

EHRS Project Update
for
NASA EHRS Task Force

by
Wyckliffe Hoffler, MD and John Eckmann, MPH

Via ViTS

Tuesday, 1 November 2005

11:00 EST

John Eckmann, MPH

NASA EHRIS Project Lead

Dynamac Corp, KSC

- Health Informatics Specialist
- Experience with clinical EHRIS selection and installation
- Experience with database design
- Management oversight of multi-user medical research database system

Review of Sentinel EHRS Events

- April 2002 Feasibility study
- July 02-April 03 Center visits; baseline data
- Oct 02-Sept 03 Vendor evaluations
- Oct 03 EHRS Task Force named
- April 04 T/F Requirements to NASA
- July 04 IHS visit, Cherokee, NC
- Oct 04 CHMO decision: Go IHS
- April 05 NASA-IHS IAA signed
- Aug 05 SOW to NASA
- Summer 05 Med test equipment

Major Presentations on EHRS

- NASA OH Conferences:
San Diego 2003, Williamsburg 2004, Lake Tahoe 2005
- NASA Safety & Health Managers: 2004, 2005
- Task Force: Convened Nov 2003;
ViTS-Jan, Mar, Jun, Nov 2004; Nov 2005
- AMOHAC: Oct 2003
- Corporate Health Consortium: Oct 2003
- NASA Health and Safety Board: Nov 2003
- IOM: March and June 2004

Routes toward EHRS

- Data gathering and discipline learning
 - All Center clinics visited
 - International fora attended
 - Literature, InterNet, consultant sources tapped
- Commercial: via issuance of RFI and RFP
 - 12 Responses to RFI (issued Oct 2003)
 - Technical and Functional Requirements developed and delivered to NASA April 2004
 - RFP shelved (poised for issuance late Spring 2004)
- Government: via Indian Health Service RPMS
 - VA System (Viera, FL) demonstrated Aug 2003
 - IHS system demonstrated and evaluated July → 2004
 - Decision to pursue IHS RPMS made by CHMO Oct 2004
 - IAA with IHS signed April 2005
 - Contract with CIAi projected for November 2005
- Other: via internal NASA and liaisons with other organizations

Critical Decisions

- Architecture
- Connectivity
- Security
- Hardware specifications
- User categories, authorization, training, helps
- Central data repository and backup
- Order of Center implementation
- Standardizations

Medical Evaluation Information

- Demographic data
- Medical history and physical examination
- Quantification measures from test systems

with digital data output:

EKG

Spirometer

Audiometer

Vision tester

Ocular tonometer

- Laboratory assays
- Other, as height, weight, vital signs

Design Provisions for OH Services

- End-to end clinic processes,
 Work Flow iterated by TF
- Master employee (patient) identifier
- Master Physical Exam matrix updated
- Master drug formulary compiled
- Medical data forms categorized
- Center work force contractor rosters
- Center OH user rosters, categories
- Work certifications
- Required reports, data sharing (e.g., Safety, OWC, HR)
- Helps: Alerts, reminders, cross correlations

Functional Requirements

- General Physical Evaluations
 - Occupational specific/limited evaluations
 - Medical surveillance, pre-placement, special purpose
 - Health maintenance evaluations
- Occupational/non-occupational injury/illness treatment
- Emergency/acute care
- Remote Assignments/international travel

Functional Requirements, *cont.*

- Immunizations/vaccinations/allergies
- Medications
- Case management/workers compensation
- Work restriction
- Health promotion/wellness
- Scheduling

Functional Requirements, *cont.*

- Patient demographics
- Medical history
- External laboratory analysis
- Vision
- Audiometry
- PFT
- ECG
- Cardiovascular stress testing

Functional Requirements, *cont.*

- X-ray
- Environmental health
- Cost accountability
- Resources/consumables inventory
- Communications, links
- Reports

Outstanding EHRS Actions

- Contract with CIAi for OH Module
- Final system design details
- Hardware: Computer and medical
- Connectivity, risks and security/confidentiality
- Data validation and preservation
- Other discipline interfaces
- Training, helps
- Center installations, testing, deployment, activation

EHRS Schedule and Resources

- Material contingencies
 - CIAi contract initiation
 - SOW provisions
 - System components
 - Connectivity/security
 - Architecture
- People issues
 - Acceptance
 - Training
 - Use
- Money matters

Future Task Force Assistance

- Furnish your Center contractor rosters
- Name your Center clinical users, per category
- Participate in preparation for deployment of EHRs at your Center
 - Schedule
 - Personnel training
 - System readiness
 - Communication
- Review Agency related documents/standards to assure your Center requirements are met
- Become super users, Agency resources