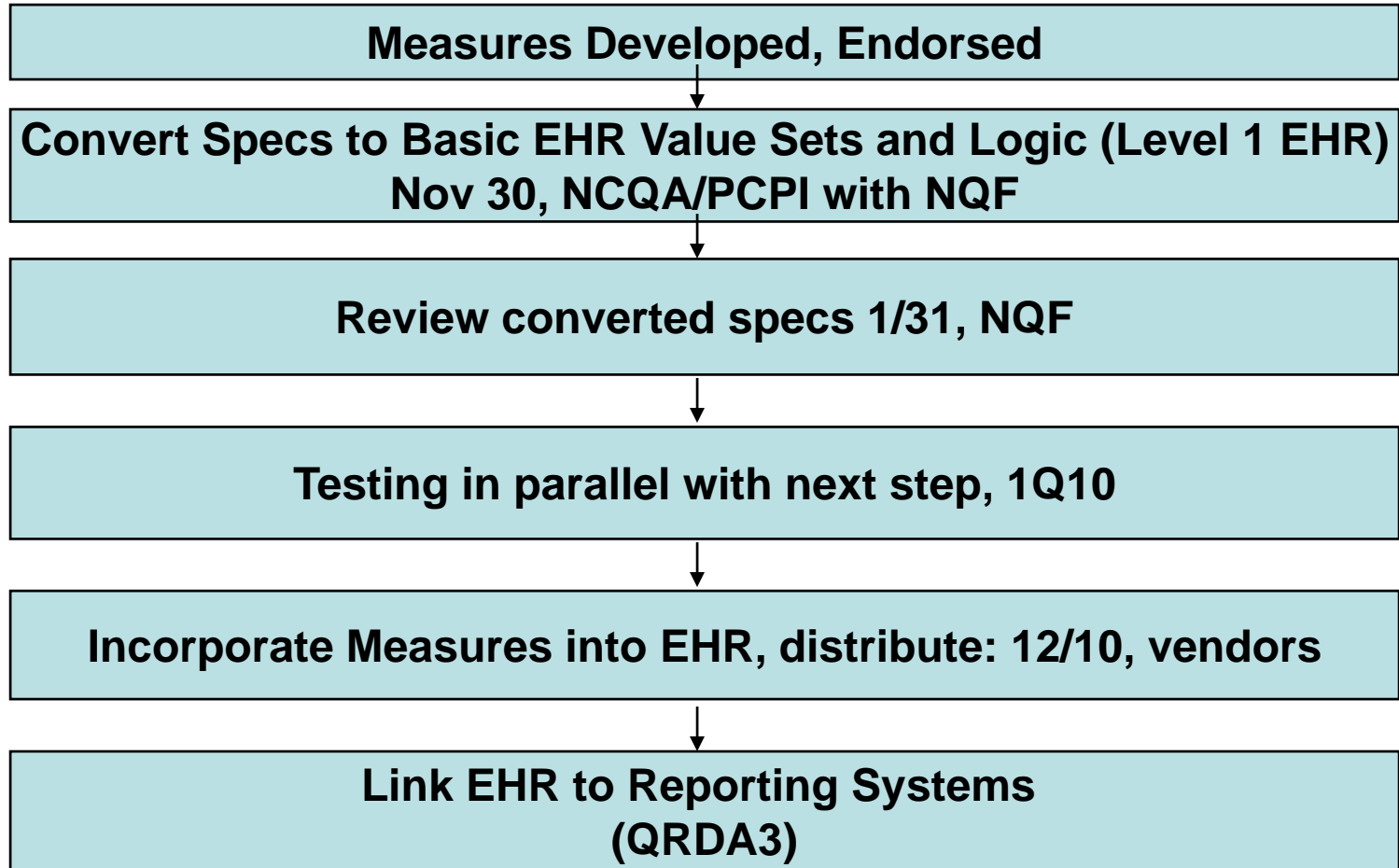**Most Recent Hemoglobin A1c Level > 9.0%**
CPT II 3046F: Most recent hemoglobin A1c level > 9.0%

OR

If patient is not eligible for this measure because hemoglobin A1c not performed, report:
Hemoglobin A1c not Performed

```xml
<?xml version="1.0" encoding="utf-8"?>

<Measure xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:noNamespaceSchemaLocation="Measure.xsd" ID="Diabetes (Type I and II)"
Name="PQRI-1" Version="0.1" VersionDate="2007-12-31">

  <TopicType>Diabetes (Type I and II)</TopicType>

  <MeasureDeveloper>NCQA</MeasureDeveloper>

  <MeasureDeveloperID>Diabetes</MeasureDeveloperID>

  <MeasureStatement>Hemoglobin A1c Poor Control in Type I or II Diabetes Mellitus --
Percentage of patients aged 18 through 75 years with diabetes mellitus who had most
recent hemoglobin A1c greater than 9.0%</MeasureStatement>

  <MeasurementUnit>Measurement Year</MeasurementUnit>

  <Copyright>©2008 National Committee for Quality Assurance, all rights
reserved.</Copyright>

  <NoticeOfUse>This performance measure was developed and is owned by the National
Committee for Quality Assurance ("NCQA").</NoticeOfUse>

  <Information Type="Denominator">
  <Statement>Patients aged 18 through 75 years of age as of December 31 of the
measurement year who had a diagnosis of diabetes (Type I or type II)</Statement>

    <MinAge>18</MinAge>

    <MaxAge>75</MaxAge>

    <AgeUnit>Years</AgeUnit>

    <MeasureCalculationDate>December 31 of measurement
year</MeasureCalculationDate>

    <NumberOfLogicalExpressions>1</NumberOfLogicalExpressions>

    <LogicalExpression LogicalOperator="AND">

      <NumberOfLogicalElements>2</NumberOfLogicalElements>

      <LogicalElement LogicalOperator="OR">

        <CodeGroup Description="Diabetes (Type I or II) ICD 9 Codes">PQRI-Diabetes-
Codes.CG1</CodeGroup>
```

Proposed Path for Retooling Quality Measures to Support Meaningful Use Legislation

Measures Developed, Endorsed

↓

Convert Specs to Basic EHR Value Sets and Logic (Level 1 EHR) Nov 30, NCQA/PCPI with NQF

↓

Review converted specs 1/31, NQF

↓

Testing in parallel with next step, 1Q10

↓

Incorporate Measures into EHR, distribute: 12/10, vendors

↓

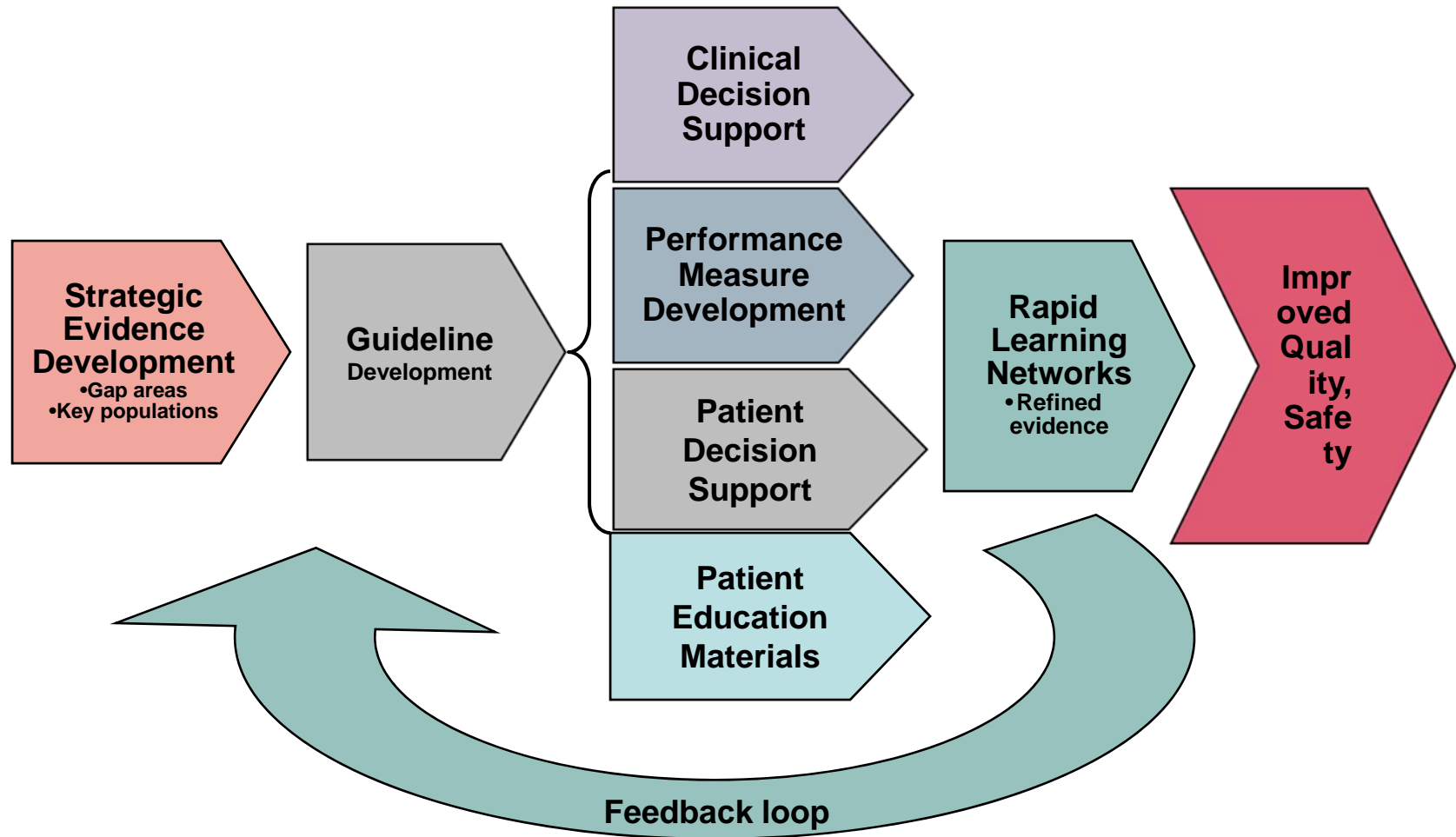| Link EHR to Reporting Systems (QRDA3) |
|---|

Measure "Retooling"

- Support from HHS to NQF
- Convert high priority measures to EHR-ready measures
- NCQA/PCPI/others will be converting 35 existing measures for MU
- For use in 2011

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Creating New Measures for E-Environments

Evidence Stewardship
Multiple uses for enhanced evidence-base

Clinical Decision Support

Performance Measure Development

Patient Decision Support

Patient Education Materials

Strategic Evidence Development
- Gap areas
- Key populations

Guideline Development

Rapid Learning Networks
- Refined evidence

Improved Quality, Safety

Feedback loop

New Measure Opportunities Unleashed

- Overuse and appropriateness, which require clinical detail

- Coordination of care

- Measures of change over time linked to patient-clinician choices

- Treatment Intensification

- Measures linked to clinical guidelines and decision support

- Risk adjusted outcome measures (propensity scores etc)

MU Measure Priorities

MU Priorities, 2013	NCQA or NCQA/PCPI Activity
• Inappropriate imaging	✓ Working on measures of overuse and appropriateness, based on ACR work
• Other efficiency measures	✓ Working on measures of overuse
• Additional patient access and experience reports using NQF-endorsed HIT-enabled quality measures	✓ Working on measures of patient-reported experience
• % of patients with access to secure patient messaging	✓ Consider for next version of patient-centered medical home requirements
• % of educational content in common primary languages	✓ Consider for next version of patient-centered medical home requirements
• % of transitions where summary care record is shared	✓ Consider for next version of patient-centered medical home requirements

MU Measure Priorities

MU Priorities, 2013 cont'd	NCQA or NCQA/PCPI Activity
• Implemented ability to incorporate data uploaded from home monitoring devices	✓ Consider for next version of patient-centered medical home requirements
• Access to comprehensive patient data from all available sources	✓ Consider for next version of patient-centered medical home requirements
• 10% reduction in 30-day readmission rates for 2013 compared to 2012	✓ Working on readmission measures
• Improvement in NQF-endorsed measures of care coordination	✓ Working on care coordination
• % of patients for whom immunization need and status has been completed during the visit	✓ Consider for next version of patient-centered medical home requirements

NCQA Activities to Create New E-Measures

- **Coordination of care-** Commonwealth project
- **Measures of change over time linked to patient-clinician choices-** Archimedes Hawaii
- **Treatment Intensification-** Exploration with Kaiser Hawaii and NW and others
- **Overuse/Appropriateness** PCI overuse with ACC, exploration with ACR

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Overuse and Appropriateness

- **Sponsored national working meeting in June**
  - Key conclusion: proceed, but with caution
- **Overuse**
  - Sinusitis (imaging), Perinatal (induction <39 weeks), Stenting-PCI, others under consideration
- **Appropriateness**
  - Research on applying existing criteria of ACR and ACC

Archimedes

- Combines clinical decision support (total CV risk calculation for individual patients) with measurement of outcomes (reduction in risk) over time
  - Specification and testing of Global Outcomes Score beginning in 2010
  - Incorporates patient-specific data to calculate overall cardiac risk
- Testing in KP-Hawaii in 2Q2010, other sites later in the year

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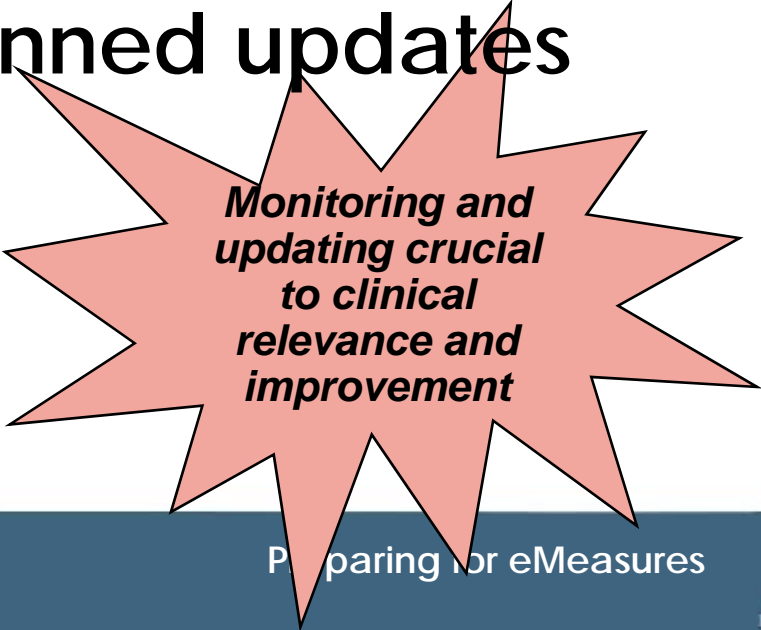Measuring quality.
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Other Work under Consideration

- Creation of new outcome measures with built in risk adjustment for MD level (BP, A1c, Cholesterol etc)

- Direct linkage of CDS to measurement – measuring treatment intensification if patient not in control

- Exploration of electronic survey modes for patient experience surveys

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Update Process

- NCQA formally re-evaluates all HEDIS measures at least every 3 years

- With new clinical evidence, updates are sometimes necessary more frequently

- Will need to coordinate with EHRs and HIEs for planned and unplanned updates

Monitoring and updating crucial to clinical relevance and improvement

Questions?