

HEALTH SYSTEM HIT INVESTMENTS: Building on a Core Foundation

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Catholic Healthcare West

- Faith-based, not-for-profit system in California, Arizona, and Nevada
- 42 hospitals with continuum care elements, integrated physician groups
- 365,221 hospital admissions
- \$5.3 billion revenues with \$431 million in operating cash flow (8.1% margin)
- Payer mix: Medicare to capitation to indemnity

Fiscal Year ending
June 30, 2004

- \$5.3 billion revenues with \$431 million in operating cash flow (8.1% margin)
- FY05: \$483 million in capital expenditures
- FY05-14: over \$4.8 billion
- IT investments: over \$612 million
- Principles: buy not build, integrated, open architecture, common standards, production proven



\$200M in near-term for Key Information System Projects Linked to CHW's Operating Strategy

- Enterprise Clinical Information System (ECIS) to improve care quality and patient safety
- Consolidated Financial and Administrative System to provide consistent, standardized information across CHW
- Significant infrastructure / applications investments across the system



Establishing the HIT Core Foundation

Strategic Area	Description
Enterprise Clinical Information System (ECIS) <i>CareConnect</i>	Enterprise wide standard clinical system with a single consolidated database.
Picture Archiving and Communication System	Enterprise archiving for facility-based, standard PACS installations.
Consolidated Financial and Administrative System (CFAS)	ERP implementation; also, applicant tracking system, central time and attendance, and productivity reporting
Health Information Management (HIM)	Medical records and document imaging systems.
Patient Revenue Cycle	Bolt-ons to current systems; standard centralized patient revenue cycle system that is CBO-oriented and has a single consolidated database.
Human Resources	Education-focused; learning management system; eLearning.
Supply Chain Management	Automation and related information systems
Decision Support	Data Warehousing and Data Marts; Data Mining; Financial and Clinical system-wide reporting.
Web Portal	Consumer, employee, physician and business-to-business portal “views” to centralize, standardize and brand CHW’s Internet, intranet and extranet presence.
Integration Infrastructure Migration	Message-broker based infrastructure; foundation for Web Services, composite applications, and actionable information company-wide.
Infrastructure Architecture Implementation	Enterprise technical architecture including security, user provisioning, consolidation, standardization and simplification.

- CaseFinder Report
 - A report generated for nurse managers that identifies patients at risk for clinical deterioration
 - **IF** Heart Rate is > 110
 - **OR** Respiratory Rate is > 24
 - **OR** SaO₂ is $< 90\%$
 - **THEN** Print those patients and room numbers, and provide a complete set of vital signs, the last two sets of blood gases, FIO₂, WBC, H&H, and Net fluid balance for the past 24 hours.
 - Generated every 12 hours



Respiratory Alert Report

10/26/01 10:29 am

Test Patient

4B17-07 4NICU 113-64-85

RR 28 10/26/01 3:45 am			HR				Pulse Ox 88 10/25/01 7:45 pm		
ABG Time	pH	PCO₂	PaO₂	SaO₂	HCO₃	FiO₂	O₂ %	O₂ LPM	O₂ Type
10/26/01 4:20 am	7.39	75	66	90.9	44.3	.65			
10/25/01 3:25 am	7.42	63	62	90.7	40.3	.65			
10/26/01 4:00 am	Temp 37.60	10/26/01 4:00 am	HR 108	RR 27	ABP 133/59	NBP /	Pulse Ox 93		
10/26/01 2:45 am	HGB 9.0	HCT 26.4	10/26/01 2:45 am	WBC 9.8	10/26/01 3:01 am	MDI/SVN Albuterol	Dosage 2.5mg		

NOTES:

Functional View of DICOM Standards Enterprise

Picture Archiving and
Communication System

Maximum
Enterprise
Value

*The right
image to
the
appropriate
care
provider
when
needed*

*Any
modality,
image
creation
"ology"
or
image
application*



Lowest Total
Cost of
Ownership

Functionality

- **Physician Messaging system**
- **Data Repository from electronic source systems in clinic and hospital**
- **Ability to manage physician workflow**

Patient Care Improvements

- **Ability to message consulting physician and attach pertinent notes**
- **Awaiting action inbox allows physicians to manage daily results arriving and watch for specific items**
- **Electronic access to transcriptions, lab results, and x-rays for appropriate decision making when paper records are not available**
- **Access to immediate partner's patient information when covering**



- **Care Management programs, such as Diabetic Education, use databases to track and trend patients**
- **Monitor outcomes and success of education, as well as patient goals**
- **Stores data to improve patient outcomes and continually improve programs**
- **Diabetes data will be converted to specialized database to achieve all of the benefits of integrated functionality**



CHWConnect Web Portal

IT use to improve quality through Clinical Communities of Practice

CHWConnect.com

Expansion from Clinical Communities of Practice to Consumer Education and Interaction

CHW Care Management Group - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Media Print W Print Preview

Address <https://codiextranet.chwealth.com/xpedio/groups/public/@cmg/documents/reference/xt006624.hcsp> Go Links >>

CHW
caremanagement

HOME MED MGMT PATIENT SAT ECIS QUALITY PALLIATIVE CARE PHYSICIAN PHARMACY HOME HEALTH NURSING RISK SVCS

Welcome to CHWConnect.com Search Go

Top Links

- NEW Community Board Packet
- ECIS
- Hospital Board Report Tools
- Opportunity Rpts
- Medication Safety
- CMG Calendar
- Archived Presentations
- Change Password
- Privacy and Security Policies

Health Resources

- New England Journal Of Medicine
- Advisory Board
- Library Requests
- Drug Info
- Medline Plus
- MD Consult
- MSDS Sheets
- MyHealth
- Prescriber's Letter
- Web Links
- Joint Notice of Privacy Practices

Welcome to CHW's Care Management Tool Site. Our mission is to provide you with all the latest and most practical tools for all your clinical needs.

Hospital Board Report Tools

- [CHW Hospital Board Template and Template Bulletins](#)
- [System MOR Report](#) (zip file)
- [System MOR Report](#) (excel file)

Medical Management

- [Length of Stay](#)
- [Opportunity Index](#)
- Home Health
 - [Physician Satisfaction Survey results](#)
 - [Patient Perception of Care Survey Results](#)
 - [Telephone Survey Results](#)
 - [Pain Management Survey Results](#)
 - [Variance Benchmark Report](#)
 - [OBQ1 Templates](#)
 - [Improvement in Pain Report](#)
- [Palliative Care](#)
 - [End of Life Care](#)

Quality

- Core Measures
 - [Acute Myocardial Infarction](#)
 - [Community Acquired Pneumonia](#)
 - [Congestive Heart Failure](#)
 - [Pregnancy-Related Conditions](#)
- [Facility Comparison Reports](#)
- AMI Mortality (non-NRMI sites)
- Pregnancy-Related (not core measures)
 - [Post-Partum Hemorrhage](#)
 - [Post-Partum Pulmonary Edema](#)
 - [Maternal ICU Admission](#)

Pharmacy

- [Coumadin Indicator](#)
- [Meperidine Indicator](#)

Hospital Board Report Tools

- Indicator Definitions
 - [FY05](#) (Adobe format)
 - [FY05](#) (MS Word format)
- FY05 Goals
- [CHW Indicator Database](#)

Patient Satisfaction

- [Inpatient](#)
- [Emergency Department](#)

Done

Start

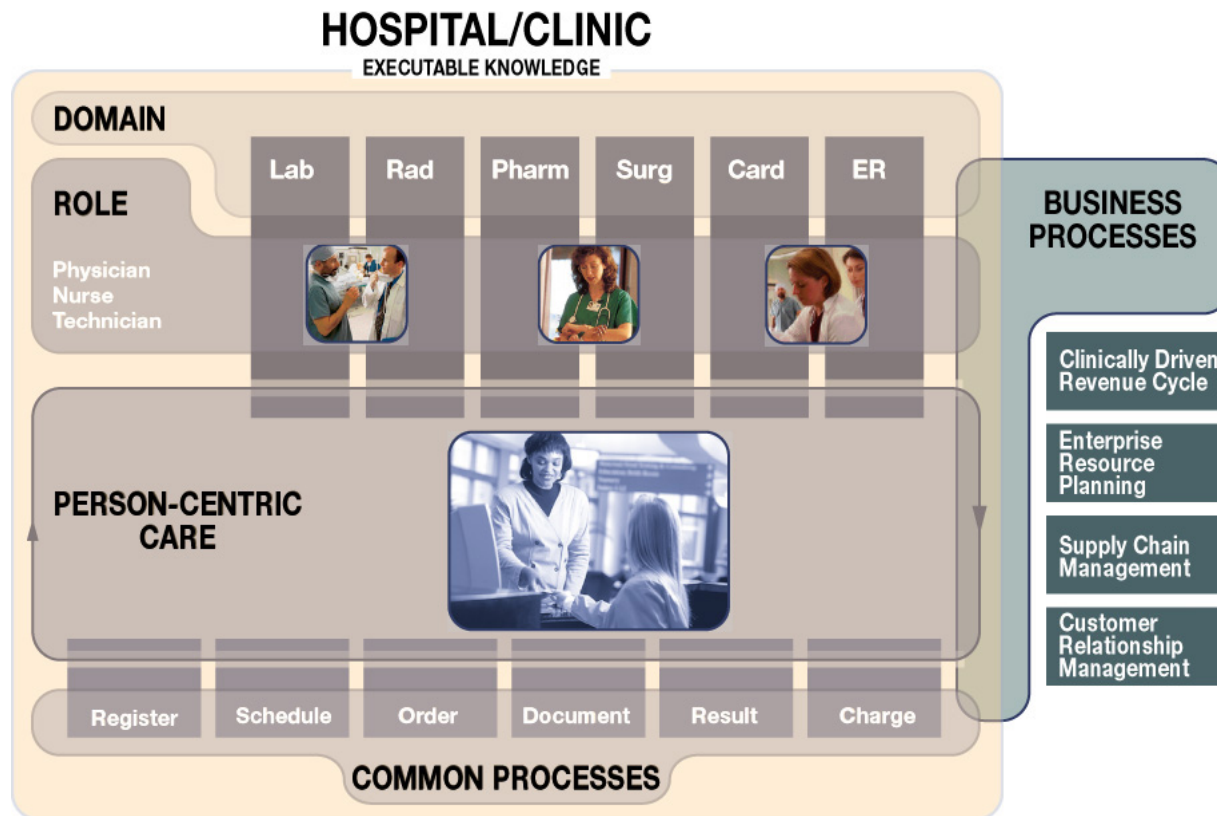
Inbox - Microsoft Outlook Microsoft Word Microsoft PowerPoint - ... Microsoft Excel CHW Care Managem...

Internet

4:05 PM

- Migration to web-based IT applications
- Functional and security enhancements to segregate and integrate connectivity with internal and external communities
- Develop knowledge management through integrated databases





Workflow Capabilities

- Domain
- Role
- Common processes
- Business processes
- Executable knowledge



A Vision for Optimal Community Health

2 Connect the Person

by Providing
Virtual Personal
Health System

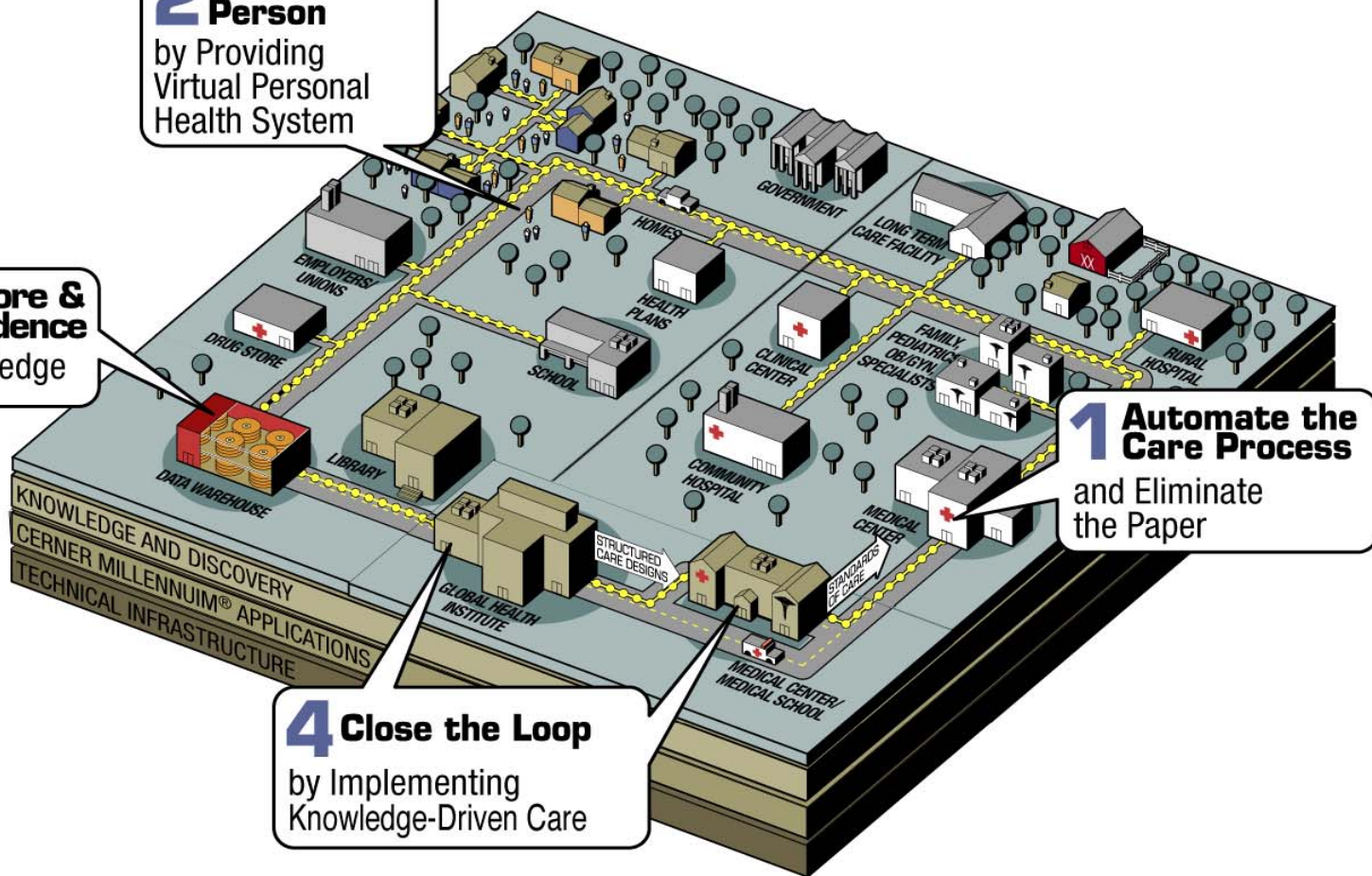
3 Structure, Store & Study the Evidence to Create New Knowledge

1 Automate the Care Process

and Eliminate
the Paper

4 Close the Loop

by Implementing
Knowledge-Driven Care



- Inconsistent data format, coding schemes, and timeliness of information
- Complexity and cost of matching up information about patients across the continuum, sites, and sources
- Incomplete data and lack of integration and interoperability
- Limited functionality in existing disease registries



- Reimbursement models of enforced fragmentation: confounding & conflicting
- Expenses: “unaffordable” for solo and small group physician practices
- Professional autonomy, transparency, and the perceived loss of control
- Change management: jumping from paper to electronic workflow



- Funding HIT: optional investment awaiting ROI or vital infrastructure
- Designing HIT: strategic context and tactical execution
- Implementing HIT with physician champions: neither propeller heads nor the technologically inert
- Serving HIT: 24X7X365 reliability and help desk service excellence

