

DISCOVER RUSH



NEW HOSPITAL: BY DESIGN

- The Edward A. Brennan Entry Pavilion, a dramatic three-story entranceway linking the new hospital to existing buildings, opens by way of automatic sensor-triggered doors that are one of many **universal design features** built into the new hospital to accommodate people with disabilities.
- The Robert R. McCormick Foundation Center for Advanced Emergency Response has 60 single treatment rooms and is **designed to ensure fast, efficient emergency care.**
- The fourth, fifth and seventh floors of the new hospital contain 42 procedure rooms, 102 prep and recovery rooms, and spacious waiting rooms, incorporating a new **design concept** called the “interventional platform.”
- The 112 standardized rooms on the 10th and 11th floors are dedicated to critical care, while the 192 standardized rooms on the 12th, 13th and 14th floors are reserved for acute care. All of the rooms were **designed to enhance the patient experience** by emphasizing comfort, safety and quality of care.

2 The need for speed:

The new emergency department is designed for fast treatment

4 Butterfly effects:

Get to know the new hospital — built with your comfort and safety in mind

IN CASE OF EMERGENCY

NEW FACILITY DESIGNED FOR PROMPT, QUALITY CARE AND PATIENT SAFETY

When you have a medical emergency, time is of the essence. You call 911 or rush to the emergency department and hope you'll be treated quickly.



Dino Rumoro, DO, is an emergency medicine physician with special interest in public health issues, including disaster preparedness. He has published numerous research articles on this and other subjects related to emergency care.

That need for speed is not only instinctive, it's essential: Research shows that the sooner emergency patients are treated, the better their outcomes.

In fact, according to Dino Rumoro, DO, chairperson of the Department of Emergency Medicine at Rush University Medical Center, treating emergency patients quickly is so important that the new emergency department (ED) was designed specifically for speed and efficiency to provide better patient care.

"Our goal is to make emergency visits as brief and efficient as possible," Rumoro says.

QUALITY CARE — QUICKLY The details of this innovative design came from people who knew best what was needed: the ED staff. Their ideas led to a system that ensures faster care and enhances patient safety by improving the way patients move through the department.

This system consists of three clinical "pods," each with single rooms. It also includes comfortable, spacious waiting rooms — but with an important catch.

"Our goal isn't to have people waiting in comfort," Rumoro says. "We don't want them waiting at all."

To accomplish this goal, the system works in the following way:

- » In the waiting rooms, patients are immediately greeted by a front-end team, which includes a nurse and patient care technician who ask why the patient has come to the ED.
- » In most cases, the patient is escorted directly to a single room in pod A, a triage area, for thorough assessment. A nurse and a physician

arrive quickly to do an examination. People with earaches or minor sprains, for example, are treated and released from pod A, then leave the ED via a separate hallway and exit that bypass the waiting room to help prevent the spread of germs.

- » Patients whose condition is more serious, such as a person who comes in with stomach pain that turns out to be kidney stones, are moved from pod A to pod B for more advanced care.
- » Patients in critical condition, such as those who arrive with heart attack symptoms, are routed directly from the waiting room to pod B and a critical care bed.
- » Pod C can be used for overflow from the other areas.

With not only speed, but also infection control as motivation, the design of the ED keeps patients — and their germs — moving through it in one direction: away from the waiting room and other patients and toward the care they need. It also gets patients that care in as short a time as possible. This is a crucial advantage, particularly for critically ill patients. For example, quick treatment with medication can make a big difference in the recovery of many stroke patients.

"Rush is among the first institutions to implement this efficient system," Rumoro says. "It really looks to the future of emergency care."

HEIGHTENED ALERT The clinical pods have another important function. Each can be converted into an isolation unit in case of a disease outbreak. Air pressure can also be controlled to vent germs quickly to the outside. This efficient use of space promotes safety by protecting patients and staff from infectious diseases — for example, a flu epidemic.

The Rush ED is also designed to handle mass casualties during large-scale emergencies. The department's flexible infrastructure is able to expand into nearby hospital areas to take in greater numbers of patients. And the ambulance bay converts into a decontamination center, with features such as a water curtain, which acts as a decontamination shower.

CARE, COMFORT AND CONVENIENCE

Additional features designed into the ED — many derived from staff suggestions — are intended to help Rush provide the highest quality emergency care. They include the following:

- » A separate waiting room designed specifically for pediatric patients and their families. By providing games and child-sized furniture, the new ED helps kids feel more comfortable.
- » Short-term parking that lets patients park close by in an emergency. If patients need to be admitted, Rush's valet service or security will move their vehicles to the nearby long-term parking garage.
- » Imaging equipment, such as computed tomography scanners and X-ray machines, that is located within the ED and ultrasound testing that can be performed in the patient's room. This proximity reduces the risks involved with transporting sick or injured patients to another department for imaging tests and speeds the overall care process.
- » A wireless system that connects patient call buttons in the ED — and in the rest of the new hospital — to communication devices worn by nurses, allowing them to respond more quickly.

BIGGER AND BETTER The Rush ED is one of the busiest in Chicago, and more space was needed to meet the needs of both patients and staff. The new ED is more than twice the size of the previous one, but its advantages extend beyond its square footage. The advanced design and public safety features make Rush a national leader in how emergency medicine is practiced, Rumoro says.

"We've always provided excellent emergency care," he says. "Now we have a great facility as well." *

"Our goal is to make emergency visits as brief and efficient as possible."

— Dino Rumoro, DO, chairperson of the Rush Department of Emergency Medicine

FROM BEDSIDES TO BLUEPRINTS

BETTER PATIENT CARE — BY CLINICIAN DESIGN

Over the past five to six years, hundreds of doctors, nurses and other caregivers at Rush University Medical Center have contributed to plans for the new hospital. Drawing on their years of experience, countless interactions with patients and families, and a shared passion for outstanding medicine, they've helped create a space designed for the best patient care. Here, five clinicians who played key roles in the planning share some of their favorite elements of the design that will enhance patient care.

MORE THAN MEETS THE EYE

"Naturally, all hospitals want to maintain the highest quality standards, but Rush is unique in making infection control a priority while architectural plans were still being drawn.

"For instance, because air quality is crucial to controlling infection, we're using multiple filters to provide air throughout the hospital that's as clean as what is used in the operating rooms. Ensuring high-quality air is an important part of creating the safest possible environment."

John Segreti, MD, is chair of the Infection Prevention and Control Committee at Rush. His research interests include antibiotic resistance and hospital-acquired infections.



John Segreti, MD

APPEARANCE MATTERS "Although I worked on many aspects of the planning, one of my favorites was working with the acute care floors as part of the art advisory group. As part of that group, we toured Rush's outpatient cancer center to see how we could make the artwork of the inpatient cancer floor distinct — so patients wouldn't see any repetition. For patients hospitalized with brain conditions, we talked about what type of artwork was appropriate for those who could be confused.

"We wanted to create an environment that is warm, comfortable and quiet and promotes healing. A hospital should be safe, but it should also be as pleasant as possible."

Paula Dillon, RN, has been a nurse at Rush for 35 years, and for 15 years she has been director of medical-surgical nursing, which includes oncology, transplant, acute medicine, neuroscience, cardiovascular and thoracic surgery, and general surgery.



Paula Dillon, RN

ALL TOGETHER NOW

"One of the big advantages of the new hospital is that it brings together all of the expertise that patients with a particular disease might need. The 14th floor, for instance, is a dedicated inpatient cancer unit, and we have physicians, nurses, pharmacists, social workers and psychologists all there in the same location so patients don't have to travel far for the care they need."

Howard Kaufman, MD, is director of the Rush University Cancer Center and also runs a basic science laboratory, where he explores new therapies that use the immune system to treat cancer.



Howard Kaufman, MD

ONE-STOP PROCEDURES "We created an interventional platform that consists of three floors and roughly 200,000 square feet. The space is set up so that diagnostic and therapeutic procedures can all happen in the same area. For example, a patient could have an imaging procedure and an operation without being moved to another part of the hospital or even another room. It makes care more efficient for everyone."

Kenneth Tuman, MD, is chairperson of the Department of Anesthesiology and medical director of surgical services at Rush.



Kenneth Tuman, MD

A DESIGNATED SPACE "Family-centered care is what we want to deliver, so we designed a family and visitor zone in every patient room. There is an expandable sofa so loved ones can stay overnight, and visitors have their own storage space, outlets and lights.

"The point is to make people feel welcome — that their presence was planned for. We know it's important for patients to have a family member close by."

Angela Moody-Parker, RN, is unit director of the neurosciences intensive care unit at Rush and has been committed to the neurosciences since her brother's experience with Guillain-Barré syndrome.



Angela Moody-Parker, RN

THE DESIGN IS IN THE DETAILS

The completion of the new hospital Tower marks a milestone in the Rush Transformation, a 10-year project that includes building new facilities, renovating older buildings and installing advanced information systems.

As a cornerstone of the project, the new Tower's design and the planning behind that design make it one of the nation's most advanced health care facilities. Attention to details large and small resulted in an innovative blueprint that focused on patient health and also protected the health of the environment, which puts Rush on track for gold Leadership in Energy and Environmental Design (LEED) certification from the U.S. Green Building Council. The space was designed to enable the highest quality of care, patient safety, and patient and family comfort.

- Each single-bed **patient room** includes a special family zone with a recliner and sleeper sofa, as well as dedicated electrical outlets for visitors to charge cellphones, laptops and other personal devices.
- Two layers of shades hang on the windows in each patient room, making it possible either to diffuse the sun or to darken the room completely. This provides a **soothing environment** for patients.



FAST FACT: Designed to function as a neighborhood, each wing of the butterfly shape includes patient rooms and clinician workstations, and with a family lounge on each floor, staff are closer to both patients and families.

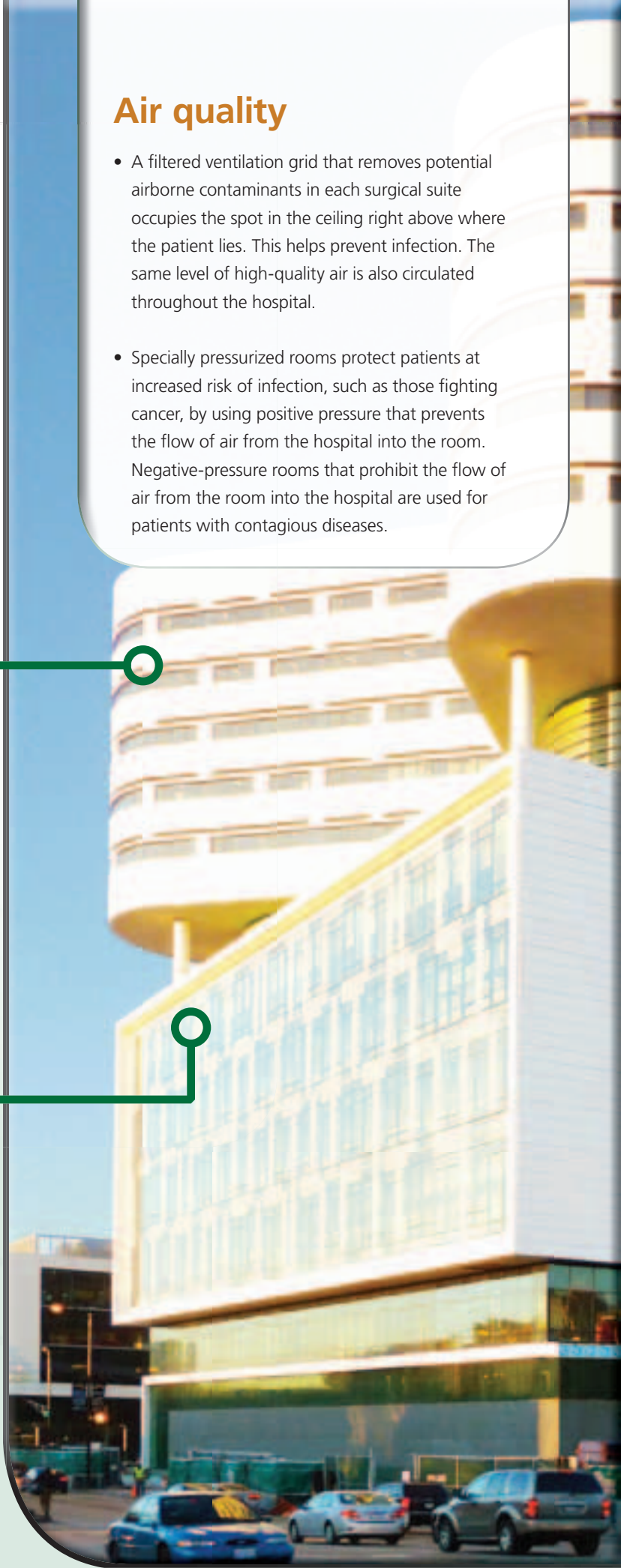


- To help design **clinical work stations** within the new hospital, Rush incorporated findings from a study that used a pedometer to track nurses' movements at different hospitals. Accordingly, the new stations were designed so that nurses are closer to their patients, enabling them to respond more quickly to patients' needs.
- To test the organization of the space during planning, clinicians walked through **life-sized outlines** painted onto the surface of the former tennis courts where the Tower now stands.

FAST FACT: Builders raised drywall off the floor slabs by one-half inch and in some areas wrapped the vinyl flooring up to meet it — all in the interest of eliminating seams and cracks where mildew can grow if liquid spills on the floor.

Air quality

- A filtered ventilation grid that removes potential airborne contaminants in each surgical suite occupies the spot in the ceiling right above where the patient lies. This helps prevent infection. The same level of high-quality air is also circulated throughout the hospital.
- Specially pressurized rooms protect patients at increased risk of infection, such as those fighting cancer, by using positive pressure that prevents the flow of air from the hospital into the room. Negative-pressure rooms that prohibit the flow of air from the room into the hospital are used for patients with contagious diseases.



CLICK

Go online to read more

There's still more to come in the exciting Rush Transformation. Visit transforming.rush.edu to learn more about the new hospital and what's on the horizon.

- There is **family space** in all parts of the Tower — close to procedural areas and in patient rooms — so loved ones remain close to patients at all times.
- Using private naming codes, **electronic status boards** in the family waiting rooms update family members on the status of their loved one throughout a procedure.



- Textiles, paints and other construction materials meet **strict chemical-emissions limits** to help prevent irritation for people with allergies and chemical sensitivities.
- Carpeting in the Tower has a low yarn height to prevent tripping, has colors and patterns that help direct people through the space, and is made from **environmentally friendly** recycled materials.



FAST FACT: Three separate color palettes in the Tower help differentiate areas and facilitate transitions from one space to another, including public space, staff space and conference rooms.

- The **interventional platform** — three floors that integrate diagnostic and therapeutic procedures — features check-in space, private prep rooms, operating rooms and private recovery rooms in the same area for greater patient convenience and safety and enhanced clinician teamwork.
- **Lighting fixtures** in patient corridors are tucked into alcoves near the tops of the walls to prevent lights from glaring directly into the eyes of patients moving down the hallways on gurneys.



FAST FACT: Because natural light and pleasant views reduce anxiety levels and the need for pain medication, all patient rooms feature large windows with views of the city.

Accessibility for all

- All sinks and toilets are situated at Americans With Disabilities Act-approved heights — not just for patients but for caregivers with disabilities as well.
- During planning, employees with disabilities used mocked-up patient rooms to test their accessibility. Changes — such as modifying bathroom doors to swing both ways — were made based on their recommendations.



RUSH IN THE NEWS



There's more to weight management than willpower

Current approaches to dietary counseling for obesity are heavily rooted in the notion of personal choice and willpower — the ability to choose the healthy foods and portion sizes necessary for weight loss while forgoing sweets and high-fat foods.

But experts at Rush University Medical Center have proposed a new counseling approach that instead views obesity as the result of neurobehavioral processes — ways in which the brain controls eating behavior in response to cues in the environment. The new model is highlighted in an article in the *Journal of the American Dietetic Association*.

"Typically, overweight and obese patients are simply encouraged to fight the powerful urge to eat tasty but unhealthy foods and make dietary

choices consistent with weight loss," says clinical psychologist Brad Appelhans, PhD, lead author of the article. "Yet, we know this approach rarely works — even highly motivated patients struggle."

The new approach emphasizes how personal choice is affected by biological and environmental factors. It advises counselors to help patients control their weight through strategies focused on the interaction between the brain and the environment, such as removing tempting foods from the home and workplace, avoiding buffets and restaurants, and focusing on achieving short-term behavioral goals rather than long-term weight-loss goals.

Learn more in the October issue of *Discover Rush Online* at www.rush.edu/discover. *

Brain may benefit from B-12

Research has revealed many things that can protect against cognitive decline as we age, from omega-3 fatty oils to large social networks. Now, a new study by researchers at Rush suggests that vitamin B-12 — found in fish, poultry, liver and other meat as well as animal products, such as eggs and milk — may also help safeguard the brain.

In the study, published in the journal *Neurology*, older adults with marginal vitamin B-12 deficiency scored lower on cognitive tests and had smaller total brain volume than those with normal levels of B-12.

"Our findings lend support for the theory that inadequate vitamin B-12 is a potential risk factor for brain atrophy and may contribute to cognitive impairment," says clinical nutritionist and lead study author Christy Tangney, PhD. "It's too early to say whether increasing vitamin B-12 levels in older people through diet or supplements could prevent these problems, but it's a question we intend to explore." *

CLINICAL TRIALS AT RUSH

LUMBAR SPINAL STENOSIS TREATMENT STUDY

The Department of Neurological Surgery is conducting a study to compare an investigational interspinous spacer to the X-STOP IPD spacer in patients with moderate lumbar spinal stenosis. Both minimally invasive surgical procedures are intended to relieve pain and weakness in the patient's legs or lower back while preserving the natural anatomy of the spine. Participants will be randomized to receive either the investigational spacer or the X-STOP IPD.

Participants must meet the following criteria:

- Have a diagnosis of degenerative spinal stenosis of the lumbar spine
- Be age 45 years or older
- Have persistent leg, buttock or groin pain, with or without back pain, that is relieved by sitting

MORE

This is a partial list of inclusion and exclusion criteria. For more information, call Corey Woods at **(312) 942-1489**.

LOWER RESPIRATORY TRACT SYMPTOMS IN CHILDREN STUDY

The Section of Allergy and Immunology is participating in a study for children of preschool age with recurrent severe episodes of lower respiratory tract symptoms, such as wheezing. The goal is to identify novel treatment approaches and confirm standard-of-care treatments for these symptoms.

Participants must meet the following criteria:

- Be between one and six years of age
- Have recurrent significant wheezing within the past year
- Have had all required immunizations, including the varicella vaccine

MORE

This is a partial list of inclusion and exclusion criteria. For more information, call Jia (Grace) Li at **(312) 942-6296**.

For other current clinical trials, visit www.rush.edu/clinicaltrials.

DISCOVER RUSH is published as a service for the Rush community.

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PLEASE NOTE: All physicians featured in this publication are on the medical faculty of Rush University Medical Center. Some of the physicians featured are in private practice and, as independent practitioners, are not agents or employees of Rush University Medical Center.

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RUSH UPCOMING EVENTS

FREE CLASSES FOR YOUR HEALTH | SPRING 2012



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For a complete and up-to-date list of community wellness events at Rush, visit www.rush.edu/events, where you can also find presentations from previous talks.

Take Care of Your Heart

Saturday, Feb. 18

8:30 a.m. to noon

Searle Conference Center

1725 W. Harrison St., Fifth Floor

Join physicians from Rush for a comprehensive program about caring for your heart. Be proactive about your health, and learn about risk factors for heart disease, such as diabetes, hypertension and cholesterol; conditions, including arrhythmias, heart failure and vascular disease; and the latest in research and clinical trials.

Risk Factors, Prevention and Treatment Options for Colorectal Cancer

Thursday, March 22

6 to 8 p.m.

Armour Academic Center

600 S. Paulina St., Room 976

Colorectal cancer is the third most common cancer in men and women and the second leading cause of cancer deaths among men and women combined in the United States. Join physicians from Rush at this free event to learn more about risk factors, prevention and treatment options for colorectal cancer.

Treatments and Research for Epilepsy

Thursday, April 26

6 to 8 p.m.

Armour Academic Center

600 S. Paulina St., Room 976

Join experts from the Rush Epilepsy Center to learn about treatments and the latest in research for epilepsy. The epilepsy center evaluates, diagnoses and treats adults and children with all forms of epilepsy, as well as people experiencing frequent spells that may be epilepsy. It offers comprehensive inpatient and outpatient services and provides patients with a full range of medical and surgical treatment options, including investigative therapies and approaches that are not widely available.



Rush Generations presents: Older adult and caregiver programs

All of the following Rush Generations programs are held at Rush University Medical Center, Searle Conference Center, Fifth Floor (Elevator II, Professional Building), 1725 W. Harrison St.

Eat Healthy and Be Fit in the New Year

Wednesday, Jan. 25

1 to 3 p.m.

Good nutrition and regular exercise are essential to healthy living. Join nutrition experts from Rush to learn how to make healthier food choices and plan well-balanced meals, as well as how to maintain or boost your physical fitness level. Make a commitment to your health in 2012, and start an exercise routine to improve your balance, circulation and heart health. You'll have a chance to try a mini class of Zumba Gold, gentle yoga or tai chi immediately following the program discussion.

What's Your Test IQ?

Wednesday, Feb. 29

1 to 3 p.m.

Health tests and preventive screenings save lives. With new technological and medical advances in early detection, many conditions can be identified, treated and even cured once discovered. Do you know the tests you should have

done for your age or stage in life? Come learn about the recommended tests and screenings for older adults in their 60s, 70s and beyond. Gain the knowledge you need to be proactive about your health and better manage your chronic conditions. Free health screenings will be available following the presentation.

Back Pain: Common Causes and Tips to Feel Better

Wednesday, March 28

1 to 3 p.m.

Between 75 and 85 percent of all people will experience some form of back pain in their lives. Back pain is the second most frequently reported reason for visiting a doctor and, after the common cold, is the top reason why people miss work. An early and accurate diagnosis of back pain is essential, because prolonged symptoms can lead to nerve damage or other serious medical conditions. Hear from experts at Rush on common causes of acute and chronic back pain — and learn how to get relief.

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You can get helpful health information in your email inbox each month with our e-newsletter, **DISCOVER RUSH ONLINE**. Sign up today at www.rush.edu/discover.

Because space is limited, please call to reserve your seat. For more details and to register, call (888) 352-RUSH (7874). Free parking in the Rush garage is available with validation.

E-NEWSLETTER: *DISCOVER RUSH ONLINE*

TAKE PREVENTION TO HEART

Changing unhealthy habits is a key to protecting yourself from heart disease. Check out the December-January issue of *Discover Rush Online* for ways to lower your risk and safeguard your heart. Sign up for the newsletter at www.rush.edu/discover.

WWW.RUSH.EDU

ARCHITECTURAL DESIGN: FORM FOLLOWING FUNCTION



Mick Zdeblick is vice president of campus transformation at Rush. He helped guide the clinical staff and architects who worked together to design the Medical Center's new hospital building.

Plenty of architects set out to create buildings that will stand out in Chicago's skyline, but it's rare for a structure's eye-catching design to be created solely for the purpose of helping those inside do their jobs more effectively.

The unique butterfly design of Rush University Medical Center's leading-edge new hospital, known as the Tower, came from a group of nurses and other caregivers who were intent on designing patient-care floors where they could provide the very best care.

Rush formed this group to ensure that all voices are heard as the Medical Center replaces buildings that are becoming outdated — some of them are more than 100 years old. Physician and nursing leadership was vital to the project, as these staff members received feedback from their colleagues throughout the planning process about ways to improve patient care. They conferred with the architects, who used the information to develop a striking design that focuses on improved health care — not on creating features that exist for their own sake.

"Collaboration was extremely important in creating the design — from concept to final blueprints," says Mick Zdeblick, vice president of campus transformation at Rush.

TAKING FORM The top five floors of the 14-floor hospital comprise the butterfly shape, which is readily identifiable as you drive down the Eisenhower Expressway.

"The building design has morphed many times over six years of engineering analysis, but the butterfly has never changed," Zdeblick says. "The butterfly has always stood because it's a great design from the inside."

Architects took the traditional hospital cross shape and expanded the inside corners outward, creating the butterfly shape. This unique shape features four identical wing tips, each of which includes what

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Zdeblick calls a "patient-care triangle." A clinical workstation is situated at each corner of the triangle, and within the triangle are resources that clinicians require to care for patients, including medication, nourishment and linens. Nurses are able to work easily around and within the triangle. This allows them to spend most of their time in the immediate vicinity of the patient rooms, which are located along the outside edges of the building to take advantage of natural light and great views.

In addition, every clinical workstation and patient room is standardized. This means everything is in the same place, allowing staff to find what they need as quickly as possible. This is particularly important during emergencies when time is of the essence.

If it hadn't been for the nurses and physicians who actually provide care in such settings, the blueprint for the new hospital could have been much different, and the butterfly design might not have taken shape.

"It's not an architectural statement," Zdeblick says. "It's a health care statement." *

 MORE ONLINE
AT WWW.RUSH.EDU

TOUR RUSH'S NEW HOSPITAL: To learn more about the Rush Transformation and to take a virtual tour of the new hospital building, visit transforming.rush.edu.