

Year in Review 2004-05

We have changed the timing of this publication to coincide with the fiscal calendar, so this Year in Review actually covers 2004 and part of 2005. Two of our most visible and high-profile projects over the past 18 months were the openings of the **Orthopaedic Center** and **Huntsman Cancer Hospital**. The technical infrastructure and system support for these facilities required a truly department-wide effort, and we are very pleased with the results to date.

Another important highlight for the year was the work done to support the **Supply Chain Initiative**. Several computer systems were implemented or enhanced to enable cost

Clinical Highlights

One of our major focuses has been the optimization of the use of the current **Electronic Health Record (EHR)** functionality and preparing for new phases of implementation, including, **ZEUS**, a system for reviewing results during Olympus downtime. Some of our most complex work has revolved around the implementation of systems to help move forward with becoming fully electronic or **chartless**. Efforts included, increased documentation directly inside PowerChart, point-of-care and batch scanning, as well as a Rehab Therapies document system called **MediLinks**, which interfaces with Olympus.

savings for the Hospital, which we've provided more detail about in the Business & Finance section of this report.



While we achieved **Most Wired** status for 2004, we did not make the 2005 list, because of more stringent requirements for online physician, patient, and customer services. We are confident that several of our projects underway will help us regain this honor next year.

Our collaborative work with main campus continues, as illustrated in the selection and planning for a new University e-mail system, and progress toward a unified wireless network authentication standard.

As part of the Supply Chain Initiative, ITS helped in making the Inpatient and **Retail pharmacies** robotic and automated, including bar coding all of the medications and implementing new PharmNet software.

In addition to work on the EHR system, ITS staff have worked with clinicians throughout University Health Care to define the **Care Transformation** project, which is the next phase of the EHR rollout.

A popular enhancement has been an interface from **IDX Schedule** into **PowerChart** that allows provid-

ers to view their schedule and chart in a single location within PowerChart.

Within the Health Sciences community, we have successfully integrated the technical support for the **College of Nursing** and are excited about the level of service and efficiencies we are seeing as a result of merging support staff and services. We also continue to strive for improved communication with our customers, and have added a monthly **"IT Update"** to our publication list.

Links to the various Web sites and ITS groups mentioned in this report can be found on the ITS home page at uuhsc.utah.edu/its. If you have questions about the projects described here, please e-mail me at Pierre.Pincetl@hsc.utah.edu

ers to view their schedule and chart in a single location within PowerChart.

Dr. Pierre Pincetl received recognition from the **World Class U Physician Satisfaction** Team as a physician who has been named on the survey multiple times for his leadership and service to the Hospital and community. Dr. Marta Petersen was included under the Dermatology specialty on the 2003-04 list of the **Best Doctors in America**.

One of the goals for the Web Resource Center (WRC) was to reduce

Research & Academic Highlights

A central information service in the new **Health Sciences Education Building** is an integrated room scheduling system and several large electronic bulletin boards that display real time class schedule and event information. ITS staff worked behind the scenes beginning early in the building project to integrate Health Sciences academic process and classroom scheduling needs with the lower campus PeopleSoft database and scheduling system.

With the help of a nationally recognized expert, the Office of the Sr. VP for Health Sciences



developed a **cultural competence/mutual respect** course. As part of the effort, the Web Resource Center designed and created a website and online registration module for course facilitators and students. To date, over 1,438 students have registered online and taken the course.

The **Maternal Fetal Medicine Outcomes Tracking System**, a web-based clinical outcomes

and biological sample tracking application, was designed to

integrate data from the Enterprise Data Warehouse with patient outcomes collected by researchers. A bar coding system tracks and maintains inventory and utilization of biological samples used to advance clinical research.

In partnership with Huntsman Cancer Institute and the Eccles Health Sciences Library, the Utah Telehealth Network offers monthly **Lunchtime Lecture Series** distributed via videoconferencing for health professionals throughout Utah, offering CMEs for qualified individuals. The Library website provides archives and links to literature relevant to series' topics.

Information Security & Confidentiality Highlights

Thanks to the efforts of many, the **HIPAA Security Rule** April 20, 2005 compliance deadline was met. In honor of "privacy month" in April, the HIPAA Privacy & Security Office sponsored a contest and received several impressive patient privacy ideas which will be considered for implementation.

A new version of the **online HIPAA training** is now available through SafetyCAT/Healthstream, making it more convenient for hospitals and clinic users to access online training from a single location. The training is more comprehensive and specific to our institutional policies, helping to decrease the number of violations.

The HIPAA Privacy Office participated in a **state-wide pre-emption task force** established to determine policy for release of protected health information to law enforcement, under the direction of the Utah Hospitals and Health Systems Association.

A **Disaster Recovery & Business Continuity** Committee was formed in cooperation with the Emergency Preparedness department to address critical business needs. Thus far, the Committee has completed a criticality analysis for IT responses to a disaster.

Electronic claims that University Health Care sends to insurance companies were modified to conform with the new set of HIPAA standards for bills. The new standards require that cleaner and more complete data be sent so the claims can be paid more accurately and timely. Insurance companies have also modified their electronic remittance files to comply with the new HIPAA standards for payments and we have in turn modified our system to read and process these new files. Although not mandated by HIPAA, a new database and web interface were implemented to help track the electronic claims and payments.

Business & Finance Highlights

Since August 2004, University of Utah **Health Plan subscribers** have been able to view and print an electronic version of claim history and Explanation of Benefits (EOB) information, including co-payments, type and date of services, and amounts paid to the provider by the Health Plan.

See <http://uuhsc.utah.edu/uhealthplan/>. The online EOB also allows the Business Office the ability to conduct electronic searches for research purposes.

In the outpatient clinics, **eCharge tickets** have replaced multiple paper forms, and are printed at the point of service making them easier to update.

Patient charges in the Physician Billing system are now tied to the patient on a visit-by-visit basis rather than to the patient's primary insurance carrier. The new **Visit Management** module within IDX helps ensure that patients are billed correctly and reduces the number of insurance provider errors.

ITS staff have been heavily involved with the technical implementation and support of the Hospital-wide **Supply Chain Initiative**. The replacement of ESI with the **Lawson/RPM** purchasing, payables, and materials management system has had the most wide-spread customer impact, with more than 500 employees across the

hospital and clinics receiving training.

Other new systems implemented under the Supply Chain umbrella include **Qsight** - a web-based inventory management system for the Cath Lab and Interventional Radiology, and an install to **Omnilink RX** at the University Hospital and Huntsman Cancer Hospital to support medication orders transmitted as PDF files to the Pharmacy. This install has resulted in a more efficient receipt and accuracy in filling the orders. **Automed** is now the primary mechanism for labeling and packing medications in the University Hospital, Orthopaedics Center, South Jordan Health Center and Union Pharmacies, and with

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Core Services & Infrastructure Highlights

The recently completed Health Sciences Education Building has wireless access throughout and is one of the first buildings to implement **Perfigo wireless technology**. The new system provides seamless wireless connectivity for users as they walk from one building to the next within the HSC campus.

Due in part to the efforts and talents of many individuals in ITS, the **World Class U Behavior Standards** rollout proved to be a success. More than 3,000 employees were trained on the new Hospitals and Clinics Behavioral Standards using a multi-media pres-

entation created and designed by ITS staff.

Through **rounding** at the Hospitals and Clinics, observing users and asking about their likes and dislikes with system features, we have made systems more usable, reduced login time without compromising security, and improved application delivery speed to outlying clinics.

Over **100 new interfaces** were developed to communicate data among our systems. The interfaces were built in support of the Supply Chain Initiative, HIPAA transactions

and implementation of new systems. An interface engine was implemented to accommodate the growth of these interfacing needs now and in the future.

Tremendous growth in the needs of data storage required a move to a **virtualized storage area network** architecture and a new solution for providing backups. The new environment provides a level of **redundancy** and **reliability** that ensures the highest level of availability of our data assets.

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HSC's
Construction
Virtual Tour wins
the prestigious
2004 Golden
Spike Award!



Visit the Health Sciences
Construction Virtual Tour
Web Site at:
uuhsc.utah.edu/virtualltour

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CLINICAL HIGHLIGHTS

administrative duties in one Hospital unit by 10 percent with the use of a departmental intranet. The WRC focused its efforts on the **Burn ICU Intranet** and exceeded the goal by reducing administrative duties by 50% by providing web tools for day-to-day planning and communication. The intranet allows the Burn Unit to spend more time on patient care rather than administrative work.

It was a busy year for **PACS** (Picture Archiving & Communication System). The system underwent an upgrade and massive data migration, and new modalities were installed in various clinics and interfaces to the Kinetics system for ultrasound reports were

implemented. In addition, the routine front-line support for PACS has been shifted to the ITS Help Desk, which frees up the PACS technicians to provide more advanced technical support for the physicians.

Nutritionists and dieticians now use a wireless hand-held device to order meals for patients from the bedside with the **Bedside Menu Management** system. Patients' personal menu profiles are also accessible from the hand-held device which allows the dietician to make modifications within the dietary restrictions.

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BUSINESS & FINANCE HIGHLIGHTS

the **D21** implementation pharmacy supplies are automatically replenished based on system inventory levels.

Assistance with the **Concuity** contracting system implementation helped identify \$8 million in underpayment from payers.

After an extensive review process, **Siemens** was selected as the "vendor of choice" for the Hospital's new enterprise-level patient scheduling, registration and billing system.

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CORE SERVICES HIGHLIGHTS

More thoughtful staffing of the **Help Desk** as well as improved training and better availability of reference tools has led to a significant improvement in services provided by Help Desk agents. The ability to process calls more efficiently has steadily improved. Close to 80 percent of the calls are answered immediately with no wait-time for the customer. The average wait time for calls that do get placed on hold has decreased from 5 minutes to 1 ¹/₂ – 2 minutes.

For the past several months, HSC has been using a new application delivery tool that has made the **Citrix Meta-frame** environment more stable. The product is called Softricity. **Softricity** isolates applications and allows them to

co-exist with other applications. As a result, time-consuming testing is no longer required. During the 2005-06 fiscal year, Softricity will be installed on PCs throughout Health Sciences and will become the application delivery method of choice.

With the new automated configuration management software, **Altiris**, the roll-out of new PCs as well as upgrades has been made easier. Deployment of 100 machines at the UUOC took a single day, instead of the week that it would have taken to do the same job in the past. In addition to new installs, the tool assists with printer installation, application deployment, and patch management.

The **Customer Toolkit for Construction Projects** has aided several areas with a smooth transition of IT services to their new facilities. Current standards, practices and processes are outlined in the toolkit, which helps saves time in planning a successful infrastructure.

Presentations & Publications by ITS Staff

- August 2004 — Marta Petersen, MD & Deb LaMarche
"Overview of Telemedicine in Utah"
Four Corners Telehealth Consortium
- August 2004 — Brenda Densley, Richard Hutchinson
"Road to Enter Charge Corrected Encounters in TES"
IDX/TES Conference
- August 2004—Tracy Reynolds
"Benefits of Implementing EDI: 837 Transactions"
IDX/MCA Conference
- September 2004 — Deb LaMarche
"Advances in Medical Technology"
Utah Navajo Trust Fund Annual Conference
- September 2004 — Stephanie Argoitia
"HIPAA at the Second Anniversary"
American Association of Health Care Administration and Managers
at Cottonwood Hospital
- October 2004 and May 2005 — Teri Olsen & Nicolle Eberhard
"Creating an IT Metrics Reporting Program You Can Sustain"
Society of Technical Communicators Regional Conference and
Towards an Electronic Patient Record (TEPR) National Conference
- October 2004 — Deb LaMarche
"Funding Telehealth"
NWRPCA/CHAMPS Fall 2004 Primary Care Conference
- October 2004 — Tracy McGee
"A Case Study: Moving from KPX to 5.5 sp1"
ServiceWare Users Group
- October 2004 — John Fagg
"End User Perspectives Panel"
Storage Networking World
- October 2004 — Jeff Haddon
"Server Consolidation"
Cerner Conference
- November 2004 and December 2004 and February 2005 —
Jim Livingston
"University of Utah Health Sciences Storage Infrastructure"
Hitachi Storage Conference, Colorado, California, Utah
- November 2004 — Jeff Shuckra, Sherri Evershed,
Deb LaMarche
"Telehealth Workshop"
Rural Health Association of Utah Annual Conference
- November 2004 — Sherri Evershed
"The Road Less Traveled...Distance Learning"
Rural Health Association of Utah Annual Conference
- November 2004 — Jeff Shuckra, Bo Mendenhall
"Viruses, Hackers, and HIPAA, Oh My..."
Rural Health Association of Utah Annual Conference
- January 2005 — Deb LaMarche
"Utah Telehealth Network"
Utah Hospital Association Rural Council
- Winter 2005 — Lindsee Colindres
"Exploring Careers on the Web"
Student Paths (a nation-wide resource for high school students)
- January 2005 — Ken Gondor
"Contract and Fee Schedule Analysis"
PDS Users Conference
- February 2005 — Deb LaMarche
"Dermatology"
Office for Advancement of Telehealth Grantee Meeting
- March 2005 — Deb LaMarche, Jeff Shuckra
"No More Fear Factor: Do-it-yourself Telehealth"
Intermountain Association of Speech and Hearing
- April 2005 — Milton Burbidge
"Requirements for Placing High School Students for Training"
Davis School District High School Career Counselors
- May 2005 — Jim Livingston
"Implementing a Storage Infrastructure to Meet the Growth
Demands of Healthcare Data"
Towards an Electronic Patient Record (TEPR) National Conference
- May 2005 — Bo Mendenhall
"Wireless Technology in Hospitals: Common Misconceptions
and Keeping Information Safe"
Towards an Electronic Patient Record (TEPR) National Conference
- May 2005 — Leann Robertson
"IDX/TES/CM Interface"
Ingenix Users Conference
- June 2005 — Deb LaMarche, Sherri Evershed
"Utah Telehealth Network - Lessons Learned"
Oregon Office of Rural Health Policy and
Oregon Telehealth Alliance
- June 29, 2005 — Jeremy Lund
"Climbing Trees: Dealing with Hierarchal Data Structures
in Relational Databases"
CFUnited 2005 Conference Guide/Conference CD

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Detailed organization charts are available on the ITS Web site. All ITS employees are available in the e-mail system at firstname.lastname@hsc.utah.edu.

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Nancy Brazelton, Director of Clinical Information Services

Chris Kidd, Director of Information Security & Business Services

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Jim Livingston, Director of Data Resource Center

Teri Olsen, Director of Web & Customer Service

Marta Petersen, Director of Utah Telehealth Network

Al Tokunaga, Director of Health Information

Nicolle Eberhard, Editor



ITS Staff "In the News"

- June 2004 — Jim Livingston
"University of Utah Health Sciences Center reduces risk via HP's management solutions for an Adaptive Enterprise Environment"
Hewlett-Packard
- July 2004 — Suzette Reid
"Workforce Scheduler"
Kronos Public Relations Materials
- October 2004 — Viki Bass
"Cerner and Softricity Help Healthcare Organizations Maximize IT Efficiency, Responsiveness with Virtualization Technology"
Softricity News Release
- November 2004 — Jim Livingston
"University of Utah Health Sciences Center Storage Economics Case Study"
Hitachi Data Systems
- January 2005 — Jim Livingston
2004 HP Annual Report
- 2005 — Jim Livingston
"Hitachi Storage Solutions at Work: University of Utah Health Sciences Center"
Hitachi Data Systems
- February 2005 — Clint Criddle
"It's not just people that need healthcare, it PCs too"
TechWorld
- June 13, 2005 — Stephanie Argoitia
"Privacy Law Gets Mixed Reviews in Utah"
Deseret Morning News