Indian Health Service Electronic Health Record

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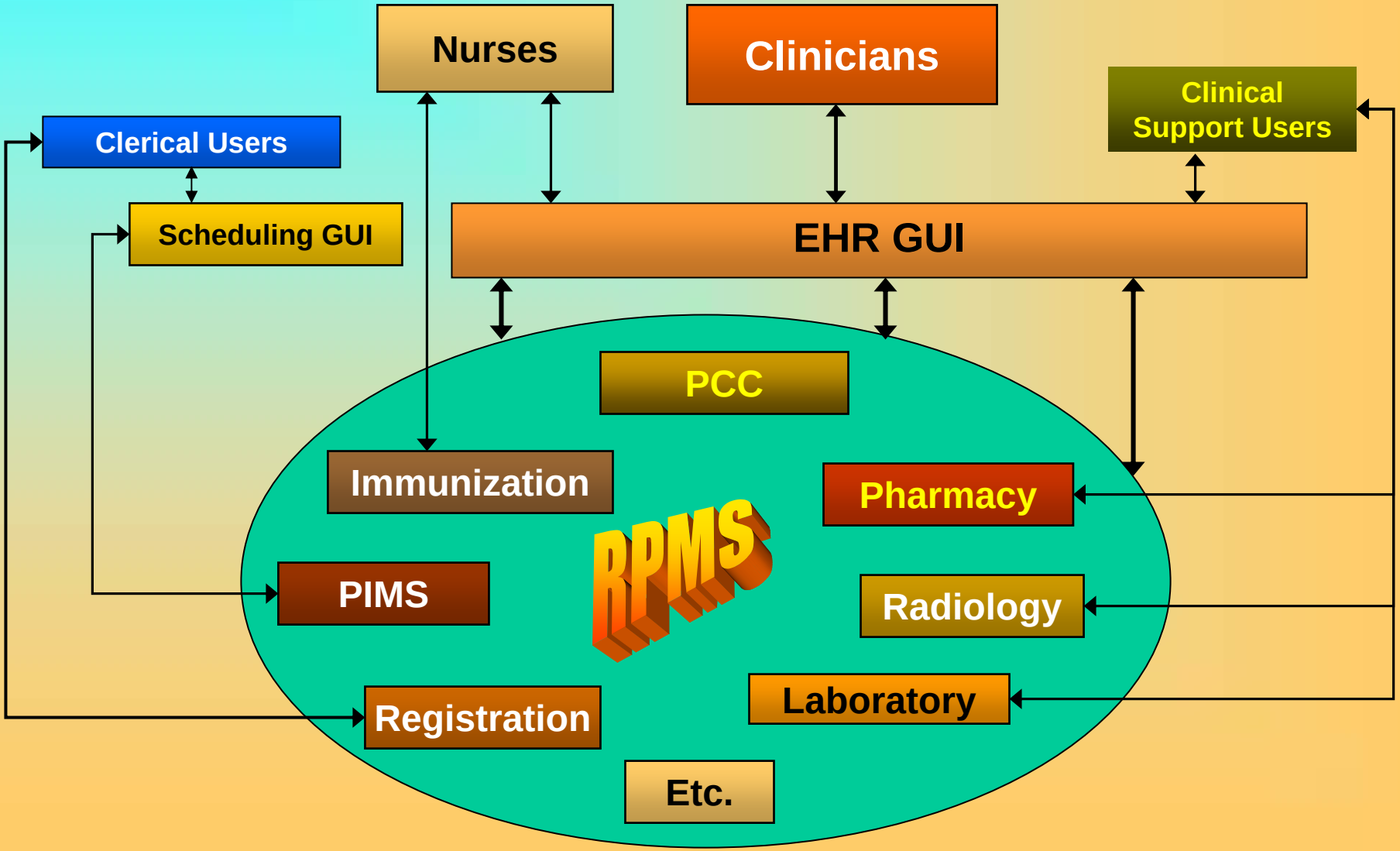
Presentation Objectives

- Brief description of EHR
- Milestones and Current Status
- Impact of EHR at Test Sites
- Functional issues and development
- Deployment plans and issues
- Special situations
- Opportunities for Area leadership

What is IHS EHR?

- Server-side RPMS applications
  - adapted from VHA or developed by IHS
- Client-side Graphical User Interface
  - VueCentric framework with IHS-customized components
  - Principal users of the GUI – clinicians
  - Many others use the GUI for convenience and ease of access, but do not (yet) have GUI access to their applications (e.g. Registration, Lab, Radiology, Pharmacy)

EHR/RPMS/User Relationships



EHR Milestones

- June 2002 – Prototype EHR at Crow Hospital
- February 2003 – First national presentations about IHS-EHR – programming begins in earnest
- September 2003 – Dr. Grim commits leadership and resources to completion of IHS-EHR in FY 2004

EHR Milestones

- June 2004 – PIMS released
- July 2004 Beta testing begins
- August 2004 – Radiology 5.0 released
- December 2004 – Pharmacy 5/7 certified
- January 2005 – EHR v1.0 certified

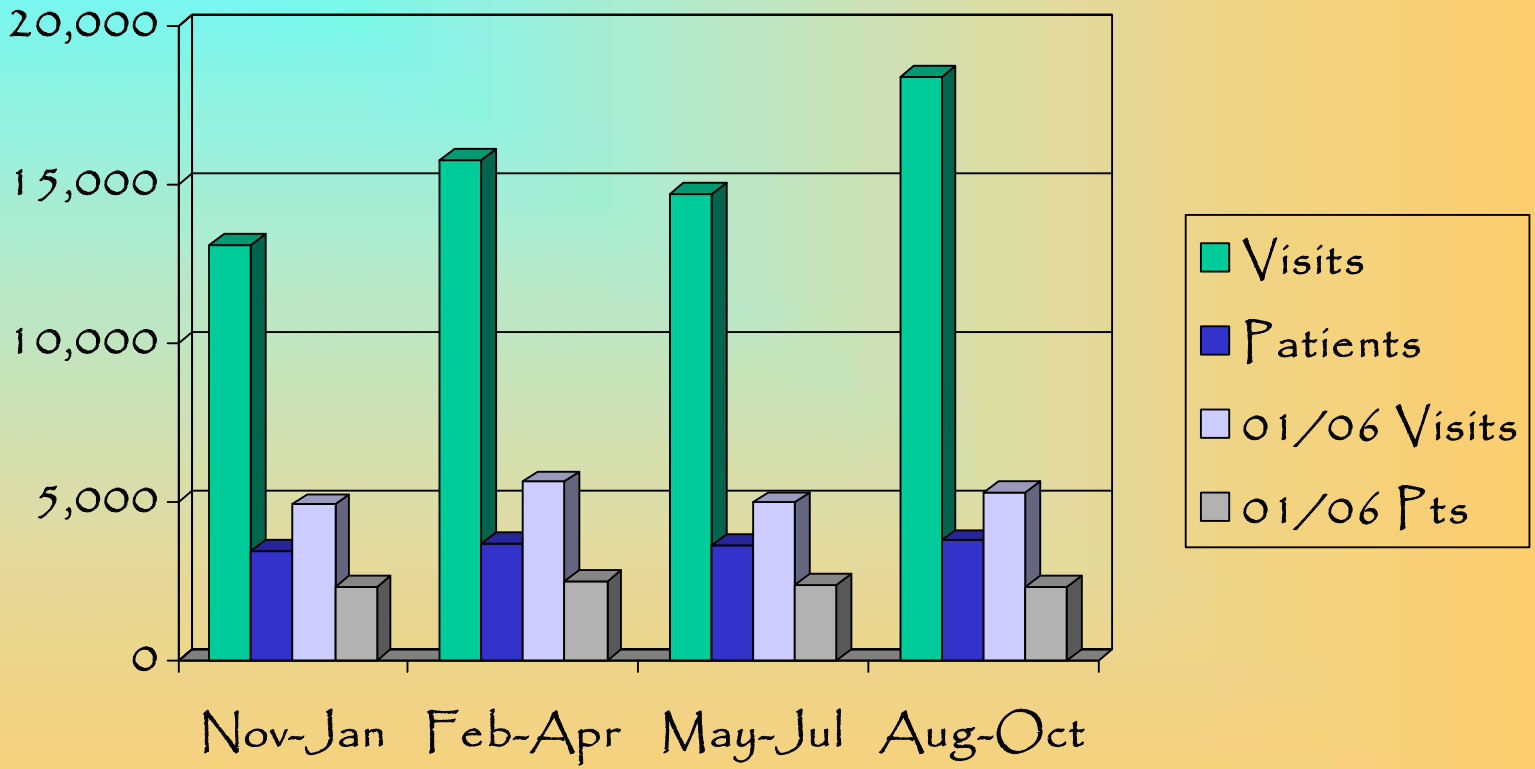
Why "Certified" vs "Released"?

- Pharmacy 5/7 and EHR GUI are "Certified" but not "Released"
- "Released" implies software files are available to any site for download / installation
- Pharmacy and EHR GUI files will be released in controlled fashion to sites who meet specific software and site preparation prerequisites

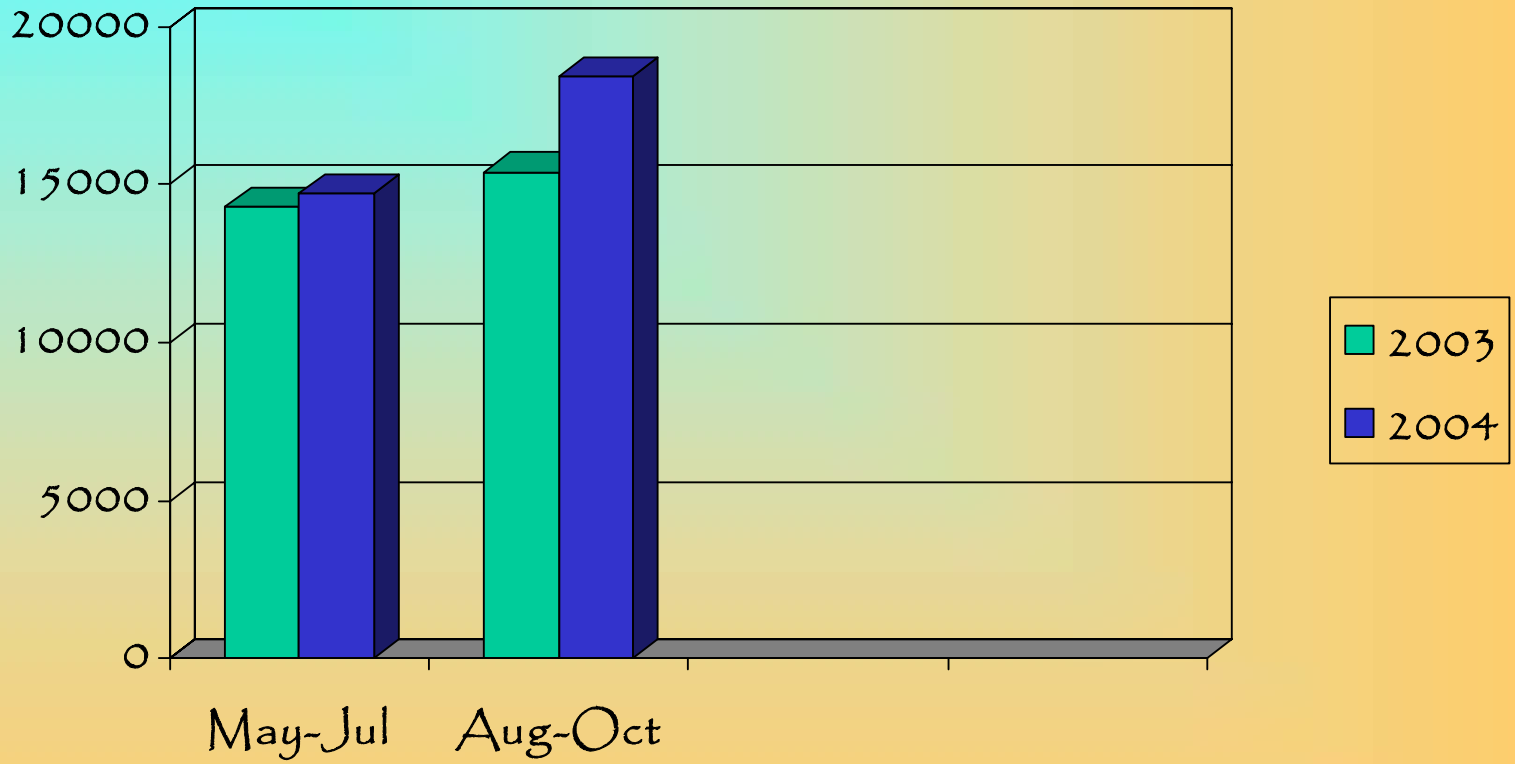
Impact of EHR at Test Sites

- Acceptance has been very high
  - User estimates at various sites (includes support staff) –
    - Warm Springs – 70
    - Fort Defiance – 85
    - Sacaton - ~120
- Some sites (e.g. Sacaton) report continuing impact on productivity, while others (Warm Springs, Wind River, Cherokee, Fort Defiance) report this as transient

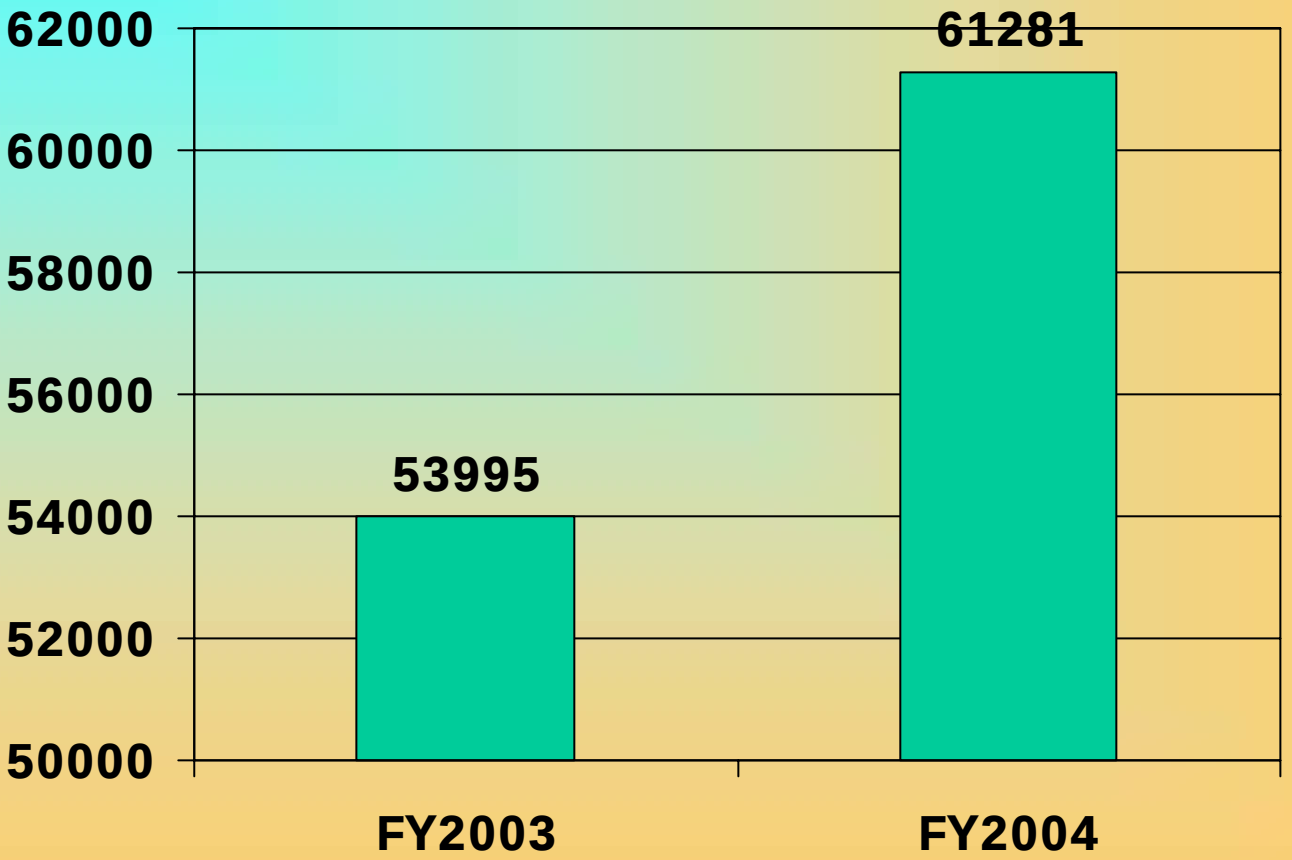
Warm Springs Clinic Visits



Warm Springs Quarterly Visits

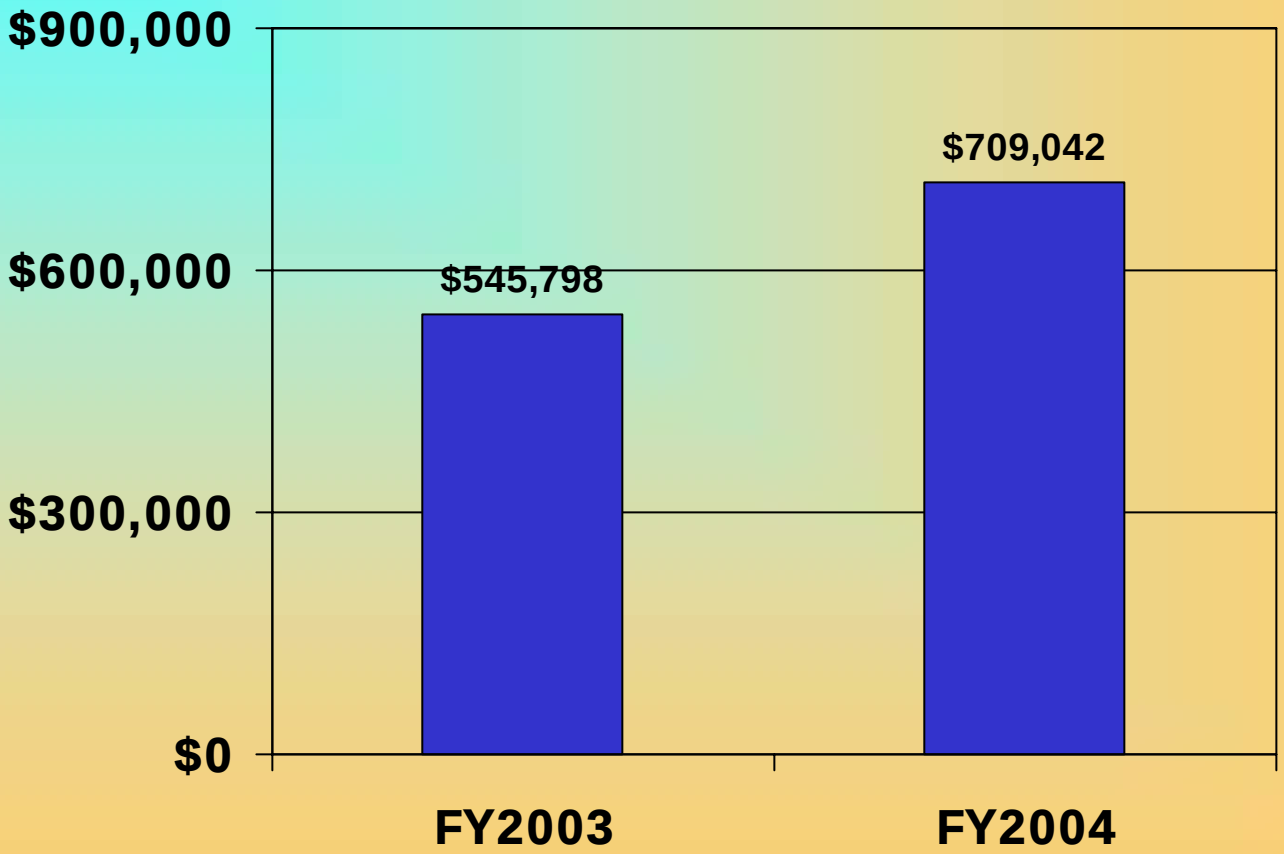


Wind River APC Visits



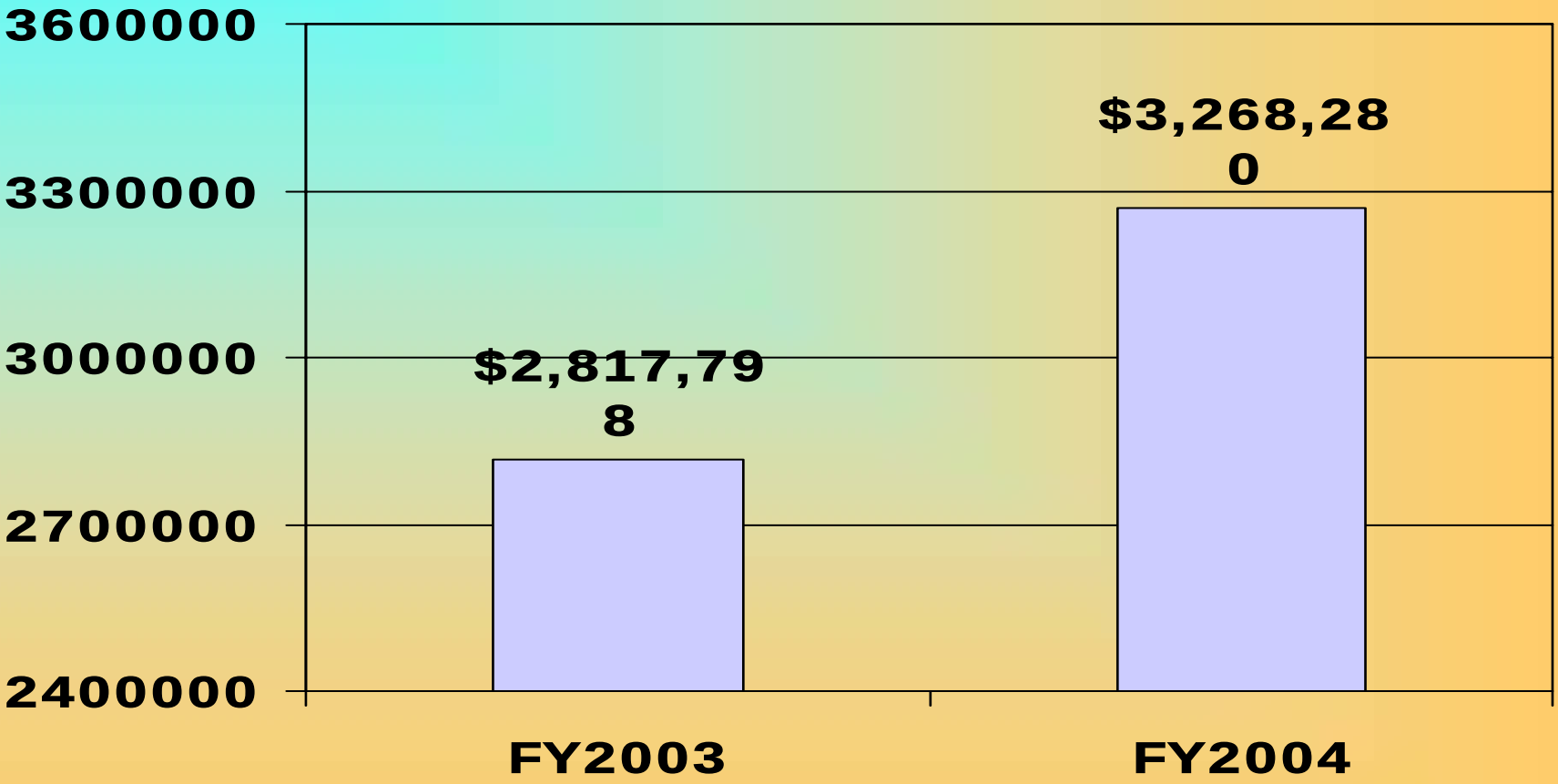
13.5% Increase from FY03 to FY04

Wind River PI collections



29.9 % Increase from FY03 to FY04

Wind River Medicaid Collections



16% Increase from FY03 to FY04

Other Comments from Sites

- “Easier access to clinical data”
- “Coding and billing folks love it”
- “Improved access to (legible) progress notes”
- “Improved clinicians knowledge of coding”
- “Correcting errors is labor intensive for pharmacy”
- “Improved management of problem lists”
- “Markedly reduced lag between service time and note entry” (BH provider)

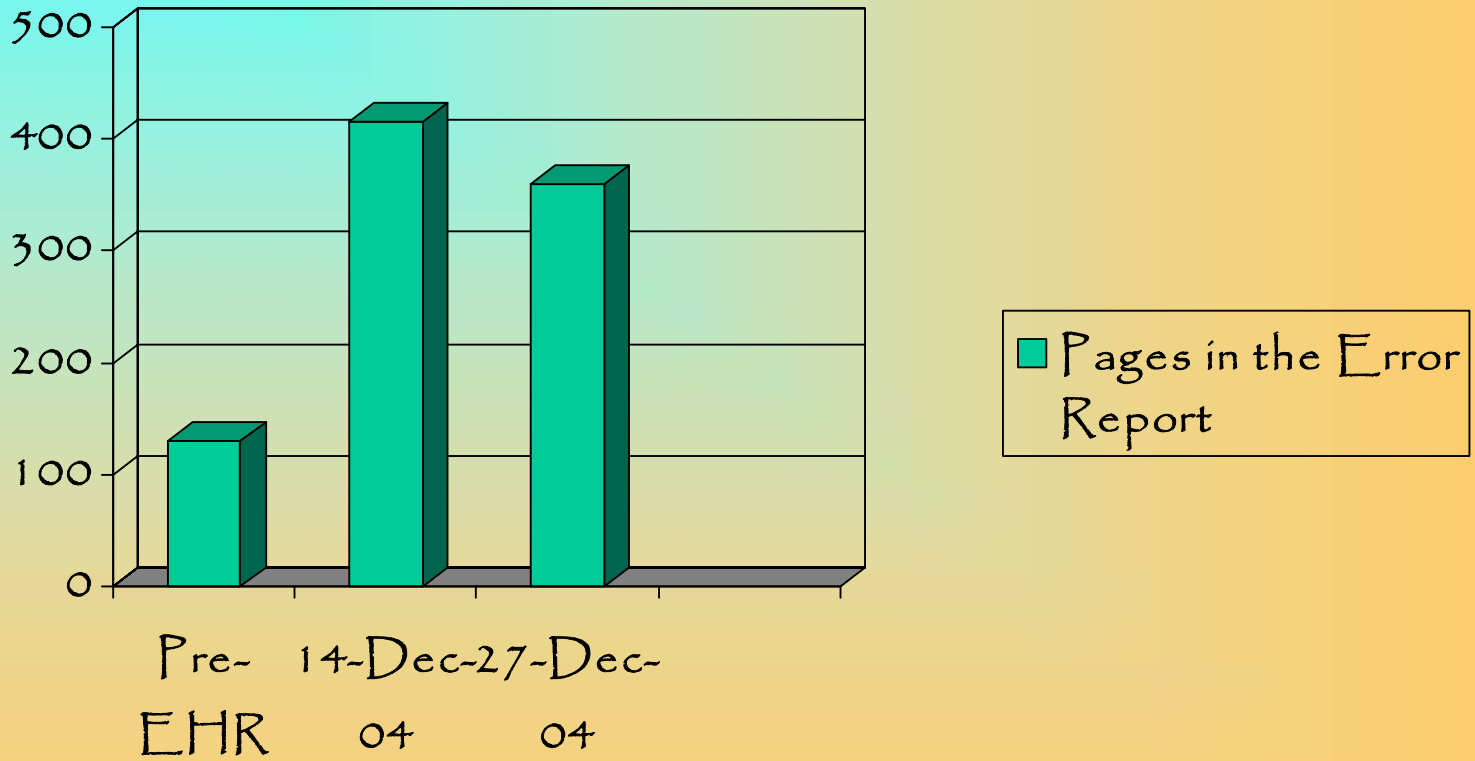
User Issues with Version 1

- Visit creation
- Coding
- Medication management
- Child health components
- **Note:** No facility has stopped or limited EHR because of these issues, and all are continuing to deploy it more broadly

Visit Creation

- Historically RPMS applications have created visit stubs that are later merged with automated relinker and manually by Data Entry
- EHR adds opportunities for users to create visits, and eliminates the PCC data entry process
- These have resulted in significant increases in PCC errors at EHR sites

PCC Errors at Warm Springs



Visit Creation – Solution

- Programming of an API in PIMS that ALL visit-creating applications call to create a visit
- This API checks for and merges matching visits **up front** instead of later
- Some visit stubs will be created but will be easier for automated relinker to merge
- Timeframe for resolution 2-3 months, depending on contracting

Coding

- With paper PCC/PCC+, forms reviewed by DE, codes assigned for POV, services by DE or coders, visit completed in PCC and data picked up by 3PB package
- EHR allows direct coding by providers, who vary in coding ability
- EHR also allows providers not to code, resulting in .9999 codes → PCC errors
- Erroneous and .9999 codes picked up by 3PB cause erroneous and rejected claims

Coding – Solution

- Add an audit function to PCC
- Coders can call up a list of unaudited visits to review codes
- Once visit is reviewed and codes corrected, the visit is flagged as reviewed
- Third Party Billing only picks up and bills visits with the “reviewed” flag set
- Timeframe for resolution 2-3 months, depending on contracting

Medication Management

- EHR has sophisticated med ordering capabilities, with checks for allergies, interactions etc.
- However the medication display (inherited from CPRS) is not as capable as it could be in helping providers review and manage chronic meds
- Several sites have expressed concern that the med management capabilities are cumbersome for providers and can be improved
- Cherokee's unique solution – fill all meds for a year and don't use refills as the reason to coerce patients to return

Med Management – Solution

- Newly-designed medication list
- Allows sorting and display in several ways to facilitate visualization of active and chronic medications
- Users can select several meds and process one at a time directly from the list rather than moving between Orders and Medications tabs
- Timeline for resolution 2-3 months

Child Health

- EHR adapted from CPRS (VHA)
  - VA does not see children
- EHR v1 has no specific child health components (except immunization forecaster)
- Users requesting growth charts, developmental milestones, nutritional guidance
- Requirements meeting 1/25-26
- Growth charts will be added soon, other enhancements to follow

Enhancements for 2005

- Resolution of visit creation issue
- Coding enhancements
- Chronic med management component
- Child Health Components
- Referred Care (RCIS)
- Women's Health
- IHS Health Maintenance Reminders
- Incorporate newer CPRS code (v21ff)
- Integrated Behavioral Health
- Standardize encounters
- iCare (Integrated Case Management)
- Ongoing requirements collection for future versions

Future Enhancements

- Document scanning & storage
  - VistA Imaging
- Electronic consents, signature capture
  - Pharmacy, procedures, HIPAA, etc.
- Integration of COTS coding support
  - 3M Coder?
- Multi-facility integration
  - Master Person Index (MPI)
  - Remote data views
  - Regional EHRs
- Prenatal/Obstetrics capabilities

Facility Preparation for EHR

- 9-12 month planning timeframe
- Starts with leadership but involves all staff, all departments
- Needs to be managed locally as major project
- Includes hardware/network assessment and upgrades, business process assessment, acquisition of new staff, development of new policies/procedures, installation of numerous software prerequisites (with training), community communication, initiation of metrics, CAC training, installation of Pharmacy, EHR GUI setup, user training, incremental go-live, and many intermediate steps

EHR Training Events

- CAC/Implementation team – currently bi-monthly in Albuquerque
- Advanced CAC – quarterly
- EHR Technical – quarterly
- Pharmacy EHR training – March
- HIM/BO EHR training – May
- On-site user training for go-live
- EHR 1-day demos – Warm Springs, Cherokee
- Webex demonstrations – various

Deployment Mandate

- All IHS sites and those Tribal sites that want EHR by the end of 2008.
- By the end of 2005 there will be about 30 sites using EHR – for the most part these are “low-hanging fruit” – relatively aggressive and sophisticated sites
- This leaves approximately 200 hospitals and health centers to implement in 3 years
- Significant ramping up of site prep, installation, training, and support capabilities will be required
- Areas have a critical role to play

2005 EHR Short List

- Indian Health Council (CA)
- Fairbanks (AK)
- Kotzebue (AK)
- Chickasaw Nation (OK)
- Whiteriver (AZ)
- Phoenix Indian Medical Center (AZ)
- Fort Mojave (AZ)
- Red Lake (MN)

2005 EHR Intermediate List

- Chemawa (OR)
- Lame Deer (MT)
- Fort Peck (MT)
- Hopi (AZ)
- Chinle (AZ)
- Choctaw (OK)
- Claremore (OK)
- Browning (MT)
- Fort Belknap (MT)
- Wellpinit (WA)

2005 EHR Late List

- Santa Fe (NM)
- Mescalero (NM)
- Acoma-Canoncito-Laguna (NM)
- Riverside San Bernardino (CA)
- Haskell (OK)
- Parker (AZ)
- Yakama (WA)

Deployment Issues

- Hardware & personnel costs
- Local IRM expertise (or lack)
- Poor upkeep of current RPMS installations
- Local leadership (clinical/administrative)
- Reluctance to add staff (CAC, IRM)
- Competing priorities for dollars, time, energy
- Access to training

Special Situations

- Viking Scriptmaster sites
- Multidivisional Pharmacy Systems
- Small facilities

Viking Scriptmaster Sites

- Approximately 60 I/T/U facilities
- Viking interface to Pharmacy 6 developed & maintained by CMI
- Incompatible with Pharmacy 7
- Viking is exploring interface development
- RPMS Point of Sale (POS) application available for pharmacy cost recovery
- Several sites have successfully converted from Scriptmaster to POS

Multidivisional Pharmacy Systems

- Multidivisional systems in Oklahoma
  - Choctaw, Cherokee, Chickasaw
- One consolidated drug file containing duplicate meds from multiple facilities
- Made modifications to drug file lookup routines to keep pharmacists from selecting drugs from a different facility
- New EHR routines do not recognize the separation of divisions, so multiple copies of same drug are selectable by users
- Will be very difficult to resolve – preliminary conference call planned for 1/31

Small Facilities

- EHR developed for sites with pharmacy, lab, radiology services
- Many I/T/U sites lack one or more of these
- Installation of full EHR is somewhat complex and may not be necessary for these facilities
- Evaluation underway regarding development of “lite” version of EHR for small facilities

Opportunities for Areas

- PIMS deployment
- Pharmacy support and training
- Installation support
- EHR training
- Regional EHR support

PIMS Deployment

- PIMS is first major prerequisite for EHR
- All sites will need PIMS installed
- OIT has a contract with CMI for a limited number of training/installations in 2005
- These will be reserved for the larger, more difficult sites
- Area staff can learn from these trainings and installations and apply to smaller sites

Pharmacy support and training

- Implementation of Pharmacy 5/7 requires extensive file preparation
- Training needs for Pharmacy 5/7 are also significant
- Regional support for both activities (TDY pharmacists, provision of training) could be offered through Area Offices

Pharm/EHR Installation Support

- Pharmacy/OERR installation is very complex, but doable
- OIT has a contract with CIA for a limited number of installations in 2005
- Areas may wish to develop expertise to install Pharmacy/OERR if more rapid regional deployment schedule desired

EHR Training

- Not enough training space/capacity in Albuquerque
- Competent sites needed to host EHR training events
- Requirements
  - Modern training room, well equipped
  - Instant on-call technical support
  - Two training databases, fully installed
  - Live access to attendees' home systems

Regional EHR Support

- Many small facilities may not have CACs
- Ideally, Areas will have regional support staff with CAC-level (clinical) understanding of EHR
- Potentially can be more responsive regionally than the national program

Discussion

www.ihs.gov/cio/ehr