

Advanced technology and a design that puts well-being first come together in the new Stanford Hospital

The future is not what it used to be,” George Tingwald, MD, was fond of saying while the new Stanford Hospital was under construction.

“You future-proof a building by trying to understand how to create the most flexible framework to allow for change, even though you may not know what that change is,” explained Tingwald, Stanford’s administrative director of medical planning as well as an architect and a surgeon.

The hospital, which opened its doors Nov. 17, was a decadelong, \$2 billion project sparked by seismic safety requirements and a ballooning San Francisco Bay Area population. It was constructed to withstand an 8.0-magnitude earthquake and can triple its patient capacity in a disaster.

“We truly are Palo Alto’s community hospital,” said David Entwistle, president and CEO of Stanford Health Care. “I’m deeply grateful to everyone who believed in the vision for this facility and worked so hard over the past decade to make it a reality.”

The hospital relies on the most advanced technology to ease patients’ stay — controls at every bedside adjust lighting, room temperature, window shades and entertainment — and to provide the

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Lloyd Minor, MD
Dean, Stanford University School of Medicine

Paul King
President and CEO, Stanford Children’s Health

David Entwistle
President and CEO, Stanford Health Care

COMMUNITY MATTERS

The dream of a new hospital is realized

The first patients to move into our soaring new Stanford Hospital on its opening day last fall admired its features, from the spacious private rooms to the picture windows offering expansive views.

But transplant patient Paul Lee and many others said that the most moving aspect of the sparkling facility was the warmth and caring of the people within it.

That day, we are proud to say, the concrete and steel of our much-anticipated, state-of-the-art hospital came to life with the heart and soul of Stanford Medicine: our physicians, nurses and staff who provide tireless care, and the patients

and families we serve on the San Francisco Peninsula and beyond.

With the new seven-story facility, we have created a world-class medical environment that not only matches the high caliber of our research, education and patient care, but also offers abundant opportunities to raise the standard still higher.

Mirroring advancements in the recently renovated Lucile Packard Children’s Hospital Stanford, our hospital enables powerful translational medicine, improving our ability to bring breakthroughs to our patients. In our new operating

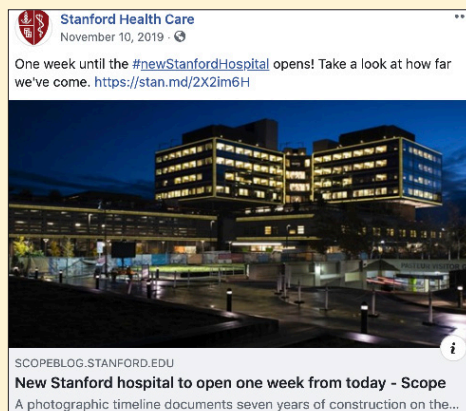
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Social Spotlight

This new series will feature a social media channel from Stanford Health Care, Stanford Children's Health or the School of Medicine in each issue.

Stanford Health Care's Facebook page is for those who want to stay up to date with images, videos and news from Stanford Health Care. Here's a glimpse:

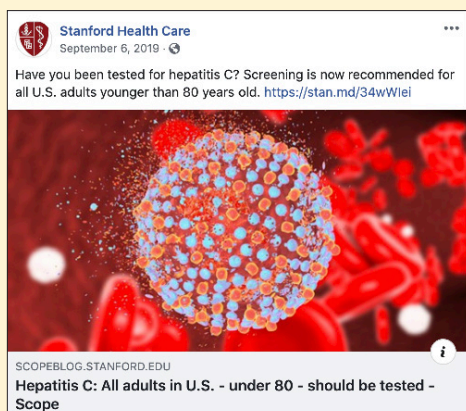
► The new Stanford Hospital has been the recent star of the show:



► Shout-outs to the fantastic nurses, doctors and other staff are perennial favorites:



► The channel features health news and Stanford discoveries:



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A year at Stanford Children's Health

An interview with Paul King

Paul King, president and CEO of Stanford Children's Health, celebrated his one-year anniversary with the organization in late January 2020. He's led a distinguished career of over 30 years in health care leadership at several top academic medical centers. Reflecting on his first year at Stanford, King talks about the highlights as well as the opportunities that lie ahead for the growing organization.

What were some top achievements at Stanford Children's Health?

It's incredible what has been accomplished at Stanford Children's Health. One achievement that we are most proud of is earning Magnet recognition for nursing excellence. This tremendous accomplishment reflects our commitment to delivering the highest quality of care to our patients and their families. We also successfully negotiated a new three-year agreement with our nurses' union.

Additionally, at the end of 2019 we opened new care units in Lucile Packard Children's Hospital Stanford. The fifth floor is now the inpatient care unit for our Bass Center for Childhood Cancer and Blood Diseases. The space is designed to provide optimal care and support for this patient population, allowing our physicians and researchers to advance the work they are doing in specialties like stem cell transplantation and gene therapy. We also opened a new outpatient clinic on the first floor — part of the Betty Irene Moore Children's Heart Center — which focuses on cardiac care, neurodiagnostics and pulmonary diagnostics.

Of course, these major undertakings were planned long before I arrived, so my role was to ensure that the leaders involved felt supported to meet their benchmarks and fulfill the goals.

I am also struck by the many ways the Stanford community is collaborating to innovate and improve how we deliver care and how we partner to improve health in our community. Here in Silicon Valley, we are at the epicenter of innovation and the forefront of shaping precision health, working toward a goal of preventing and curing diseases.

We added three new members to our executive team: Rick Majzun, our chief operating officer; Patrick Idemoto, our chief strategy officer; and Marcie Atchison, our chief human resources officer.

What are you most encouraged by?

I am encouraged by the opportunity for enhancing our collaboration with the adult hospital and the School of Medicine. I work closely with my colleagues David Entwistle (president and CEO of Stanford Health Care) and Lloyd Minor, MD (dean of the School of Medicine), to address mutual concerns and to facilitate our shared goals for advancing research and clinical care.

In Stanford Children's Health's 30 years of operation, we've experienced rapid growth of our reach in the Bay Area and beyond through our network of over 65 clinics and hospital partnerships.

A key focus is how we responsibly leverage digital health technologies like telehealth to improve



access for our patient families and to expand the ways our providers can deliver care. The use of tools like telehealth by our patient families indicates that they have a desire for these options to manage their health care and communicate with their care teams.

What is the greatest opportunity for improvement in health care for children?

Those of us in pediatric health care can convince our state legislators and regulators to protect kids no matter what form health care reform takes. California has led the way with a wide range of programs to make sure that most children have some form of coverage. Although these programs do not cover the total cost of care, they do provide some level of financial support to provide access that otherwise would not be there.

Medicaid provides an infrastructure that supports all children, not just the underserved and poor. That is a key message that resonates whenever we get in front of our legislators: The unraveling of the public safety net can lead to the unraveling of the entire health care system.

The ACE Kids Act was passed by Congress and signed by the president this year. Not every region has all the pediatric subspecialties available to care for kids with complex health conditions. This legislation makes it easier for children covered by Medicaid to move across state lines to get the right care with the right provider at the right time.

What do you think of the Bay Area?

Well, you can't beat the weather, especially coming from Michigan! What I enjoy most about the Bay Area is its vibrancy. There is an energy level here that I haven't experienced anywhere else. I attribute that to the innovation that is driven by the tech industry and fostered by the venture capital community. There is also so much beauty and charm within arm's reach.

The magic of serving a mission to care for children and expectant mothers is that it brings out the very best in people. And here, where there is truly limitless potential, I can't imagine a more exciting place to be. [stan](#)

The original Stanford Hospital building

Quality care continues during renovation

When the Stanford Medical Center opened in Palo Alto in 1959, the large, long building at 300 Pasteur Drive ushered in a new era for Stanford Medicine.

Designed by Edward Durell Stone, this facility brought Stanford's hospital, clinics, classrooms and medical library under one roof in Palo Alto, moving them from San Francisco. Over the next six decades, the graceful building with its covered colonnades and geometric panels bore witness to a remarkable array of medical advancements — including the first successful human heart transplant in the United States — and served as an inspiring setting for countless instances of healing, learning and discovery.

Now, with the opening of the new Stanford Hospital next door, the building at 300 Pasteur Drive is slated for renovation to provide inpatient cancer care, inpatient psychiatry and other services for Stanford Health Care patients. Over the next six years, workers will remodel patient rooms, modernize operating suites and upgrade technology.

The renovation project offers an opportunity to celebrate the hospital's rich history, while looking forward to its new incarnation.

Sharon Hunt, MD, spent the summer of 1967 working in a cardiology lab in the basement before starting medical school at Stanford.

"I remember it being a place of a lot of light, because even basement rooms looked out on courtyards," said Hunt, now a Stanford professor emerita of cardiovascular medicine. "It was really pleasant to work in."

Sheryl Michelson, RN, joined Stanford Hospital as an operating room nurse in 1981, as the D, E and F pods were being built to add more room for patients. During her job interview, she was asked a curious question: Could she cook a turkey?

"I later found out it was the tradition," Michelson said. Every year during the holidays, the operating room managers picked a day to cook and decorate the lounge with Christmas trees. People who worked in the operating room from 11 a.m. to 11 p.m. were invited to partake in an enormous turkey feast "with all the sides and pies." Those in the overnight crew — doctors, staff members and housekeepers — were treated to pancakes and bacon.

Michelson also helped with a celebration to mark the opening of the new operating rooms with the modernization project of the 1980s. The Saturday night before it opened to patients, a band played and doctors and staff members enjoyed a catered dinner with their spouses, all dressed in formalwear, she said.

"There was a wonderful display of respect and camaraderie among everyone we worked with," said Michelson, who is now an infection



STANFORD HEALTH CARE

Volunteer Daniel Shurman enjoys the garden where he and his late wife found comfort when she was a patient. Bonnie Johnson Shurman also volunteered at Stanford Health Care, as a chaplain in the original hospital, above.

control consultant at Stanford Health Care.

That sense of belonging has extended beyond the staff to patients and their families, even during the most difficult times.

In August 2002, Daniel Shurman's wife, Bonnie Johnson Shurman, was admitted to the hospital for inpatient chemotherapy treatment. When her hair began to fall out from the treatment, a nursing assistant offered to cut off what was left, sitting at her bedside and gently shearing away the remaining tufts into a paper bag.

"She did just the right thing at just the right moment," Shurman said. "Bonnie turned to me and looked at me, and all three of us felt, in that moment, the beauty of the care that she was receiving."

Before her death in 2011, Johnson Shurman had the opportunity to work as a volunteer chaplain at the hospital. Daniel Shurman went on to volunteer as a research associate in Stanford's health library; now he is a caregiver coach in a program that debuted with the opening of the new hospital building.

That tradition of compassionate care was a key consideration in the design of the original hospital's next phase, said Carlos Villalva, administrative director of capital initiatives for Stanford Health Care.

The project entails remodeling patient rooms, modernizing operating room suites and transforming the original location of the Marc and Laura Andreessen Emergency Department



DAPHNE SASHIN

— which now handles child and teen emergencies.

"It's a major redo," Villalva said, "to renew this building's life for the next 50 years."

Patient rooms will undergo major renovations, and a reconfiguration will add 57 new inpatient beds, for a total of 232 patient beds. Rooms will have added space for families, as well as larger bathrooms and technology that allows patients to access information about their care and to control the environment from their beds.

The pediatric emergency department will triple in size and feature 15 private rooms, trauma and resuscitation areas, dedicated rooms for psychiatric patients, and a child-centered design, said pediatric emergency medicine director Bernard Dannenberg, MD.

Much has — and will — change at 300 Pasteur Drive, but behind its glass doors, Stanford Hospital's tradition of world-class patient care endures stronger than ever. [stanford.edu](#)

Stanford Children's Health achieves highest honor for nursing excellence

Last fall, more than 60 nurses from Lucile Packard Children's Hospital Stanford traveled to Orlando, Florida, to be celebrated as first-time recipients of the prestigious Magnet recognition.

The American Nurses Credentialing Center's Magnet Recognition Program rewards excellence in nursing and is the highest honor an organization can receive for professional nursing practice.

Only 8% of the more than 6,300 hospitals in the United States have achieved this distinction.

"Magnet recognition is a tremendous honor and reflects our commitment to delivering the highest quality of care to the patients and families in our community and beyond," said Kelly Johnson, RN, PhD, vice president of patient care services and chief nursing officer. "This achievement underscores the foundation of excellence and values that drives our entire staff."

To earn Magnet recognition, organizations must pass a rigorous and lengthy process that demands widespread participation from leaders, staff members and providers. This includes an electronic application, written patient care documentation, an on-site visit and a review by the Commission on Magnet Recognition.

The Magnet Recognition Program focuses on three goals: promoting quality in a setting that supports professional practice, identifying excellence in the delivery of nursing services to patients and disseminating best practices in nursing services.

Magnet-recognized health care organizations have proven to provide specific benefits to the communities they serve and the people who

work there, including higher patient satisfaction rates, lower risk of 30-day mortality, lower failure-to-rescue rates, higher job satisfaction among nurses and lower rates of job turnover.

More than 6,000 nurses, physicians and team members at Stanford Children's Health



STANFORD CHILDREN'S HEALTH



STANFORD CHILDREN'S HEALTH

Stanford Children's Health nurses celebrate their Magnet recognition, given for nursing excellence, at a conference in Orlando, Florida.

contributed to this achievement.

"We are exceptionally proud of reaching this milestone — a result of tireless dedication from our nursing and patient care leadership and everyone who delivers care at Stanford Chil-

dren's Health," said Paul King, president and chief executive officer. "Magnet recognition is an immense source of pride for our entire organization, and a testament to our unparalleled quality and potential." [SMN](#)

COMMUNITY MATTERS FROM PAGE 1

rooms — on more than 3 acres of surgical care space — surgeons can now access moving images of their patients during surgery and connect with specialists anywhere in the world in real time.

The new hospital also allows us to care for more patients. Its 368 patient beds bring our total to 600 for adult care, and with the opening of the facility, the Marc and Laura Andreessen Emergency Department now has two locations, enabling us to treat 30,000 more patients each year. The emergency department at 1199 Welch Road serves trauma patients and patients who are 21 or older, and we provide emergency care for patients age 20 and younger at 900 Quarry Road Extension.

The patient experience is particularly important to us. To ease the logistical burdens of a hospital stay and ensure patients' needs are met, we thoughtfully combined the virtual and physical worlds. Within the hospital, the Guided Journey app empowers and informs patients at the bedside. Once they return home, the MyHealth mobile app allows patients to review test results remotely and have virtual follow-up visits with their doctors.

We also feel strongly about supporting patients' loved ones. The hospital's third floor is a testament to our dedication to wellness, featuring lounges, a meditation and chapel space, and

a staffed resource center to provide information and assistance. Infused with natural light, the facility also includes more than 400 works of original art and 4 acres of gardens.

As exciting as these innovations are, however, the new Stanford Hospital is just one aspect of our long-term plan for helping this community thrive through our vision of precision health — a future in which personalized medicine empowers doctors to predict, prevent and cure disease — precisely.

The completion of the latest expansion projects at Packard Children's advances this vision by increasing the hospital's capacity for treating the most critically ill young patients and those with rare conditions. The Bass Center for Childhood Cancer and Blood Diseases moved to a 65,000-square-foot space on the main building's fifth floor, adding shared spaces and 49 private rooms for patients with blood disorders and those undergoing stem cell treatment.

On the first floor, the Betty Irene Moore Children's Heart Center opened an outpatient clinic — complete with a dedicated telehealth room and special consult rooms for family conversations. This clinic also houses the hospital's neurodiagnostics and pulmonary diagnostics services. The Pulmonary Function Laboratory provides testing to help diagnose lung and breathing conditions, as well as guide treatment decisions.

The Electroencephalography Laboratory uses brain imaging to identify and treat neurological conditions in children.

We eagerly anticipate another milestone this spring, with the opening of the Biomedical Innovations Building. The research labs and light-filled rooms of this 215,500-square-foot facility will offer a collaborative setting for scientists and clinicians in related fields to work together on translational research and clinical treatments.

And as the new hospital springs to life, the original Stanford Hospital building will continue its long tradition of providing value-focused patient care. We are activating a plan for this facility that reimagines it with a focus primarily on cancer care. We'll modernize the operating rooms, and we'll build two extensions, adding 57 new patient rooms — all private. We also will renovate to more seamlessly integrate this historic building with the new Stanford Hospital.

As we reflect on its opening and other activity of these past months, we feel great pride and great hope. During more than a decade of hard work and planning, the Stanford Hospital shimmered on the horizon like a distant dream. Now that this dream has become a reality, we're excited to continue our progress, building a future of biomedical discovery and clinical care that will benefit the community and reach far beyond our campus. [SMN](#)

Two new care units at Packard Children's

Young cancer and heart patients benefit from pediatric centers

The new Bass Center for Childhood Cancer and Blood Diseases was designed to help patients like Peter Hanson.

Peter first came to Lucile Packard Children's Hospital Stanford at the age of 2 to receive a heart transplant. By age 8 he had developed a very rare cancer, angioimmunoblastic T-cell lymphoma. He needed a stem cell transplant, but he had a donor heart, meaning that any donated cells would have to be accepted by both his immune system and the heart.

Fortunately, just a few years earlier, pediatric stem cell transplant specialist Alice Bertaina, MD, PhD, had developed a new transplant technique that could help Peter. The method she developed, called alpha/beta T-cell depletion, enables doctors to use cells from a donor that aren't a perfect match.

In alpha/beta T-cell depletion, technicians process stem cells from the donor to eliminate some immune cells that could prove problematic. Because of Bertaina's technique, Peter's mother was able to donate stem cells to her son. Today, Peter is a sophomore in high school who enjoys playing video games with friends, is practicing for his driver's license and is thinking about his future.

The Bass Center, which opened at Packard Children's in December, isn't the only recent addition at the hospital. That same month, the hospital also opened a new outpatient clinic, part of the Betty Irene Moore Children's Heart Center, which focuses on cardiac care, neurodiagnostics and pulmonary diagnostics.

These developments are the latest in the children's hospital's campus expansion since the opening of the main building in December 2017.

"The opening of these care units is long anticipated," said Kathy Bishop, RN, who was the clinical director of the Bass Center when it was under construction. "The design and the technologies employed are improving the coordination of care and safety for our most acute patients."

Bass childhood cancer center

The newly designed, 65,000-square-foot Bass Center, which is housed on the fifth floor, strengthens the hospital's capacity to care for children and young adults with cancer and blood disorders, as well as patients undergoing stem cell transplant. It includes 49 new private rooms along with shared patient spaces, all designed to improve quality of care and the patient experience.

"The design and the technologies employed are improving the coordination of care and safety for our most acute patients."

— Kathy Bishop, RN

Architects and hospital staff worked alongside patients and family caregivers in designing the fifth floor, making sure that the new space matches the hospital's healing nature theme and that the patient rooms are spacious and bright with natural light. The rooms include sleeping accommodations for family members and have the latest technology, such as iPads, TVs and gaming consoles.

The floor features a playroom for patients

and a special space for the adolescent population. These teens and young adults, who make up about half of Bass Center patients, now have access to a dedicated lounge called the Den, with computer stations and a big screen for movies and video games.

The center includes another feature that benefits children who have a compromised immune system: A positive-pressure ventilation system in the stem cell transplant unit keeps every room cleaner to prevent infections, meaning that patients and visitors don't have to wear masks, gowns or booties.

Children's heart clinic

The new children's heart outpatient clinic, on the first floor of the hospital, is also making visits easier for patients and their families. Designed for efficiency and family-centered care, it includes a dedicated telehealth room for families that reside far from the hospital, as well as a real-time location services platform that tracks the patient's journey through the clinic. The platform alerts staff to prolonged waiting periods and the locations of care providers within the clinic.

In addition, the heart clinic has consult rooms where family members and health care providers can converse privately about their care plan or discuss a diagnosis.

The clinic's location eases the work of cardiac care specialists, as they can travel between the clinic and the surgery center or the cardiovascular intensive care unit without leaving the building.

Most important, the clinic expands the capacity of Stanford Children's Health to treat more young heart patients. Patient visits now number nearly 10,000 annually, and surgeons perform more than 700 open-heart operations a year. [www.stanfordchildrens.org](#)



Above: Stanford Children's Health employees take part in a ribbon-cutting ceremony for the Bass Center for Childhood Cancer and Blood Diseases. Right: Children cut the ribbon at the outpatient heart clinic.



Popular community health event celebrates five years

Health Matters, Stanford Medicine's free health fair for the community, is back for a fifth year on Saturday, May 16. At this popular and well-attended event, physicians, scientists and health care experts will discuss the most exciting recent medical innovations and offer tips for healthy living. This year, attendees can learn about the health impacts of happiness, how to use exercise diagnostics to fight chronic disease, diabetes facts versus fiction, LGBTQ+ health concerns, cancer survivorship skills and more. An outdoor pavilion featuring interactive exhibits and mini-talks will provide fun activities to educate and entertain the whole family.

Health Matters will run from 9 a.m. to 2 p.m. For more information and to register, go to healthmatters.stanford.edu.



STAN OLSZEWSKI



CHRISTOPHER HOWARD



JIM ROBERTS



STAN OLSZEWSKI

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best care. Heart-rate monitors, oxygen saturation monitors, infusion pumps and automated prescription-filling machines are connected to patients' electronic health records, updating them in real time.

The hospital is also a working laboratory for all this technology: In each room, two units equipped with artificial intelligence-enabled cameras study how monitoring can improve quality and patient safety.

"It's a beautiful, serene setting for healing that is also an advanced incubator where we can cultivate our vision of precision health — predicting and preventing disease in the healthy and precisely diagnosing and curing disease in the ill," said Lloyd Minor, MD, dean of the Stanford University School of Medicine.

"For patients and families, as well as medical students, trainees and scientists, the new Stanford Hospital promises to raise the bar for all we do in care, research and education."

The state-of-the-art design extends to the building's engineering: The hospital stands on base isolators — a structural foundation decoupled from the building it supports — which allow the structure above to remain steadier during an earthquake. It has its own sewer tank, water tank and generators.

Artwork and nature also play a starring role: There are 4 acres of gardens, views from every

patient room, wall-to-wall windows in common areas and dramatic artwork. The emphasis on art and nature reflects the growing recognition that they contribute to healing and well-being.

"From the patient rooms, the views are spectacular," said Michael Moore, a member of the hospital's Patient and Family Advisory Council. "You've got the mountains to the west, the skyline of Palo Alto to the east and campus — one of the greatest views of Hoover Tower. It's absolutely beautiful. And then at night, when the sun goes down, in that pure light, it's absolutely breathtaking."

The 368 patient rooms are in the top four levels of the hospital, each with a single bed and an expansive window as well as a bathroom and a daybed for visitors.

The third floor is devoted to cultivating wellness, with lounges for patients and their families, a dining area, a meditation and chapel space, and access to the outdoor gardens. It also has a health library and caregiver resource center. The second floor houses operating rooms.

On the ground floor, the new emergency department is 2½ times the size of the previous one, with 66 large, private bays — each with the equipment necessary to accommodate at least one extra patient.

It also has four full, private triage rooms equipped with exam lights, oxygen and full-

size gurneys so patients can be treated in those spaces. New features include a dental emergency room and 55-inch, two-way video monitors near the foot of every patient's bed for services that include remote consultation and translation for the hospital's many non-English-speaking patients.

Of course, the changes aren't all physical. When the new hospital opened, the focus for Alpa Vyas, vice president of patient experience for Stanford Health Care, was not so much on the building as on the people within it. Her goal was to build a knowledgeable network of people to support patients and their families, not only while they're in the hospital, but also long after they leave it. Patient navigation team members are available to explain resources that assist family or friends in supporting the patient's care, even from a distance.

"It's really the people within the building who bring it to life," Vyas said. "The experience is not only the physical facility and the environment; it's also the culture and service."

The original hospital next door now houses the pediatric emergency department, the inpatient psychiatry unit and several other patient units; a section is being renovated to become a cancer hospital. The two buildings, which together hold 600 beds, are joined by a second-story walkway. [SNM](#)

Aspirin for prevention: Should you take it?

New research prompts a reconsideration

Recent studies have provided new information about when aspirin should be used to prevent disease. In general, they suggest that fewer people should use aspirin for cardiovascular disease prevention.

People with a history of heart attack, stroke or other types of cardiovascular disease are still strongly recommended to take a daily low-dose aspirin to reduce their risk of a future event. There is no question that aspirin has an important role *after* someone has already developed heart disease.

But new studies show that the risks of side effects from aspirin (such as bleeding) likely outweigh the potential benefits (such as prevention of a first heart attack or stroke). These findings have prompted a major shift in clinical practice.

However, there is still a role for aspirin in primary prevention for certain people (such as those with a high risk for cardiovascular disease and low bleeding risk), but this is not a simple decision.

People considering the use of aspirin for primary prevention should have a conversation with their health care provider to clarify the potential benefits and harms. Similarly, people already taking aspirin for primary prevention should have a discussion to see if they should continue or discontinue this medication.

How aspirin works

Aspirin interferes with small blood components known as platelets. By making platelets less sticky, aspirin can prevent blood clots, or clumps, from forming. When clots occur in critical blood vessels, such as the heart or brain, they can cause a heart attack or stroke. Aspirin can reduce the risk of heart attacks, strokes and several cancers — especially colon and rectal cancer.

However, the same process that makes aspi-

rin beneficial can lead to problems.

When aspirin makes platelets less sticky, they cannot do their normal job of stopping abnormal bleeding. This can result in excessive bleeding in unexpected locations within the body, such as in the stomach or brain.

The key question with aspirin is which is greater — the possible preventive benefits or the chance of excessive bleeding?

Should you be on aspirin?

If you have known disease of your arteries or have a history of a heart attack, angina, stent, bypass surgery or stroke, then you should probably take aspirin or an alternative.

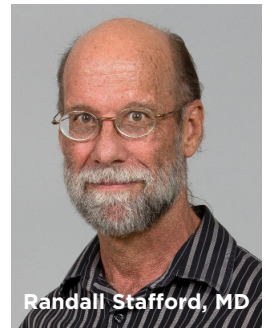
If you have no known artery disease, then it depends on your risk of having a heart attack or stroke. Risk factors include high blood pres-

“People considering the use of aspirin for primary prevention should have a conversation with their health care provider to clarify the potential benefits and harms.”

sure, high cholesterol, diabetes and smoking history. If you are younger and have fewer risk factors, you are unlikely to benefit from aspirin. If you are older and have more risk factors, you may benefit from aspirin. You can determine the



Shreya Shah, MD



Randall Stafford, MD

chances of a heart attack or stroke in the next 10 years using an online risk calculator, like one from the American College of Cardiology (called the ASCVD Risk Estimator Plus, available through an online search).

There are other factors that are important to consider when thinking about aspirin and discussing it with your health care provider:

Bleeding: If a person has a higher than average chance of bleeding (especially past bleeding), then aspirin should probably not be used unless the person is at a very high risk of a heart attack or stroke.

Colon cancer: Having a higher than normal chance of developing colon cancer might prompt use of aspirin even in someone at moderate risk of heart disease and stroke.

Aspirin dose: A low dose (81 mg) is just as effective for heart disease and stroke prevention as higher doses, which carry a greater chance of internal bleeding.

Continuing aspirin: Once aspirin is started in a high-risk individual, it should be continued, unless major bleeding problems occur. If aspirin was previously started in someone at low risk, it is reasonable to consider stopping aspirin after a discussion with their health care provider.

Other wellness strategies: Treating high blood pressure and high cholesterol can also lower the risk of a heart attack or stroke. Adopting healthier behaviors related to physical activity, diet, improved sleep, smoking cessation and stress reduction can further reduce the risk of heart attack, stroke and cancer. In fact, these health behavior changes can go a long way toward preventing heart disease and stroke, and may be even more effective than starting aspirin.

The decision to start, continue or discontinue aspirin for prevention requires a discussion between you and your health care provider to review the risks and potential benefits as well as your personal preferences. Your calculated risk may have implications for other disease prevention strategies.

Please take the time to find out if aspirin is or isn't right for you. [LNU](#)

This piece was written by Shreya Shah, MD, assistant professor of primary care and population health, and Randall Stafford, MD, PhD, professor of medicine and director of the Program on Prevention Outcomes and Practices.





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Less invasive heart surgery

*Stanford patient
receives a new aortic
valve without
open-heart surgery*



STEVE FISCH

Sharon Kramer received a replacement heart valve via a less invasive procedure that's newly available to low-risk patients like her.

Sharon Kramer has always thrived on hard work. She and her husband run two hofbraus in the San Francisco Bay Area, plus two Italian restaurants and a boutique in Palm Springs, California. Between traveling from their home in Atherton, California, to the businesses, as well as visiting grandchildren, the 76-year-old is constantly on the move. At least until a year ago, when all that energy disappeared, and she started taking catnaps in her car.

"I've always been high energy, so when I was starting to get unusually tired, I just thought, 'Well, getting older is finally catching up with me,' she said. 'I'd get up in the morning and be good for a couple of hours, but if I did too much, I would have to go back to bed.'"

Eventually, disturbed by this unusual fatigue, along with some shortness of breath and a fainting episode in a department store, she went to see her Stanford doctors. Medical tests showed that she had severe aortic valve stenosis, a narrowing of the aortic valve, which is life threatening. She needed a new heart valve.

"At that point, I was facing open-heart sur-

gery," she said. "But I didn't want to do that. I understood that they had to split my chest open and that recovery could be quite painful and take four to six weeks. There was just no way I could lie around recuperating that long."

Another option

Fortunately for Kramer, her doctors were able to offer her a less invasive option: transcatheter aortic valve replacement. TAVR reduces the patient's recuperation period because it eliminates the need to cut open the chest. Instead, physicians insert an expandable biological heart valve via a catheter and thread it, usually through a needle puncture in the groin, into an artery in the leg up through the aorta and down into the heart to replace the diseased valve.

"It can be wonderful for patients," said William Fearon, MD, professor of cardiovascular medicine, who, along with other Stanford researchers, has been involved with several TAVR clinical trials. "TAVR is a less invasive way for repairing defective heart valves, with a better quality of life."

TAVR was once reserved for patients at high risk of not surviving open heart surgery. But positive results from two recent clinical trials resulted in its approval for use in a broader, healthier segment of the patient population who need new aortic valves.

Aortic stenosis occurs in more than 5% of the American population older than 75, according

to the American Heart Association. As the valve opening narrows, it restricts blood flow to the aorta, the body's main artery, forcing the heart to work harder to pump blood throughout the body. In severe cases, it can cause fainting, chest pain, heart failure, irregular heart rhythms and cardiac arrest — and even lead to death.

The standard treatment has been to open the chest cavity and replace the aortic valve with a mechanical or bioprosthetic valve to improve blood flow. Last summer, after two randomized clinical trials revealed TAVR to be as good or even better for low-risk patients, the Food and Drug Administration approved two valves for such patients.

'Well studied in patients'

"This procedure has been well studied in patients," Fearon said. "We've done more than 2,000 — about six a week." With all the practice and advances in equipment, the outcomes have continued to improve, he said.

Kramer said she was thrilled with the outcome. She said she's able to travel and work with the same amount of energy she had prior to getting sick.

"There was hardly any pain involved," she said. "When I got home within a day or two, I was walking up and down stairs. I think I stayed in bed the first morning, but within two days, we were out to dinner, and I had a margarita in front of me. It was that quick." **SMN**