Indian Health Service
Approach to Population Health

Theresa Cullen, MD, MS
RADM U.S. Public Health Service
Indian Health Service
Indian Health Service

• Mission: To raise the physical, mental, social, and spiritual health of American Indians and Alaska natives to the highest level

• Goal: To assure that comprehensive, culturally acceptable personal and public health services are available and accessible to American Indian and Alaska Native people.
A Quick Look at the IHS

• Provides a comprehensive health service delivery system for approximately 1.9 million American Indians and Alaska Natives.

• Serves members of 562 federally recognized Tribes in primarily remote locations in 36 states.

• FY 2010 spend authority is approximately $5.0 billion.

• Indian Health Service total staff consists of about 15,700 employees, which includes approximately 2,400 nurses, 800 physicians, 400 engineers, 500 pharmacists, 300 dentists, and 300 sanitarians.
Consider Newer Technologies to Manage a Broad Picture of Health

- Personal Health
- Family History
- Community Health
- Public Health
- Population Health
Resource & Patient Management System

• Developed in the 1970s as a population health tool
  - Cousin to Vista / CPRS at the VHA
• Over 60 software applications
  - Patient, provider, community and population health focus
• Used at most IHS and Tribal health care facilities

www.ihs.gov/CIO/RPMS
Resource & Patient Management System

• Client –server application (currently due to bandwidth issues, though work in progress on a web-based delivery model)
• Cache dB- upgrade to Ensemble
• Processing for most applications is in Cache at the POC
• Front end programming dependent on usability evaluation and testing (.NET, Java, etc)
• Patient Care Component (PCC) functions as the HDR equivalent
• Programming designed for efficiency and minimal impact on performance at POC
• National Data Warehouse for routine administrative and longitudinal evaluations
Focused on the use of Electronic Health Records

http://www.ihs.gov/CIO/EHR/
Supporting community centric health care delivery

- Software views that allow for integration of community based data within a HIT system
- Community based health measures
  - Community based resources and health status information
  - Early notification of community based risk events
    - Sentinel community based events (e.g. suicide)
      - One event can trigger notification
    - ‘Early epidemic’ notification based on community
      - Pertussis, environmental exposures
Supporting population and public centric health care delivery

• Software views/applications that allow for ‘on the fly’ passive extraction of comparable and defined data for analysis, evaluation, and improved performance – based on defined provider, populations and communities

• Include population and public health measures
Clinical Reporting System

2007 NATIONAL DASHBOARD

2007 National Dashboard (HIS/Tribal)

<table>
<thead>
<tr>
<th>2007 Final</th>
<th>2006 Final</th>
<th>2005 Final</th>
<th>2007 Target</th>
<th>Final Results</th>
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**FY06 Clinical Performance Measure Patient List**

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Cancer Screening: Pap Smear Rates: List of women 21-64 with documented test/refusal, if any. (cont’d)

<table>
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<tr>
<th>PATIENT NAME</th>
<th>MRN</th>
<th>COMMUNITY</th>
<th>SEX</th>
<th>AGE</th>
<th>DENOMINATOR</th>
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Total # of Patients on list: 592

77.4% 67.5% 68.4% 90.0%

http://www.ihs.gov/CIO/CRS
Interoperability Features of RPMS that promote public centered care

- Master Patient Index (in development)
- Electronic Prescribing
- State Immunization Registries (bi-directional)
- Reference Lab Interface (bi-directional)
- Personal Health Record Portal (in development)
- Nationwide Health Information Network
- Regional Health Information Exchanges (HIE)
iCare

- A GUI interface to RPMS data that assists providers in the proactive identification and management of their patients (populations) that share similar, user-defined characteristics.
iCare: Population Management Tool

- Provides an intuitive, integrated view into diverse patient data elements for populations as well as individuals
- Facilitates the proactive identification and management of populations as well as identified patients
- Supports easy creation and customization of panels of patients
- Nationally deployed in May 2007
- Active workgroup, change control board and Subject Matter Expert involvement
Key Features

• Flexible Patient Panels
• Tags
• Registers
• Search Templates
• Ad Hoc Fields
• Community Alerts
• Diagnostic Tags
• Care Management (HIV Management)
• Patient Record
Public Health: Community Alerts

- CDC Nationally Notifiable Diseases
  - Mandatory
  - Optional
  - Recommended
- Public Health Alerts
  - ILI
  - H1N1
- Suicidal Behavior
  - Ideation
  - Attempt
  - Completion
**Community Alerts: First Login Display**

**COMMUNITY ALERTS**

Community Alerts provide deidentified visit data related to high-profile diagnoses that occurred within the past 30 days and may affect other patients in your community. The Alert categories are:

1. CDC Nationally Notifiable Infectious Diseases (CDC NND)
2. Suicidal Behavior Related Incidents

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<th>Type</th>
<th>Diagnosis</th>
<th>Number of Cases in the Past 30 Days</th>
<th>Number of Cases in the Past 24 Hours</th>
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Community: Alerts

• Anonymous – linked to Community of Residence

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Community: Alerts

• Customizable Display
Supporting Patient-Centric Health Care delivery

• Patient Wellness Handout
  – Integrated patient health record for patient use
  – IHS patient health summary includes
    • Patient health summary
    • Lab results (including reference labs)
    • Medication lists
    • Immunizations
    • Interpretation of the above
Indian Health Service
Population Health

Patient Wellness Handout

Data extracted from RPMS

Logic used to provide information about results

Reviewed with patient by clinician, nurse, educator, or pharmacist
Where we need to be going

• Data transformed into information and knowledge
• Develop and enhance clinical information systems and data sharing processes that improve care
• Provide the ability to translate information into action (to benefit patients, insurance programs, population health programs and others)
• Facilitate Health Information Technology transition from medical model to integrated care model
• The patient, family and community become the center of health care decision making and power
  – Data availability to the patient and community is as important as the providers access
OIT- OUR VISION

• A Health IT system that goes beyond displaying hemoglobin A1C values

• Facilitate Health Information Technology transition from medical model to integrated care model

• The patient, family and community become the center of health care decision making and power

• Data availability to the patient and community is as important as the providers access

• A health care IT system that integrates population and community health as a cornerstone of health care delivery (not just an afterthought)

• Innovative solutions to simple and complex problems

• An ‘enabler’ for achieving equity in health status for American Indian/Alaska native people and communities