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
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
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
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

<?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>
      </LogicalElement>
    </LogicalExpression>
  </Information>
</Measure>

TO THIS

<?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>
      </LogicalElement>
    </LogicalExpression>
  </Information>
</Measure>
Proposed Path for Retooling Quality Measures to Support Meaningful Use Legislation

1. Measures Developed, Endorsed
2. Convert Specs to Basic EHR Value Sets and Logic (Level 1 EHR)
   - Nov 30, NCQA/PCPI with NQF
3. Review converted specs 1/31, NQF
4. Testing in parallel with next step, 1Q10
5. Incorporate Measures into EHR, distribute: 12/10, vendors
6. 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
Creating New Measures for E-Environments
Evidence Stewardship
Multiple uses for enhanced evidence-base

- Strategic Evidence Development
  - Gap areas
  - Key populations
- Guideline Development
- Performance Measure Development
- Patient Decision Support
- Patient Education Materials
- Clinical Decision Support
- 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

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

### MU Priorities, 2013 cont’d

<table>
<thead>
<tr>
<th>Activity</th>
<th>NCQA or NCQA/PCPI Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Implemented ability to incorporate data uploaded from home monitoring devices</td>
<td>✓ Consider for next version of patient-centered medical home requirements</td>
</tr>
<tr>
<td>• Access to comprehensive patient data from all available sources</td>
<td>✓ Consider for next version of patient-centered medical home requirements</td>
</tr>
<tr>
<td>• 10% reduction in 30-day readmission rates for 2013 compared to 2012</td>
<td>✓ Working on readmission measures</td>
</tr>
<tr>
<td>• Improvement in NQF-endorsed measures of care coordination</td>
<td>✓ Working on care coordination</td>
</tr>
<tr>
<td>• % of patients for whom immunization need and status has been completed during the visit</td>
<td>✓ Consider for next version of patient-centered medical home requirements</td>
</tr>
</tbody>
</table>
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
Overuse and Appropriateness

- **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
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
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?