HIV MANAGEMENT SYSTEM

Software Application

Indian Health Service

Office of Information Technology
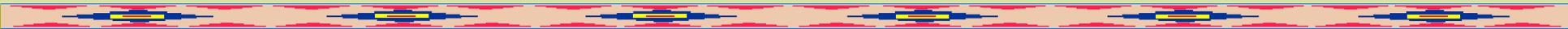
BACKGROUND

- The IHS Resource and Management Patient System (RPMS) is an electronic information system designed to enhance the ability of IHS direct, Tribal, and Urban facilities (over 591 clinics and 48 hospitals) throughout the United States to provide high quality healthcare.

- RPMS includes over 60 integrated software components covering clinical, administrative, and financial information on patients and resources.

- IHS is committed to providing appropriate IT tools to diagnose, monitor and effectively case manage health care problems that are confronting American Indian and Alaska Native communities.

<u>GOALS</u>

- Extend the RPMS suite of case management software into a condition-specific area

- Provide case managers and specialists with a tool to capture condition-specific data related to HIV and AIDS

- Assist non-specialist providers in decision making through use of clinical reminders, provider guidelines and reports

- Ultimately to improve quality of health care delivery and improve outcomes for HIV/AIDS patients

METHODS

- A workgroup made up of physicians, pharmacists, epidemiologists, nurses and others was assembled to identify desired functional features for the software

- The application was designed specifically for use by both general and specialist health care providers

- Developed algorithm logic based on national clinical guidelines for care utilizing standardized international clinical code sets to create definitions for the algorithms and to allow for customization from site to site

HMS FEATURES

• Presents an initial candidate list of patients from the facility's RPMS data base who are potentially eligible to be included in a register

• Users can create and manage a register of HIV/AIDS and/or "at risk" patients

• Incorporates artificial intelligence algorithms to provide HIV-related reminders to assist case managers and providers in managing patient care

- Identifies patients who are due or overdue for various tests, immunizations and other procedures related specifically to HIV/AIDS

- Provides both individual patient management and reporting capabilities and population-based tracking and reporting

- Provides an HIV Quality of Care Report

"DATA IN"

- Populate the Register
- Select an individual patient record for review
- Enter register information including:
- Initial DX date
- CDC Classifications
- Etiology
- HAART Status
- Notifications to State and Partners
- Review patient data from within RPMS (i.e. lab; radiology; pharmacy)
- Enter historical data about tests/services received outside facility

"DATA OUT"

- HMS Supplement: a Health Summary presenting patient data tailored to this specific condition
- HIV-related Reminders
- Provider Guidelines
- Reports:
  - Due/Overdue Report: for one patient or groups of patients
  - HIV Quality of Care Audit for your Register patients
  - State Surveillance Form and Report
  - Register Master List

HIV Quality of Care Audit

TOTAL PATIENTS REVIEWED: 25

		#	%
Gender: Male		18	72.0%
Female		7	28.0%
Age:	<15 yrs	3	12.0%
	15-44 yrs	17	68.0%
	45-64 yrs	5	20.0%
	>64 yrs	0	0.0%

LABORATORY EXAMS:

	#	%
# w/ CD4 count		
(in last six months)	20	80.0%
most recent < 50	3	15.0%
most recent 50-199	8	40.0%
most recent=>200	8	40.0%
Undetermined	1	5.0%
# w/ Viral Load		
(in last six months)	18	72.0%
<100,000 copies/ml	15	83.3%
=>100,000 copies/ml	3	17.7%
# w/ RPR (Syphilis Test)		
(in the last 12 months)	14	56.0%
Reactive	1	7.1%
Non-Reactive	10	71.4%
Refused	0	0.0%
NMI	0	0.0%
Undetermined	3	21.4%
# w/ Chlamydia Screen		
(in the last 12 months)	20	80.0%
Positive	2	10.0%
Negative	10	50.0%
Refused	5	25.0%
NMI	0	0.0%
Undetermined	3	15.0%
# w/ Gonorrhea Screen		
(in the last 12 months)	8	32.0%
Positive	2	25.0%
Negative	3	37.5%
Refused	1	12.5%
NMI	0	0.0%
Undetermined	2	25.0%

# w/ Tuberculosis tests	#	%
Needed	23	92.0%
PPD Received	17	73.9%
PPD+	2	11.7%
w/ Treatment Given	0	0.0%
PPD-	8	47.1%
PPD Refused	6	35.3%
PPD Status Unknown	1	5.9%

VACCINATIONS:	#	%
# w/ Pneumovax		
(in last 5 years (or 2 ever)	17	68.0%
# w/ Tetanus		
(in past 10 years)	22	88.8%

EXAMS : (Yearly)	#	%
Dilated Eye Exam	14	56.0%
Dental Exam	7	28.0%
Pap Smear	5	100.0%

TREATMENT: (past 6 mos.)

	#	%
ARV Therapy given	21	84.0%
HAART	14	66.7%
Mono Therapy	2	9.5%
Other Combination	5	23.8%
PCP Prophylaxis given		
(if CD4 ≥50 and <200		
in last six months)	7	87.5%
MAC Prophylaxis given		
(if CD4 <50		
in last six months)	1	33.3%

RISK FACTORS:	#	%
Tobacco Use Screening	19	76.0%
Current Tobacco User	9	47.4%
If Yes, Counseled	6	66.7%
Not a Current User	6	31.6%
Not Documented	4	21.1%
Substance Abuse Screening	15	60.0%
Current User	9	60.0%
I/V - Yes	Unavailable	
Not a Current User	Unavailable	
Not Documented	6	40.0%

<u>CONCLUSIONS</u>

- HMS provides a tool that will help providers identify the patients in their service area who have either HIV or AIDS.

- HMS provides a mechanism for healthcare providers to be informed and proactively manage their patients with HIV, AIDS or who are "At Risk" for contracting the disease.

- HMS provides evidence based guidelines and clinical reminders that will assist the non-specialist provider with appropriate recommendations for evaluation, care and follow up.

•HMS provides a tool to the provider who has patients who would rather be treated at an I/T/U facility so that he or she can continue to receive care at a local facility.

•Over the next year, through a grant from the DHHS Minority AIDS Initiative, IHS will be performing pre- and post-deployment evaluations to assess the impact of a condition-specific case management tool on patient quality of care.

CONTACT INFORMATION

- **Theresa Cullen, MD**

    Theresa.cullen@ihs.gov

Cindy Gebremariam, RN

    cynthia.gebremariam@ihs.gov

    (520) 670-4697