

**Indian Health Service
Office of Information Technology
Fiscal Year 2008 Successes**

**Submitted by
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The mission of the Office of Information Technology (OIT), Indian Health Service (IHS), is to support the Agency's overall mission accomplishment by ensuring efficient and effective technology resources are available to the IHS; resources are properly used to support the technology needs of IHS clinical and administrative programs; and the American people are well served by the funds expended for these systems and services. The OIT made substantial progress in accomplishing annual performance contract measures and other high priority initiatives during Fiscal Year (FY) 2008 including the following:

Resource and Patient Management System

Electronic Health Record (EHR) - The Resource and Patient Management System (RPMS) EHR is in use at 182 sites nationwide, far exceeding the IHS Director's FY 2008 target of 151 sites. The EHR adoption at Tribally-operated facilities has been aggressive as well - 82 of the 182 EHR sites are Tribal or Urban. With the exception of a very small group of remote facilities that have substantial connectivity issues beyond Service Unit control, all Federal hospitals, health centers, and health stations have implemented the RPMS EHR for patient care. The OIT's EHR deployment staff spent 36 weeks on site at IHS--direct/Tribal/Urban facilities conducting EHR setup activities. These individuals traveled tirelessly to assist sites in taking advantage of the full capabilities of RPMS and the EHR and conducted numerous EHR training events. The Cherokee Indian Hospital Authority (CIHA), a Tribally managed hospital and health care system located in Cherokee, North Carolina, received the 2008 Davies Award in Public Health. The Davies Award is presented by the Health Information Management Systems Society (HIMSS), recognizing excellence in the implementation and use of Health Information Technology (HIT). The CIHA's award was based upon the facility's system-wide utilization of RPMS and the EHR, and the process and patient care improvements that resulted. This is the second time in four years that RPMS has been recognized by the Davies committee; the Clinical Reporting System received the award in 2005.

Certification Commission for Healthcare Information Technology (CCHIT) - The IHS successfully completed certification documentation, coding, and testing by end of third quarter FY08 without any negative findings. Programming on one outstanding issue is underway, and full certification is anticipated by the end of December 2008. Among the new features developed in response to CCHIT is the ability to send electronic prescriptions to community pharmacies, a major advantage for small facilities without a pharmacy on site. With full CCHIT certification, the IHS RPMS will join the ranks of EHR systems that have proven their capabilities across a broad range of functional and security requirements. Many Tribal and Urban facilities that are recipients of Health Resources and Services Administration (HRSA) or other grants requiring utilization of CCHIT-certified systems will be able to stay on RPMS as a result of this effort. The CCHIT-certified version of RPMS EHR is expected to be released to the field in the second quarter of FY09.

Integrated Case Management (iCare) -The IHS deployed iCare enhancements nationally on June 26, 2008. Internal testing of future iCare enhancements (iCare v2.0) is already underway and IHS anticipates deployment in early calendar year 2009. The IHS continues to aggressively train Areas on iCare regularly via WebEx, and appropriate on-site trainings,

Quality and Transparency - The OIT ensured Agency programs are aligned and fully integrated with the Department of Health and Human Service's goals with transparency through the release of the Clinical Reporting System (CRS) enhancements on April 1, 2008, including four new clinical topics and a new patient list for Government Performance and Results Act (GPRA) reporting. The patient list provides a forecast of GPRA measures a patient will not meet as of the date the list was run and will assist health care and quality improvement staff with improving their facility's GPRA performance. The OIT also released a new Other National Measures (ONM) Report for reporting non-GPRA measures. The new ONM Report significantly aids end users in differentiating between GPRA and non-GPRA measures. Additionally, the OIT developed and released on August 12, 2008 a new IHS Quality Transparency Measures Data Report that complies with Presidential Executive Order (EO) 13410, "Promoting Quality and Efficient Health Care in Federal Government Administered or Sponsored Health Care Programs," dated August 28, 2006. This data report is used in customer friendly reporting on the new IHS Quality of Care website for sharing information with health care consumers at the local facility level and for consumers with Internet access.

Quality of Care (QOC) Website – On September 30, 2008, the OIT deployed the new IHS QOC website that includes a patient wellness summary supporting patient-centric care from both patient and clinician perspectives, on September 30, 2008. The QOC reports the quality of health care provided by IHS facilities as well as participating Tribal and Urban facilities. This site includes important information to help patients actively participate in their health care and improve their health. The IHS measures quality of care for two distinct purposes, Transparency and GPRA. Transparency reporting is one of several requirements from EO 13410. The OIT collaborated with the VA and DoD to identify and report a set of clinical performance measures for Transparency purposes. IHS is reporting seven Transparency measures from 70 IHS facilities for 2008; each Transparency measure is reported at the Facility, Area, and IHS National levels so that patients can compare performance across facilities. In 2009, five additional performance measures will be added. The QOC site also includes reports on 24 clinical GPRA measures that are reported annually to Congress and OMB in the IHS Annual GPRA Performance Report. GPRA measures are reported at the IHS National level only.

United Financial Management System (UFMS)

As part of the IHS financial management system modernization, the OIT provided a stable Information Technology (IT) infrastructure for the UFMS. The IHS is first in the government to attempt to feed a patient accounts receivable system into a national accounting system. Implementation of an interface between IHS revenue generation systems and UFMS was a challenge that IHS met. The UFMS as designed could not handle the multitude of financial transactions generated from IHS patient accounting systems requiring modifications to UFMS and IHS systems. The OIT had to re-engineer business processes, validate existing requirements and identify new requirements for additional software functionality to address the changes to UFMS.

The OIT released two Third Party Billing and four Accounts Receivable patches to support UFMS interfacing efforts. To meet the October 2008 deadline and minimize data entry errors as well assist with close-out activities, the best alternative was to release multiple patches rather than new versions of software which require longer development lifecycles. IHS professionals from the Office of Resource Access and Partnerships, the Albuquerque Area Office/Financial Management, Billings and Portland Area Business Offices and the OIT worked tirelessly to successfully meet the UFMS implementation deadline. Testing activities proved the interface is successful and functional. Detailed functional requirements for Third Party Billing and Accounts Receivable software were identified by Tribal and Federal users of the existing applications. An alternatives analysis will be conducted in FY 2009 based on the functional requirements. Once completed, IHS and business owners can make an informed decision regarding options for modernizing the RPMS practice management suite to maximize revenue cycle efficiency and reimbursements. Challenges ahead include addressing data quality issues

common to software interface projects and to further rapid development and release cycles to meet evolving requirements.

The OIT also successfully implemented a Contract Health Service (CHS) interface with UFMS. Through OIT user support and corrective action programming, the OIT resolved issues with data incorrectly entered into the RPMS CHS-MIS application causing user-generated UFMS errors. Tested an RPMS patch for the CHS Management Information System and Departmental Contracts Information System (DCIS) interface project, an HHS mandate (released patch 10/9/08).

RPMS Training - Activities continue to increase year to year. In 2008 (including scheduled classes) the OIT provided 247 separate learning events that have reached 3,773 learners. The utilization of remote training technology (WebEx) has greatly increased the availability of RPMS training. Three multi-site training events have taken place to date, reaching as many as 100 participants simultaneously at up to six locations. Since 2002, the median annual increase in RPMS training events has been 34%, with the number of participants increasing at a median annual rate of 26%.

Electronic Dental Record (EDR) - The RPMS EDR project moved forward with the awarding of two major contracts. One contractor will develop an interface between the commercial dental record system (Dentrix) and the RPMS Registration system, and the other contractor will work directly with IHS and Tribal facilities to implement the new EDR. Testing will continue through the first quarter of FY2009, with national deployment to begin thereafter.

National Patient Information Reporting System

- Met report deadlines for the generation of User Population and Workload counts.
- Began producing the official “ORYX Reports” from the National Data Warehouse (NDW) in the Spring of 2007. All subsequent official ORYX reports have come from the NDW.
- Migrated all other existing, ongoing production reports from the legacy system to the new NDW system.
- Initiated a General Data Mart Users Group.
- NDW users stood up the following initial data marts: ORYX, Public Health Nursing, CHR, CMS, Patient Education, and Environmental Health.

Security

Training

- All IHS Areas and Headquarters reported 100% completion of Security Awareness Training by May 15, two weeks before the HHS deadline. Area users that had not completed training had network access removed until training was completed. Training database reflects 22,337 users completed training. This included 15,655 IHS users and 6,682 Tribal, intern, and contractor users.
- Implemented an IHS Role Based Training Program in accordance with HHS requirements and a total of 653 IHS employees with significant security responsibilities completed the training.

Oversight and Compliance

- Submitted 100% of quarterly security reports at least two days prior to due dates via the HHS SPORT Tool.
- Completed and submitted the annual Federal Information Security Act report to HHS two days before established deadline.
- Instituted an intra-agency, cross-functional workgroup to improve coordination between IT security and IT operations. This group has greatly increased collaboration, improved customer satisfaction,

and yielded a high project completion rate and reduction in outstanding Plan of Action and Milestones (POAM) by reducing the number of POAMs from 36 to 14.

- Developed and updated cyber security policies, procedures, guidelines, practices, and templates for hardware, software, and telecommunications within the IHS.
- Implemented new procedures to address new HHS, Office of Management and Budget, and National Institutes of Standards and Technology security requirements.
- Executed a wide variety of Interconnection Security Agreements.
- Collaborated in the creation of Tribal Interconnect Security Agreements.

Vulnerability Management

- Various virus and worm outbreaks were detected, halted, and resolved.
- Utilized various tools, techniques, and technologies such as Securify, Intrusion Detection System (IDS)/Intrusion Prevention System, Virtual Private Network (VPN), Firewalls, Access Control Lists, Antivirus, system logs, audit and assist team, Nmap ("Network Mapper"), Ethereal, etc. to detect computer security incidents.
- With the WebSense team, stream-lined WebSense and add proper structure to its configuration and usage so the product can be utilized to its fullest for IHS.

Certification and Accreditation

- Created a new Certification and Accreditation (C&A) process which includes a new C&A methodology, System Security Plan methodology, and Risk Assessment methodology. This new process could reduce contract costs (not including government costs) from \$4.5 million to \$1.2 million.
- Performed a three-day C&A training for Area and Facility ISSOs which will assist IHS in implementing the new C&A process. There were 47 attendees representing 10 IHS Area Offices, Headquarters, DES, and OIT.
- Mitigated findings discovered in previous C&A efforts.

Incident Response and Management - Improved response figures IHS-wide for Monthly Security Event Reporting by Area Offices from 93% in 2007 to 97% in 2008.

Network Operations and Security Center

- Doubled the bandwidth at the network core for OIT access and Internet access for all the Areas.
- Undertook a number of measures to enhance network security. For example, core firewall rules were evaluated for need and as a result, the firewall configuration was reduced from 1566 lines to 887. Also, the number of active Virtual Private Network accounts was reduced from approximately 3000 to 1493 users.
- Developed automated tools (database and SharePoint site) for asset management of OIT-managed network devices.
- *PointSec* - Continued implementation of PointSec encryption to ensure all laptops are properly encrypted.

Emergency Preparedness/Response

- The OIT participated in the government-wide national CyberStorm II exercise.
- Conducted annual training for National Programs/OIT emergency team members.
- Completed server restoration capability testing by April 11, 2008.
- Updated the IHS 2008 Emergency Management Plan.
- Completed testing the RPMS, NPIRS, and IOAT Continuity of Operations Plans (COOPs) in May 2008.
- Updated the RPMS, NPIRS, and IOAT COOPs by July 28, 2008.

Collaborations

Family Health History (FHH) – The OIT and the Office of the Surgeon General, HHS, will be prototyping a web-based tool that can collect FHH information based on a recommended set of information the patient will enter and save that information in a shareable format that can be transmitted to IHS as well as other partner organizations' electronic health information systems (i.e., EHRs). A public interoperability demonstration of the prototype that includes IHS will be provided on or around November 25, 2008.

Global War on Terror Heroes - The OIT worked closely with the Department of Veteran Affairs (VA) on the GWOT initiative established by Presidential Executive Order to improve IT interoperability between the VHA and the IHS electronic health records and establish a single portal so clinicians who care for these returning heroes will have access to all available information. During September, IHS physicians began accessing Tucson VA Medical Center records for Native American veterans in a pilot implementation of the VA's VistaWeb application at the Sells IHS Hospital.

National Health Information Technology Initiatives - The Nationwide Health Information Network (NHIN) is being developed to provide a secure, nationwide, interoperable health information infrastructure that will connect providers, consumers, and others involved in supporting health and healthcare. This critical part of the national health IT agenda will enable health information to follow the consumer, be available for clinical decision making, and support appropriate use of healthcare information beyond direct patient care so as to improve health. The IHS is participating in the NHIN Trial Implementations in December. Additional information will be provided during the Indian Health Information Management Conference in Phoenix the week of December 15.

Presidents Management Agenda

Quarterly Health Interoperability Surveys - All achieved green ratings.

Quarterly E-Gov Scorecards - received a green rating in Q1, red in Q2, yellow in Q3, and improved to green in Q4. Lower ratings were due to Capital Planning and Investment Control issues throughout the Department.

Capital Planning and Investment Control - The HHS rated 100% of IHS IT business cases highly. Out of 84 major and tactical investments throughout all HHS agencies, the FY10 IHS RPMS and NPIRS investments have been ranked by HHS in the top 7, with RPMS coming in as #1 and NPIRS #7. The IHS rolled the Infrastructure, Office Automation, and Telecommunications investment into the HHS enterprise-wide IT Infrastructure Line of Business. All IHS IT investments were consistently within 10% of cost and schedule. The IHS IT Investment Review Board met quarterly to ensure IHS compliance with OMB and HHS requirements.

Infrastructure, Office Automation, and Telecommunications

AIX and Microsoft Windows Standard Configurations - Developed a standard configuration for the IBM AIX and Microsoft Windows based hardware servers that host the RPMS operational environments. The standard configuration is intended to address identified IT security vulnerabilities and remediation efforts have been outstanding since 2004. The defined configuration is currently under BETA testing at four healthcare facilities.

Federal Desktop Core Configuration (FDCC) - Completed 100 percent implementation of the FDCC for IHS desktops three weeks ahead of the mandated August 25, 2008 deadline. This included implementing FDCC and increasing server monitoring at over 160 IHS sites.

HFNetCheckPro - Implemented HFNetCheckPro across the Agency for domain controllers.

Help Desk – The OIT developed a process improvement plan for the OIT Helpdesk to include standard operating procedures addressing ticket processing and customer service level agreements. The new system went live at the end of FY 2008. Users will be asked for their feedback on the Help Desk software, business process changes, and standard operating procedures in early 2009.

SharePoint Services - Directed the software upgrade of the SharePoint Services from version 2.0 to 3.0 to provide additional functionality for improved site administrative management and workflow process capabilities.

Technology Refresh Cycle - Implemented technology refresh cycle of IT devices to include desktops, laptops, servers, switches, and routers.

One Computer Model - Prior to the General Accounting Office Property Report being issued, the OIT proactively implemented the “One Computer Model” at IHS Headquarters. The model consisted of issuing laptops with docking stations instead of multiple computers to Headquarters users during the annual computer refresh cycle, thereby lessening the number of computers purchased/issued and a potentially saved up to \$75,000 at IHS Headquarters.

Internet Services and Section 508 - Revised and updated IHS Web standards and guidelines. Improved Website development process to include Section 508 and security vulnerability checks and scans. Developed a remediation plan to address deficiencies associated with Section 508 compliance.

E-Mail Services – the CIO officially requested HHS approval of the IHS exit from HHSMail services, effective October 1, 2009 (pending HHS approval). OIT staff is currently building a business case for a more cost effective/efficient IHS e-mail service.

National Management Support

The OIT consistently communicated ongoing management expectations to the Area Information Systems Coordinator Committee (ISCC) and Information Systems Security Officers (ISSO) through monthly ISCC conference calls and two in-person meetings (January and July 08). The ISSOs also met via monthly conference calls and OIT conducted a highly commended ISSO training session in July 08.

The OIT consulted with the Information Systems Advisory Committee (ISAC) in person (November 07 and April 08) on current IT issues, budget, and IT investments. The ISAC established 2010-2011 IT priorities to be used in setting overall IHS IT priorities and budget requirements.

The OIT provided quarterly OIT updates to Headquarters and Area executive staff informing them of project and budget status, accomplishments, and challenges.

Telehealth

- Worked closely in support of the IHS Director’s Initiatives including coordination of the ninth IHS Open Door Forum (highlighting examples of telehealth activities supporting the Director’s Initiatives).
- Integration of telehealth tools/planning into key program strategic directions. Examples include:
 - IHS Division of Diabetes Treatment and Prevention
 - Innovations in Planned Care
 - Native American Cardiology Program
 - IHS Obesity Strategic Planning Workgroup
 - Pharmacy services planning (with the IHS Office of Clinical and Preventive Services)

- Expanded planning with IHS Area offices regarding the role of telehealth in Area and regional service delivery models. Examples include:
 - Detailed service delivery planning with the IHS Southeast Regional Area offices (Nashville, Oklahoma, and Albuquerque) concerning telehealth business models.
 - Southwest Telehealth Consortium. This included the 4 Southwest Areas' involvement in the FCC Rural Health Pilot Program.
 - Participation in service modeling and planning for the Billings, Aberdeen, and Bemidji Area offices.
 - Assistance with a telehealth service menu developed by the IHS Phoenix Area.
- Enhanced mental health service delivery, through partnership with the Behavioral Health Program.
- Expanded ENT expert triage consultation, through collaboration with the Alaska Native Medical Center.
- Expansion of the OIT infrastructure to support real-time videoconferencing, store-and-forward telehealth-based services, and remote monitoring capabilities.
- Development and expansion of key specialty service models. Examples include:
 - The IHS Joslin Vision Network – now providing tele-ophthalmology services to 60 IHS and Tribal facilities in 16 states.
 - “Tele-nutrition services” – medical nutrition therapy services via videoconferencing.
 - Other types of specialty services (e.g. pharmacy, nephrology, AIDS/HIV consultation) under development in multiple Areas and sites.
- Business modeling, with IHS Areas and facilities including expanded support of planning with state Medicaid programs for telehealth service reimbursement.
- Improvements in telehealth service coding, workload reporting, and clinical data integration such as:
 - Multidisciplinary planning is addressing the complex requirements of telehealth service coding, etc.
 - Data interface activities in support of the JVN-RPMS and AFHCAN-RPMS interfaces.
- Continued collaborations with other agencies and organizations. Examples include: the Mayo Clinic, the Arizona Telemedicine Program, the Veterans Health Administration, the University of New Mexico, the American Telemedicine Association, and many others.
- Support of national IHS Memoranda of Understanding (MOU) and relationships including the following:
 - HHS-Health Canada MOU -- first meeting of representatives from the IHS and the First Nation/Inuit Health Branch of Health Canada (October 3, 2008)
 - IHS-Mayo MOU -- service planning with both Mayo Rochester and Mayo Scottsdale is underway.