WYOMING – EHRS NOW WHAT?
PAY FOR QUALITY!!

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Wyoming Opportunities

- Wyoming Leadership strongly supports Clinical Quality Measurement as an important strategic goal.
- Part of payment reform in Wyoming Medicaid includes utilization of tools that incentivize quality of care.
- Stage 3 of Meaningful Use is expected to have a significant healthcare quality improvement component.
- eCQM mandate for Medicare in 2014 EHR CEHRT from ONC.
- eCQM is optional for Medicaid but several states are considering it and CMS is encouraging (90/10 FFP).
Leveraging Current Systems

Wyoming State Level Registry (WYSLR) Capabilities:

- Originally developed for providers participating in the EHR Incentive Payment Program
- Enables self-enrollment and data submission functions for Clinical Quality Measures (CQMs)
- Developed Wyoming Quality Care Coordination Program (PCMH)
  - Meets the tiered “Pay-for-Quality” initiative
  - Provide Non-EHR Incentive Payment providers along with those enrolled through the NLR a reimbursement for demonstrating quality of care
- Utilizes popHealth to aggregate statewide clinical quality data
- Employs an integration of the State Level Repository and popHealth
Clinical Quality Measures (CQM)

- Initial nine CQMs to be used focusing on two of the six domains:
  1. Population/Public Health
  2. Clinical Processes/Effectiveness
    - Tobacco Use Assessment and Cessation Intervention
    - Breast Cancer Screening
    - Cervical Cancer Screening
    - Colorectal Cancer Screening
    - Childhood Immunization Status
    - Diabetes: Hemoglobin A1C Poor Control
    - Diabetes: Blood Pressure Management
    - Diabetes: LDL Management and Control
    - ADHD Follow-Up Care for Children Prescribed Medication
popHealth Introduction

- Tool developed based on popHealth (an open source prototype sponsored by ONC) which incorporates:
  - Current definitions of CQMs for Meaningful Use (Stage 1, Stage 2)
  - Clinician focused “User Interface” standards approved by a physicians panel
  - Use of “Continuity of Care” standards for understanding patient population health
- From a business intelligence perspective popHealth provides actionable clinical information
popHealth Introduction (cont.)

- Allows provider-level analysis of Clinical Quality Measures
- Provides a tool for user managed provider hierarchies:
  - Organize providers into teams or groups
  - Organize multiple teams
  - Reporting at every level of the hierarchy
- Provides quality performance monitoring:
  - Allows comparison of multiple providers
  - Allows comparison across groups of providers
  - Provides the ability to identify ‘best’ performers and ‘under’ performers
Adopted Standards

- Quality Reporting Document Architecture Category I (QRDA 1)
  - Individual patient-level clinical data
- Quality Reporting Document Architecture Category III (QRDA 3)
  - Aggregated quality report of clinical data
- Continuity of Care Document (CCD)
  - Patient summary clinical document containing sections of allergies, medications, problems, and laboratory results, in addition to patient header information
- Continuity of Care Record (CCR)
  - Summary of the patient’s health status including problems, medications, allergies, and basic information about health insurance, care documentation, and the patient’s care plan
High Level Process Flow

HEALTHCARE PROVIDER

EHR System → Patient-Level Data (QRDA Category 1) → File Importer → DB Adapter → Population Health Reporting Database → Measure Engine → HTTPS → Quality Report (QRDA Category 3), Public Health Case Report, Immunization and Response Management

WDH / HealthTech Solutions, LLC.
High Level Gap Analysis

- Develop infrastructure to accept QRDAs
- Modify SLR and PopHealth to be able to exchange CQMs
- Modify SLR to accept CQMs for Medicaid providers who may not be applying for EHR incentive payments
- Mechanism for Pay-for-Quality payments
- Onboarding/testing of EHRs for submission of QRDAs
Technology Stack

- **popHealth Server**
  - Ubuntu (Server 12.04 or higher) and Apache (Version 2.0 or higher)
  - Ruby (version 1.9.3) on Rails (version 3.0 or higher)
  - Modern HTML5, JavaScript, and CSS Web UI frameworks

- **Database**
  - MongoDB (version 2.2.x or higher)
  - Non-relational (NoSQL) document oriented database
  - Leverages Map/Reduce for calculations

- **Horizontally scalable for high performance benchmarks against “Big Data”**

- **CQM Calculation**
  - Measure logic encoded in JavaScript

- **popHealth Internal Measure Representation**
  - Uses JSON and JavaScript
  - Clear, concise, and versatile data formats
Implementation Challenges

- Business rules around the CQMs are evolving and CMS continues to make significant changes to the meaningful use standards.
- This open source product is a prototype and requires significant expertise (not easy to find) in:
  - HL7, QRDA standards
  - Mongo DB
  - Ruby on Rails
  - JSON
- As with any open source product the documentation is lacking and there is no standard support model.
- Need to be an active member of the open source group.
- Future integration with disparate systems, single sign on, and role based security options.
Process and Data Flow

Integration with SLR will avoid duplicate data entry, thus reducing provider burdens.

Based on the CQM benchmarks reported, providers classified into the 3 Tiers.

WDH / HealthTech Solutions, LLC.
CQM Submission Timeline

- **Through 2nd Quarter 2014**: Manual Entry Pilot Starting February 2014
- **Through 4th Quarter 2014**: QRDA Cat-III
- **2015 and Beyond**: QRDA Cat-I
popHealth Dashboard

Core Measures:
- Preventive Care And Screening: Tobacco
- Adult Weight Screening And Follow-Up
- Hypertension: Blood Pressure Measurement
- Childhood Immunization Status
- Preventive Care And Screening: Influenza Immunization For Patients >= 50 Years Old
- Weight Assessment And Counseling For Children And Adolescents

Alternate Measures:
- Heart Conditions
- Cancer
- Miscellaneous
- Women's Health
- Diabetes

Provider: Adam, Gino
Reporting Period: 07/31/2010 - 10/31/2010
Number of Patients: 49

Measures:
- Preventive Care and Screening: Tobacco
  - Use: 69% (18/26)
- Cease: 66% (4/6)
- Adult Weight Screening and Follow-Up
  - 65+: 44% (4/9)
  - 18-64: 8% (2/24)
- Hypertension: Blood Pressure Measurement
  - 50% (1/2)
- Childhood Immunization Status
  - DTAP: 100% (3/3)

Parameters:
- Patients
# popHealth Provider Statistics

**Measure Name:** Childhood Immunization Status  
**Reporting Period:** April 1 - June 30  
**Description:** Percentage of children 2 years of age who had four diphtheria, tetanus and acellular pertussis (DTaP), three polio (IPV), one measles, mumps and rubella (MMR), three H influenzae type B (Hib), three hepatitis B (Hep B), one chicken pox (VZV), four pneumococcal conjugate (PCV), one hepatitis A (Hep A), two or three rotavirus (RV), and two influenza (flu) vaccines by their second birthday.

## INDIVIDUAL PROVIDER STATISTICS

<table>
<thead>
<tr>
<th>Provider Name</th>
<th>Immunization Rate</th>
<th>Count</th>
<th>Total Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADAIR, Steve</td>
<td>64%</td>
<td>4215</td>
<td>6580</td>
</tr>
<tr>
<td>BABCOCKE, Meryl</td>
<td>61%</td>
<td>2752</td>
<td>4440</td>
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<tr>
<td>BARBER, Ginnie</td>
<td>42%</td>
<td>3780</td>
<td>8814</td>
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<td>CHAPMAN, Johnnie</td>
<td>25%</td>
<td>2181</td>
<td>8657</td>
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<tr>
<td>HENRYSON, Landon</td>
<td>48%</td>
<td>2570</td>
<td>5336</td>
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<tr>
<td>HERBERT, Tiffany</td>
<td>25%</td>
<td>2214</td>
<td>8664</td>
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<tr>
<td>LONGSTAFF, Brande</td>
<td>32%</td>
<td>2709</td>
<td>8450</td>
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<td>NOWELL, Audrey</td>
<td>91%</td>
<td>6464</td>
<td>7068</td>
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<tr>
<td>WASH, Augustine</td>
<td>68%</td>
<td>2541</td>
<td>3690</td>
</tr>
</tbody>
</table>
popHealth Parameter Review

Measure Name: Childhood Immunization Status
Reporting Period: 2013 April 1 - June 30
Description: Percentage of children 2 years of age who had four diphtheria, tetanus and acellular pertussis (DTaP); three polio (IPV), one measles, mumps and rubella (MMR); three H influenza type B (HIB); three hepatitis B (Hep B); one chicken pox (VZV); four pneumococcal conjugate (PCV); one hepatitis A (Hep A); two or three rotavirus (RV); and two influenza (flu) vaccines by their second birthday.

47% (29426 / 61713)

exclusions (0)

exception (0)

denominator (61713)

numerator (29426)

- Individual characteristic
  - birth date
  - <= 2 years Starts Before Start of Measure Period

and

- Individual characteristic
  - birth date
  - >= 2 years Starts Before End of Measure Period

and

- medication
  - DTaP Vaccine
  - >= 1 day Starts After End Of

and

- medication
  - DTaP Vaccine
  - >= 1 day Starts After End Of
Dashboard graphs allow analogous review of individual CQM data against congregated CQM data per filtered reporting period.
Wyoming QCCP Clinical Measure Entry

**Preventive Care (1 of 9)**

( * ) Red asterisk indicates a required field.

**CMS ID 138/POR 124**

**Title:** Preventive Care and Screening: Tobacco Use: Screening and Cessation Intervention

**Description:** Percentage of patients aged 18 years and older who were screened for tobacco use one or more times within 24 months AND who received cessation counseling intervention if identified as a tobacco user.

Complete the following information:

- **Denominator:**
- **Numerator:**
- **Exception:**

Next | Save | Cancel
SLR Integration allows quick review of CQM calculation details for questions regarding Numerator, Denominator, Exclusions, and Exceptions.
Pay-for-Quality Tier reporting allows the SMA a snapshot of their Quality Initiative Programs.
For Additional Information

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