All Facilities Update

TO: Joint BOD/Strategic Planning Committee on August 16, 2005

FROM: Marcia Jackson, Chief Planning Officer
Mike Shanahan, Director Facilities Planning & Development

BACKGROUND: Since the July 19 Strategic Planning Committee meeting was also a Joint BOD/Strategic Planning Committee meeting, a partial update on the planning and process status of affected PPH Facilities (PMC East and West, and POM) was provided. Due to time constraints, the rest of the presentation was deferred until the August 16 Full BOD/Strategic Planning Committee meeting.

BUDGET IMPACT: Unknown

STAFF RECOMMENDATION: For information only.

COMMITTEE RECOMMENDATION:

Information: X

Information Technology Update

TO: Joint BOD/Strategic Planning Committee on August 16, 2005

FROM: Ben Kanter, MD

BACKGROUND: Dr. Kanter will present a clinical information technology update, including where we were, what we did, where we are, where we're going, and where the government is taking us, and a review of the process that got PPH to this point.

BUDGET IMPACT: Unknown

STAFF RECOMMENDATION: For information only.

COMMITTEE RECOMMENDATION:

Information: **X**

PPH Strategic Planning

Clinical Information Technology Update: August 2005

Ben Kanter MD FCCP
Physician Informaticist
Palomar Pomerado Health

Agenda

- Where we were
- What we did
- Where we are
- Where we're going
- Where the government is taking us

External Factors Influencing IT Development

- Institute of Medicine "Crossing the Quality Chasm"– March 2001
  - "Information Technology holds enormous potential for transforming the health care delivery system, which today remains relatively untouched by the revolution that has swept nearly every other aspect of society. Central to the application of technology is the automation of patient-specific clinical information."
  - "reducing risk and ensuring safety require greater attention to systems that help prevent and mitigate errors"
- More than 50% of JCAHO Standards Relate to Patient Safety

CA Senate Bill No. 1875 (Speier)

- As a condition of licensure…every general acute care hospital…shall adopt a formal plan [ed. note: to be implemented by January 1, 2005] to eliminate or substantially reduce medication-related errors…this plan shall include technology implementation, such as, but not limited to, computerized physician order entry or other technology that…has been shown effective in eliminating or substantially reducing medication-related errors.
- SB1875 written by Mike Ashcraft MD

EMR: What, Why, How?

- Sections include: CPOE, PACS, Lab, Notes/Dictations, Graphics, Problems lists, Messaging, Internet Gateway, Pharmacy, Administrative, ADT, Financial, HR, and more.
- Birth to death
- Immediate availability
- Multiple customized views
- Greater security
- Greater safety

Electronic Medical Record

- Increased timeliness and coordination of care
- Enhanced preventive care
- Cost control
- Ensures order legibility
- Minimized transcription errors
- Streamline the order process
- Expedite patient care
- Reduce study duplication
- Reduce adverse drug reactions

Electronic Medical Record

- Better use of current medical knowledge to enhance appropriateness of care
- Ability to aggregate data for epidemiologic analysis
- Physician-selectable order sets
- Integration with PACS: Digital Imaging (Picture Archival Communications Systems)
- Active decision support: happens automatically as MD is entering orders
- Passive decision support: require the MD to locate the desired information or request assistance

Electronic Medical Record

- Doing things right: assisting the physician to order correctly by advice
- Doing the right things: best practices, order sets, checking for allergies, medication costs, etc
- Improved patient access to the medical system and information
- Paperless vs. Paper-less
- Forces resolution of long ignored differences between professional practices and institutional policies.
- Off-site order-entry

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IT History

- **Aging Enterprise-wide Vendor Systems** Approaching End of Useful Life Cycle (HBOC Plus 2000 Installed in 1991)
- **HBOC will Retire Plus 2000 in 2004**
  - Patient Management/Accounting
  - Order Entry and Results Reporting
- **Costly to Maintain and Operate**
  - On-going License Fees
  - Mainframe Based Applications
- **Low Level of User Satisfaction with Many Existing Systems**
- **Lack Advanced Clinical and Decision Support Tools**
- **PPH has Under Invested** in Newer and Easier to Use Software Products in Recent Years

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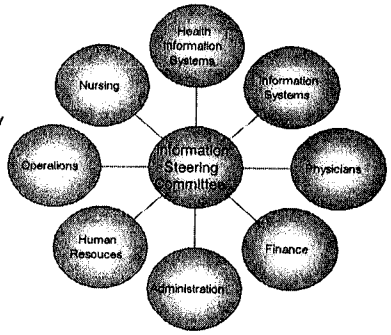
IT Steering Committee

- Determine Long Range I/T Objectives That Support Strategic Business Goals
- Establish Priorities For PPH-wide Systems Based on Their Associated Costs, Benefits and Financial Feasibility
- Decide appropriate and Cost Effective I/T Approaches
- Authorize the Capital and Personnel Resources Needed to Successfully Implement the I/T Strategies and Projects
- Approve a PPH-wide I/T Plan with Technology Standards and Guidelines
- Approve Common Standards and Processes for Systems Selection and Implementation



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Overview of Objectives

— Project Objectives —

- Identify Key Information Needs to Support an Enterprise-wide Information Environment
  - Financial and Administrative Requirements
  - Patient Care Requirements
  - Clinical and Financial Decision Support Requirements
- Determine Adequacy of Current Information Technology (I/T), Staffing and Organizational Structure
- Identify High Priority I/T Projects
- Determine Cost Effective I/T Acquisition and Implementation Approaches
- Develop I/T Organizational Structure
- Define I/T Capital Project Budget
- Establish Implementation Schedule - Phased Approach

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Information Technology Strategic Principles

- Utilize fewer, highly integrated and stable vendors for as many systems as possible across all PPH facilities
- Acquisition of new information technology will focus on patient centered care and strengthening the financial viability of PPH entities
- Evaluate and select vendors on an enterprise-wide basis to facilitate integration and management of I/T within PPH
- Maximize the value of current and future systems to the user community by investing in needed training and I/T support personnel
- Focus on re-engineering business processes as well as incorporating system functions when implementing new systems
- Develop and enforce technology standards and system selection criteria for all enterprise-wide procurements
- Foster partnerships for collaboration and sharing of technology resources and costs

Process

- Organize project team and work plan
- Determine detailed information system needs
- RFP to nine major vendors
  - Siemans, IDX, Cerner, Meditech, McKesson, Eclypsis, Per-Se, Quadramed, and GE
- Proposal Evaluations
  - Ideally, down to 3-4 systems/vendors
- On-site demonstration by vendors
  - Down to 3 vendors (Cerner, IDX, Siemens)
- Site Visits
  - Final system
- Contract Negotiations
- System Implementation

Cerner Modules

Phase I – *the foundation*

- **Lab (GL, AP, Micro, BB)**
- **Radiology**
- **Pharmacy**
- **OR**
- **Scheduling**
- **Registration**
- **ED**
- **Nurse charting**
- **Master Patient Index**
- **Patient Accounting**
- **Medical Records**
- **Clinical Data Repository**
- **Order Management**
- **Documentation Mgmt**
- **Adverse Drug Event Alerts**
- **Ad Hoc Report Writer**
- **Electronic Medication Administration Record**

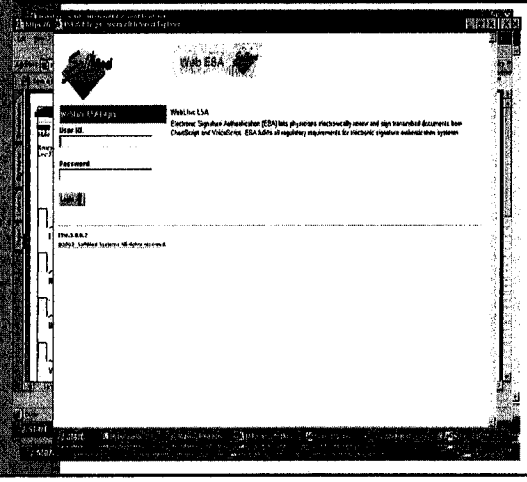
Other Cerner Applications

- PACS: Digital images (radiology) available 24/7 embedded within PowerChart

Non-Cerner Clinical Applications

- Quickchart: 24/7 web based access to all transcribed documents (admit, discharge, consults, OP reports), labs, EKGs within or without PPH
- Electronic Signature Authorization (ESA): able to electronically sign all transcribed documents through a secure web site 24/7 also without regard to location

Comparison Shopping: Then and Now



- Consolidated data view
- No sequestration of results
- Available 24/7 from the internet
- 24/7 access to transcription
- Radiology reports, sorted WITH images
- Graphs with a "click"
- EKGs: full images
- Sign records via internet

Phase II

- **Computerized Provider Order Entry (CPOE)**
- **Intensive Care Management**
- **SurgiNet Materials Management (might be removed from scope)**
- **Retail Pharmacy Management**
- **Anesthesia Management**
- **Document Imaging**
- **Medical Transcription (phasing out softmed/ESA and Quickchart)**
- **Cardiology Management**
- **Additional Interfaces**

What is Computerized Physician Order Entry?

- CPOE is a clinical software application designed specifically for use by physicians to write patient orders electronically rather than on paper.
- CPOE is one part of an electronic medical record
- Multiple different approaches to solving this issue

To Err is Human: Building a Safer Health System (IOM 1999)

- 44,000-98,000 people die from medical errors in U.S. hospitals each year, the 7th leading cause of death (more than breast cancer, MVAs, or AIDS)
- 7000 patients die each year from medication errors
- $4900 increased cost/admission based upon 1 published analysis due solely to preventable medication errors
- "Prevention requires the continuous redesign and implementation of safe systems to make errors increasingly unlikely, for example, using order entry systems that provide real-time alerts if a medication order is out of range for weight or age or is contraindicated"

Medication Errors

- Preventable ADEs at Brigham and Women's Hospital (Boston, 700 beds) cost an estimated $2.8 million annually.
- CPOE can reduce the incidence of serious medication errors by as much as 88%
  - *Bates et al. JAMA 1997;277:307-311.*
- CPOE reduced prescription costs by 30% at Royal Victoria Hospital (Montreal)
  - Improved efficiency, dosage, intervals, guidelines...

The Leapfrog Group Initiative

- A consortium of more than one hundred Fortune-500 companies and other large public and private health care sector purchasers…with support from the National Health Care Purchasing Institution. Represents 10s of millions of patients.
- WWW.Leapfroggroup.org
- Use of CPOE to prevent serious medication errors: one of 3 main healthcare goals
  - CPOE
  - Full-time ICU physicians
  - Evidenced based consultations
- This was specifically addressed by IMQ and JCAHO surveyors

Medication Errors

- 56% at time of ordering
- 34% at administration
- 6% at transcribing
- 4% at dispensing
- 2-7 ADEs/100 admissions
  - *Kaushal and Bates. Harvard Medical School*

American Hospital Association

- Potential Benefits of CPOE include:
  - Improved patient safety
  - Increased timeliness of care
  - Better use of current medical knowledge to enhance appropriateness of care
  - Better coordination of care
  - Fewer missed opportunities for preventive care
  - Ability to aggregate data for epidemiologic analysis
  - Control of costs
    - *AHA White Paper: Guide to Computerized Physician Order-Entry Systems November 2000*

Additional Clinical Efforts

- Anesthesia: Docusys
- Enterprise bar coding
  - Blood bank
  - Specimen Handling
  - Medication Administration

Outside Connectivity

- We are currently available 24/7 wherever and whenever a clinician has access to the Internet via Internet Explorer.

Phase 2...

- Phase 2 will require more physician involvement
  - Physician Order Entry
  - Anesthesia
  - Critical Care
- Order sets: KEY to making this work for us
  - Contract with provider of expert content
  - CCDS: concurrent clinical decision support

What's Next?

- Upgrade to the most current version of the operating system: **Done**
- Upgrade our Oracle database : **In Progress**
- Upgrade to Cerner's most current operating version (2005 v.2)
- Regression testing to assure critical functionality
- Plan, design, test, and roll out phase-2 projects (2006 and forward)

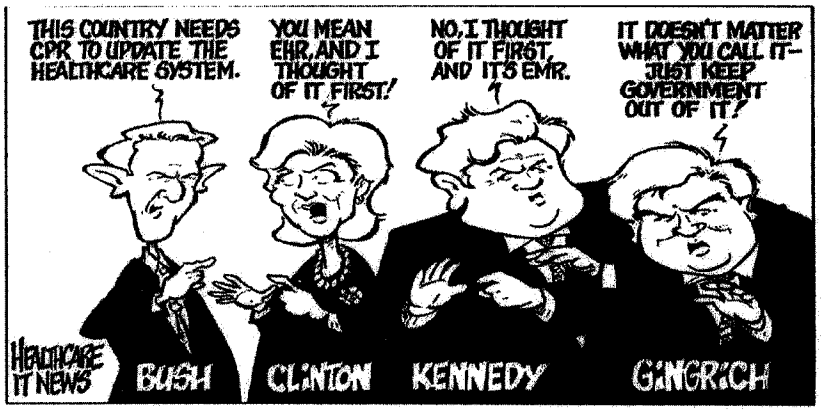
Tools

- **Buckminster Fuller – "If you want to teach people a new way of thinking, don't bother trying to teach them. Instead, give them a tool, the use of which leads them to [new] ways of thinking."**

Our Goals

- Recognize that CPOE is part of the larger enterprise objective to achieve the highest levels of safety, quality, and reliability…and that CPOE is not the only answer.
- Provide all caregivers with the tools necessary to make this happen
- Provide a tool set that can change and evolve in order to meet future needs including facilities expansion

The Government



Transformation Continues

"We have the most advanced medical system in the world, yet patient safety is compromised every day due to medical errors, duplication and other inefficiencies. Harnessing the potential of information technology will help reduce errors and improve quality by making it more effective and efficient."

Source: Senators Bill Frist (R-TN) and Hillary Rodham Clinton (D-NY) in a joint statement on the growing consensus on health information technology, June 30, 2005

1. President Bush Gets IT

- 2005 State of the Union Address
- Executive Order 13,355
- New HHS Secretary
- ONCHIT: Office of the National Coordinator for Health Information Technology

ONCHIT: Mission

- The mission of the Office of the National Coordinator for Health Information Technology (ONCHIT) is to implement the President's vision for widespread adoption of interoperable electronic health records (EHRs) within 10 years. Via the President's Executive Order #13335 issued in April 2004, the National Coordinator was charged with 4 primary responsibilities:
  - Serve as the senior advisor to the Secretary of Health & Human Services and the President of the United States on all health information technology programs and initiatives.

ONCHIT: Mission

- Develop and maintain a strategic plan to guide the nationwide implementation of interoperable EHRs in both the public and private healthcare sectors;
- Coordinate the spending of approximately $4 billion for health information technology programs and initiatives across the federal enterprise;
- Coordinate all outreach activities to private industry and serve as the catalyst for healthcare industry change

President Bush's Goal

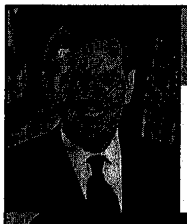
"Medicine ought to be using modern technologies in order to better share information, in order to reduce medical errors, in order to reduce cost to our health care system by billions of dollars...Within ten years, every American must have a personal electronic medical record. The federal government has got to take the lead in order to make this happen by developing what's called technical standards."

April 26, 2004

Goal Reaffirmed in 2005

". . .most Americans to have electronic health records within ten years. The President's vision would create a personal health record that patients, doctors and other health care providers could securely access through the Internet no matter where a patient is seeking medical care."

June 6, 2005 HHS Press Release



2. HHS Sec. Mike Leavitt Gets It

- HHS - 60,000 personnel and $503B budget
- New Visionary leader who is driven!!
- EHR (Electronic Health Record) and NHII (National Health Information Infrastructure)
- CHI (Consolidated Health Informatics) Initiative becomes part of Federal Health Architecture
- Industry Involvement
- Funding

AHIC: American Health Information Community

- Part of HHS under Leavitt
- To help nationwide transition to EHRs -- including common standards and interoperability
- Secretary Leavitt to serve as Chairperson. He will appoint up to 17 members
- Two year charter, with 3-year option to renew
- Transitions to a private-sector initiative to provide long-term governance for transformation
- Will not set standards nor certify products; scope limited to questions regarding interoperability

AHIC

- ...to provide a forum for interests in and outside of the Federal government to recommend specific actions that will accelerate the widespread application of health IT. The specific focus will be the creation of standards, a certification process, and a national architecture to securely share electronic health information

AHIC's Goals

- Prioritize HIT achievements providing immediate benefits to consumers (drug safety, lab results, etc)
- Recommend privacy & security protection
- Recommend creation of a private-sector, standard-setting and harmonization process, and a separate product certification process
- Recommend a nationwide architecture using the Internet to share information
- Recommend a private-sector effort to succeed AHIC within five years.

3. Dr. David J. Brailer, M.D., Ph.D.

- National Health Information Technology Coordinator, U.S. Department of Health and Human Services
- First national health IT coordinator
- Goal: Provide most Americans with electronic health records within the next decade
- Reports directly to Secretary Leavitt
- Must bring together many fragmented segments of the health-care sector, including doctors, hospitals, health plans, payers, and the health-related agencies of the federal government

4. ONCHIT/AHRQ RFPs

- Evaluate a conformance certification process for HIT
- Assess and develop plans to assess business policy and state laws that affect privacy and security practices
- Harmonize industry-wide health IT standards development
- Create prototype to evaluate a national health information network (NHIN)

Certify HIT Products & Services

- More than 200 EHR products on the market
- No tool for purchasers to use to evaluate those products to make an informed purchase decision
- ONCHIT will select a contractor to address EHR functionality for ambulatory & inpatient settings; decision support, performance reporting, interoperability, security, & reliability features

Privacy & Security Practices

- Variations in security protocols present challenges to widespread exchange
- 23 states have legislative or governor support for health information exchange
- 43 states have funding for HIT projects
- 28 states have private efforts underway
- RFP seeks solutions to various state security and privacy protocols and practices

Standards Harmonization

- Standards can be implemented in numerous ways – presenting significant challenges
- Many standards exist for information exchange, vocabularies and coding – but there is little harmony between them
- The RFP calls for a harmonizing entity to create a process resulting in widely accepted standards; resolve gaps and duplication; and propose resolution strategies and timelines

5. Murphy-Kennedy (H.R. 2234)

- Introduced May 11th by Rep. Murphy (R-PA) and Rep. Kennedy (D-RI)
  - Companion bill to be introduced in the Senate by Sen. Clinton (D-NY), with bi-partisan support
- Recognizes that making the health care system electronic has the potential to transform healthcare, the Act provides:
  - Grants to RHIOs and loans
  - Medicare / Medicaid bump ups for RHIO participants
  - Interoperability support
  - Safe guards privacy
  - Stark Act relief to support diffusion of technology
  - Minimum design requirements to ensure interoperability

6. Frist-Clinton (S. 1262)

- Health Technology to Enhance Quality Act of 2005
- 8 co-sponsors
- Mandatory standards for federal government; voluntary for private sector
- $125M in new funding for 5 years
- Stark and Anti-kickback exemptions
- QIO Assistance

7. HELP Legislation (S.1356)

- Better Healthcare Through Information Technology Act
- 22 co-sponsors
- Codifies ONCHIT in HHS
- Codifies AHIC
- Provides safe harbor and Anti-kickback
- Combining with S. 1262? (S. 1418)

8. New Caucuses and Coalitions

- 21st Century Health Care Caucus – 34 members
- Senate Health Quality Improvement and Information Technology Caucus – 2 members
- Senate Centrist Coalition – 20 members
- New Democrats Coalition – 42 members

Legislation

- S. 1262 Health Technology to Enhance Quality Act of 2005
- S. 1227 The HIT Act of 2005
- S. 1223 IT for Health Quality Act
- S. 544 Patient Safety and Quality Improvement Act
- S. 16 Affordable Health Care Act
- S. 1356 Medicare Value Purchasing Act of 2005
- H.R. 2234 21st Century Health Information Act
- H.R. 747 National Health Information Incentive Act of 2005

Legislative Contact Information

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Congressional Symposium:
Healthcare IT Policy and the 21st Century Health Information Act of 2005

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On Aug. 24, from the comfort of your own desk, you'll hear invited guest speakers **Michael Zamore**, a policy advisor for **U.S. Rep. Patrick Kennedy (D-R.I.)**, and **Michael Baxter**, a legislative assistant for **U.S. Rep. Tim Murphy (R-Pa.)**, explain the 21st Century Health Information Act of 2005. Amanda Adkins, Cerner's director of government and industry, will serve as the moderator.

Register Now

Objectives

- Discover and understand how Congress can institute fundamental changes to modernize our nation's healthcare delivery system.
- Discuss the legislative impact on the healthcare industry and on your organization.

When

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Where

Live on the Web. All you need is a telephone and a computer connected to the Internet. Cerner will provide a toll-free dial-in number for access to the audio portion of the event.

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