

University of Washington Board of Regents

June 8, 2006

Presentation overview

- Overview of UW Medicine IT business imperatives
- Action items
 - Electronic Medical Record system – Phase III (ORCA)
 - Lawson Human Resources system

Overview: Strategic Projects & Requirements

Key IT business imperatives

- Provision of clinical decision-support data through the electronic medical record:
 - Improve patient safety
 - Manage the variation in practice (and cost)
- Effective management of the key factors of production:
 - Labor
 - Supplies
 - Facilities
- Effective and efficient management of the revenue cycle

Strategic Project: Cerner Electronic Medical Record (ORCA)

- The move to a single medical record for the medical centers is our most urgent quality and patient safety issue
- Cerner Electronic Medical Record (EMR) supports Harborview Medical Center (HMC), University of Washington Medical Center (UWMC), Seattle Cancer Care Alliance (SCCA)
- Implementation phases
 - Phase 1: Physician documentation; results reporting; inpatient pharmacy – systems in daily operational use
 - Phase 2: Cerner software upgrade (completed); hardware upgrade in process – focus is disaster recovery, system performance, system reliability
 - Phase 3 (July 2006-Feb 2011): Non-physician documentation; retail pharmacy
 - Phase 4 (beginning Feb 2011): Computerized physician order entry; Emergency Department management

Strategic Project: Cerner Electronic Medical Record Business case

- Patient safety
 - Elimination of transcription errors
 - Reduced adverse drug events
 - Reducing communication gaps
- Clinical efficiency
 - Improved work flow
 - Decreased utilization of diagnostics & therapeutics
 - Clinical decision support – reductions in practice variation
- Financial benefits
 - Improvements in coding accuracy
 - Improvements in charge capture
 - Meeting health care purchaser requirements for participation
- Replacement of existing systems
 - Phase I, II, and III are all required to replace existing, disparate IT systems supporting patient tracking, results reporting, and documentation

Strategic Project: Human Resources Management System - Lawson

Project overview

- Currently there is no centralized human resources management system for the nearly 8,000 employees of UW Medical Center and Harborview Medical Center
- Health care compliance and other regulatory requirements, such as tracking of CPE credits for nursing staff, demand a computerized solution
- Lawson was selected as the vendor of choice
- Planning for this implementation is in progress
- Target timeframe is in 2006 – 2008

Business Case

- Increased security
 - Reduced liability for inappropriate access
 - Terminating IT system access when employees leave
- Financial
 - Position control – accountability for budgeted FTEs
 - Control of agency costs
 - Accuracy of leave administration
 - Reduced hiring and separation costs
- Regulatory compliance
 - Background investigation
 - Work authorizations
 - JCAHO, DOH, DOL requirements

Lessons learned & corrective action taken

- **Inadequate hardware & software to support system**
 - Updated software to current release
 - Upgraded UWMC data center to accommodate additional servers
 - Imaging data bases to provide for rapid recovery
- **Absence of clear leadership & project accountability**
 - Reorganized UW Medicine IT leadership team – appointed Jim Fine, MD as CIO
 - Established clear project leadership reporting directly to Jim Fine
 - Restructured medical center involvement to focus on policy issues & not operations
- **Need for more rigorous project planning & management**
 - Broke project into phases & prioritized phases – each phase requiring approval by management, board, ITAC, Regents, and ISB
 - Phase II – 6 month hiatus
 - Developed 7-year strategic plan
 - Enhanced project management office
 - Enhanced reporting structure for UW Medicine management & boards (UW Medicine Board, Harborview Board)
 - Independent QA consultant

Time frame & budget

Cerner Medical Records – Phase III

Key milestones

Non-physician documentation

- Start-up
 - Functional requirements (6.12.06)
 - Project plan documentation (7.12.06)
- Solution definition
 - Software design for 12 key workflows (9.22.06)
- Solution development
 - System build (12.27.06)
 - Testing (5.02.07)
 - Training – Harborview (8.29.07)
 - Training – UWMC (12.31.07)
- Implementation
 - HMC pilot (9.28.07)
 - HMC rollout (10.31.07)
 - UWMC pilot (1.31.08)
 - UWMC rollout (2.28.08)

Retail pharmacy

- Start-up
 - Functional requirements (8.04.06)
 - Project plan documentation (8.04.06)
- Solution definition
 - Workflow design (9.05.06)
 - Software design (10.03.06)
- Solution development
 - System build (2.08.07)
 - Testing (5.03.07)
 - Training – Harborview (4.12.07)
- Implementation
 - Production pilot (7.26.07)
 - Production rollout I (10.18.07)
 - Production rollout II (1.10.08)
 - Production rollout III (4.03.08)
 - Production rollout IV (6.26.08)



Cerner Medical Records System: Phase III Project Budget

(July 2006 through June 2011)

| | CIS Replacement | Reporting Database | Retail Pharmacy | Total Phase III Investment Cost | Ongoing Project and Production Cost | Total Phase III Budget |
|------------------------------------|-------------------|--------------------|------------------|---------------------------------|-------------------------------------|------------------------|
| Capital Expenditures | | | | | | |
| Hardware, Software & Maintenance | 1,134,021 | 1,272,936 | 156,051 | 2,563,008 | 1,250,967 | 3,813,975 |
| Capital Labor | | | | | | |
| Internal Labor | 3,799,896 | 90,413 | 1,611,654 | 5,501,963 | 851,666 | 6,353,629 |
| Cerner Consulting | 4,707,723 | 82,620 | 557,572 | 5,347,915 | 170,299 | 5,518,214 |
| Other Consulting | - | - | 349,200 | 349,200 | 332,550 | 681,750 |
| Sierra Systems Quality Assurance | 470,000 | 188,000 | 282,000 | 940,000 | - | 940,000 |
| Total Capital Labor | 8,977,619 | 361,033 | 2,800,426 | 12,139,078 | 1,354,515 | 13,493,593 |
| Total Capital Expenditure | 10,111,640 | 1,633,969 | 2,956,477 | 14,702,086 | 2,605,482 | 17,307,568 |
| Operating Expenditures | | | | | | |
| Software & Maintenance | - | - | - | - | 12,086,012 | 12,086,012 |
| Expense Labor | | | | | | |
| Internal Labor - Project Team | 75,149 | 7,858 | 33,945 | 116,953 | 9,880,663 | 9,997,615 |
| Internal Labor - Prog Mngt & Admin | 1,461,600 | 503,789 | 670,227 | 2,635,616 | 909,127 | 3,544,743 |
| Cerner Consulting | - | - | - | - | 744,392 | 744,392 |
| Total Expense Labor | 1,536,749 | 511,647 | 704,172 | 2,752,569 | 11,534,182 | 14,286,750 |
| Total Operating Expenditures | 1,536,749 | 511,647 | 704,172 | 2,752,569 | 23,620,193 | 26,372,762 |
| Grand Total Expenditures | 11,648,389 | 2,145,616 | 3,660,649 | 17,454,654 | 26,225,675 | 43,680,330 |

Lawson Human Resources System Key milestones

- Phase I – Lawson core system implementation
 - Installation of current version of Lawson software (9.13.06)
 - Proof of concept acceptance (3.07.07)
 - Application development & testing (7.10.07)
 - Data entry processes & procedures (9.12.07)
 - Pilot test (12.04.07)
 - Go live (2.13.08)
- Phase II – Centralized workforce management processes
 - Component testing – application, data conversion, web components tests completed (7.01.08)
 - System test (8.05.08)
 - Report development & user signoff (9.25.08)
 - Training & go live (9.25.08)

Lawson Implementation Project Budget

| | FY07 | FY08 | FY09 | FY10 | Total Investment Cost | FY11 | Total Production Cost | 5-year Grand Totals |
|--------------------------------|--------------------|--------------------|------------------|------------------|-----------------------|------------------|-----------------------|---------------------|
| Capital Expenditures | | | | | | | | |
| Lawson Vendor Consulting | \$300,000 | \$30,000 | | | \$330,000 | | \$0 | \$330,000 |
| Hardware & Software | \$300,000 | \$50,000 | | | \$350,000 | | \$0 | \$350,000 |
| Total Capital | \$600,000 | \$80,000 | \$0 | \$0 | \$680,000 | | \$0 | \$680,000 |
| | | | | | | | | |
| Operating Expenditures | | | | | | | | |
| Internal Staff Labor | \$670,000 | \$640,000 | \$430,000 | \$420,000 | \$2,160,000 | \$350,000 | \$350,000 | \$2,510,000 |
| Other (temps, training, QA) | \$200,000 | \$120,000 | \$40,000 | \$30,000 | \$390,000 | \$30,000 | \$30,000 | \$420,000 |
| Maintenance | \$200,000 | \$220,000 | \$210,000 | \$220,000 | \$850,000 | \$240,000 | \$240,000 | \$1,090,000 |
| Total Operating | \$1,070,000 | \$980,000 | \$680,000 | \$670,000 | \$3,400,000 | \$620,000 | \$620,000 | \$4,020,000 |
| | | | | | | | | |
| Capital & Operating | \$1,670,000 | \$1,060,000 | \$680,000 | \$670,000 | \$4,080,000 | \$620,000 | \$620,000 | \$4,700,000 |

Regent action requested

- Approval of an increase of \$17,454,654 in the Electronic Medical Record System budget to cover the costs of Phase III of the system implementation
- Approval of an increase of \$580,000 in the Lawson Human Resource system budget

Next strategic needs for IT support

- Admission/Discharge/Transfer & Facility Billing system
- Time management system
- Departmental systems
 - Anesthesia
 - Surgery
 - Materials Management
- IT infrastructure
 - Disaster recovery & business continuity
 - Security
 - Data centers
 - Management of end-user devices
 - Web services
 - Portfolio management