

Applying the principles of  
**Engineering, Management & Science**  
to Healthcare delivery

March 2006

Letter from the Director:

I am extremely pleased to serve as the director of the Regenstrief Center for Healthcare Engineering at Purdue University. I have spent my first month meeting the researchers, strategic partners and Purdue faculty who have been instrumental in a very successful launch of the Center and first year of operations. This is a talented and highly motivated team committed to collaborative efforts to improve healthcare delivery.

We completed a strategic planning retreat in January, and the breadth of issues discussed highlight the broad scope of our efforts. The retreat will serve as a guide for our activities as we transition into a productive second year.

This inaugural issue of our newsletter highlights some of the people and projects that contribute to our success.

Steven M. Witz

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Purdue industrial engineers Mark Lawley (left) and Yuehwern Yih (right) donate materials to the schoolmaster at the Besiebor Primary School in Turbo, Kenya. Lawley and Yih, faculty scholars at Purdue's Regenstrief Center for Healthcare Engineering, are putting together a system for food delivery to a dozen AIDS clinics in Kenya. See [Projects](#).

## People

### Regenstrief Center welcomes new director

Steven M. Witz became the first director for the Regenstrief Center on Jan. 17. A Minnesota native, Witz has 26 years of experience in hospital administration. Before taking the helm as president at St. Patrick Hospital and Health Science Center in Missoula, Mont., in February 2003, he was senior vice president and chief operating officer at the University of Wisconsin Hospital and Clinics in Madison, Wis.

Witz has held administrative roles at the University of Utah Hospital in Salt Lake City and Lutheran General Hospital in Park Ridge, Ill. He has also taught at the University of Minnesota, University of Utah College of Pharmacy, and Brigham Young University.

Witz received his doctorate in hospital and health-care administration in 1986, a master's degree in public health in 1977 and a bachelor's degree in psychology, all from the University of Minnesota.



Steven M. Witz is the first director for the Regenstrief Center at Purdue University.

“Steven brings a lifetime of experience from the ever-changing world of health care to this top post at Regenstrief,” said Charles Rutledge, vice president for research at Purdue and Discovery Park’s first executive director. “He clearly stood out among the candidates with the contributions he has made in the professional and academic settings.”

Witz has been instrumental in the formation of the Northern Rockies Healthcare Alliance, a network of six hospitals in western Montana linked through medical and informational technologies.

“With my many years planning, managing and marshalling resources in a hospital setting, I look forward to leading an organization that is using an interdisciplinary approach to help make the delivery of healthcare services more efficient and cost-effective,” says Witz. “The people in healthcare are very much behind this kind of goal because it really translates into more and better care for patients.”

## Projects

### Faculty scholars design a nutrition delivery system for Kenyan AIDS victims



Part of the nutrition delivery system for AIDS patients in the Indiana University-Kenya Partnership consists of four farms that grow food for the patients and their families.

Two Regenstrief Center faculty scholars recently returned from Kenya, where they are building a nutritional supply chain to help fight AIDS in Africa. Mark Lawley and Yuehwen Yih, Purdue professors in industrial engineering, are working with the Indiana University-Kenya Partnership and retired physician Dr. Joe Mamlin, who runs a dozen AIDS clinics in western Kenya.

The delivery system will provide smoother distribution of proper nutrition, in the form of local produce and flown-in food, to AIDS patients. Yih estimates it will take two years to take the components and complexities of the delivery of nutrition to the AIDS patients and turn them into a smoothly running system. The food distribution database will eventually link with the patient medical record system so that nutritional researchers can study the effects of nutrition on AIDS treatment. This has never been done before, according to Yih. When she and Lawley complete the project, there will be a brand new model that can be used to deliver food to other impoverished areas. Read the news release: <http://news.uns.purdue.edu/html4ever/2006/060105.Yih.Kenya.html>.

## Projects

### School of Nursing, Regenstrief promote Doctor of Nursing Practice program

Through a partnership with the Regenstrief Center, the School of Nursing at Purdue University now offers a Doctor of Nursing Practice (DNP) program. The post-baccalaureate degree emphasizes engineering and management principles to improve the efficiency, effectiveness and delivery of healthcare.

The program is the first such degree offered in the state of Indiana and one of only 10 offered nationwide, according to Julie C. Novak, associate dean of the College of Pharmacy, Nursing and Health Sciences and head of the School of Nursing. She predicts this advanced degree option will draw more applications for both bachelor's and master's programs, a good first step in helping solve the nursing shortage and preparing nurses for the increasingly complex environment at the bedside.

The program admitted its first five doctoral candidates in fall 2005. The Regenstrief Center funds the students' tuition, which allows the center to involve expert nurse practitioners and educators on the front end of the center's projects. Graduates of the practice doctorate program will be able to work alongside administrators and design specialists at medical facilities to help identify inconsistencies, inefficiencies, and other problems.

Read the news release: <http://news.uns.purdue.edu/html3month/2006/060126.Novak.dnp.html>.

## Partners

### Positive outcomes from meeting with Ascension Health and St. Vincent Health

The Regenstrief Center recently met with strategic partners Ascension Health and St. Vincent Health to discuss current projects and potential for future collaboration. Regenstrief works closely with Ascension and St. Vincent as national and regional "living laboratories" to apply research concepts in healthcare environments and help both organizations achieve their goals for transformational change. During the Feb. 7 meeting, Regenstrief reviewed its research progress in three key areas identified by Ascension/St. Vincent, including increases in patient-care time for caregivers, improvements in supply-chain efficiency, and advancements in telemedicine. The partners discussed ways to advance current and future projects and praised the positive working relationship with Regenstrief. The next collaboration meeting is scheduled for May 9 at St. Vincent Health in Indianapolis.

## Progress

### Regenstrief Center Speaker Series

2 p.m. Monday, March 6 — The Regenstrief Center and Purdue's College of Technology welcome Clement J. McDonald, M.D., director of the Regenstrief Institute in Indianapolis and Regenstrief Professor of Medical Informatics at Indiana University School of Medicine. The one-hour session in Fowler Hall is free and open to the public.

10:30 a.m. Monday, March 27 — The Regenstrief Center and Purdue's Department of Computer Science present Brad Mailin, Ph.D., expert in informatics and data mining. The one-hour lecture in Stewart Center is free and open to the public.



Dr. Clement J. McDonald of the Regenstrief Institute will speak at Purdue on March 6.

### Annual Conference: 'Delivering on Healthcare'

March 20-21 — Day one of the conference features a keynote address by Marc E. Mattix, assistant chief, U.S. Veterinary Corps, and panel discussion on pandemic flu. Afternoon sessions will focus on Regenstrief Center projects from around the state.

Day two begins with a focus on healthcare privacy and security in the wake of Hurricane Katrina, featuring a keynote address by John Loonsk, director of the office of interoperability and standards within the U.S. Department of Health and Human Services. The conference concludes with a look at advances in telemedicine and progress in government healthcare systems.

Registration for the conference is free; to register, go to <http://www.purdue.edu/dp/e-conference>.

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### Big Ten Virtual Town Hall Meeting: 'What is your Health Worth?'

6:30 a.m. March 22 — Purdue University will join other Big Ten universities in a virtual discussion about potential solutions to the shortcomings in the current healthcare system. This public forum is one of more than 25 community meetings nationwide, commissioned by Congress through the Citizens' Health Care Working Group. Answers and information shared in these meetings will be summarized in a national report.

The location of the event will be announced in early March. The public is encouraged to attend in person or via webcast at <http://www.purdue.edu/rche>.

### Regenstrief Center to contribute to DHS national visualization team

A team comprised of Purdue University and Indiana University's School of Medicine has been named a Regional Visualization and Analytics Center by Pacific Northwest National Laboratory in Richland, Wash. The Pacific Northwest lab leads the Department of Homeland Security's National Visualization and Analytics Center, or NVAC, which is bringing academic expertise to the nation's efforts to discover information that may warn officials of a terrorist attack.

The Purdue University Regional Visualization and Analytics Center will be supported by four facilities in Purdue's Discovery Park, including the Regenstrief Center for Healthcare Engineering. The center will perform research that will allow personnel at all levels of homeland security to quickly and effectively extract, visually analyze and synthesize information to make quick and accurate decisions. In the area of health care monitoring and management, the Purdue-based team will develop advanced analytical tools to monitor and quickly recognize the signs of biological and chemical incidents.

The center will officially open on Tuesday, March 7 with a kick-off and introductory workshop sponsored by the Department of Homeland Security. Read the news release: <http://news.uns.purdue.edu/html3month/2006/060117.Ebert.center.html>.