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HEALTH + FITNESS 2014

RECLAIM YOUR KNEE, RECLAIM YOUR LIFE

BACKSTAGE AT THE CENTER FOR JOINT REPLACEMENT

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Surgeon Tom Gutowski with nursing director Kathleen Ryan and benefactor Jim Craigie at the University Medical Center of Princeton.

Post Op Mission: Better Outcomes

by Barbara Figge Fox

Most of us dread going "under the knife" to have a joint replacement, a colonoscopy, or any kind of surgical procedure. But if you have ever had surgery, you know that the true menace will ambush you — not in the hospital — but when you step over your own threshold. In the hospital, medical professionals are at your beck and call. At your home, you are on your own. That's scary.

Maybe the nurse runs through your discharge instructions and, bleary eyed, you don't quite understand the details but oh well. Maybe the instructions don't adequately cover the potential complications. Maybe the instructions assume you have the right equipment at home, but you don't. Maybe the pain is worse than your doctor predicted. Maybe your caregiver isn't up to the tasks — or you live alone.

You end up back in the hospital. Nobody's happy. Certainly not you. And — under new rules — not the hospital, because now it might be penalized for what the criminal justice people call "recidivism." In the behavioral health field, it is called "relapse." In the medical world, the label is "readmission," patients who return to the hospital because the first fix didn't work.

Surely there is a better way, says David Brown. He created a timely solution to an old problem in medicine, how to improve patient care to produce better outcomes. His 21st century way, behavioral health technology, helps patients heal at home. His new company, VOX Telehealth, engages patients to play a more active role in their health. "It's a true win/win," says Brown, "it benefits all — the patient, the surgeon, and the hospital."

Located at the Straube Center in Pennington, VOX Telehealth launches its first off-the-shelf program, OrthoCare for orthopedic operations, this summer. Aiming to redefine the process of patient recovery, the company delivers procedure-specific patient education and recovery programs on web-based platform. By engaging the patient every day, these programs help patients both before and after an operation.

Result: more positive outcomes and reduced costs. Following OrthoCare VOX Telehealth plans to expand to include SpineCare, CardioCare, and Palliative Care.

OrthoCare uses E-mail and the Internet. One month before surgery you get messages that walk you through how to prepare your home — have rugs removed, get a walker, install guard rails, etc. After surgery the program continues to engage with you, providing home care instructions and letting you track your progress. Certain responses, such as an unacceptable pain level, will trigger a call from the nurse, who might schedule an office visit for you the next day.

Hospitals assume that patients will follow directions when they go home. VOX Telehealth assumes most will not.

The cost: less than $100 per month. The hospital pays. And that's a bargain, says Brown, when you consider that the average joint replacement costs $22,000. Hospitals want to avoid extra visits to the emergency room. Not to mention the exposure to a malpractice suit if something goes horribly wrong. "If you have better outcomes, you get a happier patient and a happier hospital," says Brown.

The VOX Telehealth program relies on web-based technology to do 80 percent of the work. In addition to the web-based clinical monitoring, it offers online mini-courses for patients and caregivers. Humans deal with the remaining 20 percent. For those who do not have Internet access, or if a "connected" patient's internet connection fails, VOX Telehealth partners with a clinical monitoring call center, available 24/7.

Hospitals assume too much. They assume that the general public will follow directions. But they — we — usually don't. Brown believes that only a small fraction of patients like to read the fine print on prescription bottles. "If given a discharge plan they will run with it. They are able to take information, assimilate it, and persist in the use of it until the stated goal is accomplished." The rest of the population — the larger portion — "don't mean to injure themselves but they have a lower level of initiative."

He admits that he is among those who don't read the fine print. "When it comes to health care, we are our own worst enemies."

The result of non-compliance: trips back to the emergency room or readmission to the hospital. "Recovery and reintegration models presume that the entire patient population has a level of intentionality — working towards a goal until the goal is reached — that does not exist in the broad population," says Brown. "For the rest of us, we need engagement and structure to drive, to remind, and to encourage."

If the home and the patient are prepared properly, more than 80 percent of patients can go directly from hospital to home and get physical therapy at home. If the home is not prepared, less than 30 percent can go home. The rest go to a skilled nursing facility which costs about $20,000 more per patient. Multiply this by 1.4 million procedures and a lot of medical dollars are saved by engaging patients before surgery.

An extra plus: the pre-op program gives doctors and administrators a preview of how compliant the patient will be after the operation. When you walk in the door, they know whether you are likely to follow directions.

"VOX takes the whole process into account," says Matt Dobzyniak, a surgeon at St. Mary's Hospital in Richmond, Virginia. "If you can have the patient in a better medical state when they go into surgery, which VOX allows us to do, then you're going to have a shorter hospitalization and a quicker recovery."

Doctors log into the system when a patient triggers an alert, but administrators can also log in if they want statistics on patient compliance.

Another plus: the OrthoCare discharge instructions are likely to be better than most hospital directions. Some discharge instructions are abysmally bad. Speaking from personal experience, this reporter has been a caregiver for several patients in the past year and the discharge procedures have ranged from terrific to awful. So an additional incentive for hospitals to buy the VOX Telehealth system is to access the "best practice" instructions. They were developed with Bon Secours hospital in Richmond, Virginia, and each hospital will brand it with their logo and phone numbers. To add custom content would cost extra.

As for privacy issues, all patient information is contained within encrypted databases and hosted on HIPAA-compliant servers. When patients exit the program, their outcomes data will be de-identified and saved. "Down the road," says Brown, "that information will become available to strategic organizations such as the Joint Commis-

sion [the independent, nonprofit organization that monitors more than 20,500 healthcare institutions] and likely used to establish best practices for patient pathways."

It's a big market. Major joint replacement operations could increase to as many as 4 million annually and statistics reveal that the average person might have 2.5 episodes in a lifetime. Patients are getting younger — and, with diabetes and obesity increasing, more vulnerable.

This business is Brown's second experience with transforming an "engagement" model, how people interact with each other or with a concept. As a marriage and family counselor, he transformed the usual patient engagement model, which allows for 50 minutes per counseling session. "The 50-minute session is inconsistent with human experience," says Brown. "I found that one 90-minute session or a two-hour session was far more productive than two one-hour sessions."

VOX's Orthocare hopes to redefine the process of patient recovery from knee and hip replacements.

Brown was one of four children in Austin, Texas, where his father was in real estate. His brother now works in the oil and gas industry in Houston, one sister is an artist and furniture designer in Dallas, and another sister helped start a school in Austin. As the youngest, he took on the caregiver role in tough situations. "I was the funny guy, making a joke, putting a smile on people's faces."

As a finance major at Vanderbilt, Class of 1993, he immersed himself in current trends. At that time, the hot businesses were luxury splurges, everything from spa treatments to gourmet foods, like Starbucks and the Bread Company, which offered "old world" bread. He opened a Bread Company store in Fort Worth.

Meanwhile he was volunteering with the Hope Farm for fatherless inner city boys. "After four years, I was awestruck with what they were accomplishing. By age 12, as a result of their backgrounds and mentoring, the boys were men. On the other side of town, we parents thought it was our job to be Walt and Winnie Disney, rather than moms and dads, and we are ultimately doing our children a disservice. I started a group of guys to talk about life and parenting and then I went to the next level, doing it full time. My wife, Cara, and I decided we should learn more about this. She had just had our third child."

Within six weeks they packed up, rented the house, and drove to Philadelphia, where he enrolled in Westminster Seminary.

"By November we had fallen in love with the Northeast, and we began to ask ourselves why we would leave." That was in 2001. In 2003 he opened a counseling practice, and in 2011 he launched the business.

Once again, he saw a need and tried to fill it. It's not rocket science, he hastens to say. "If it were I wouldn't be able to be involved. This is really an aspect of humanity that has been true since Biblical times and will always be true — all of us need support, we need accountability, and we need a brand of intentional encouragement that helps us to do what we know what we should be doing."

During the first three years, VOX navigated this burgeoning industry on a very lean budget, dependent on a couple of committed angel investors. Brown continued to work part-time. In 2014 he added Will Passano to the payroll as director of business development. "With more than 25 years of experience in healthcare education and the learning management system industry, Will brings an understanding of the customer and industry that is a very rare asset for a company at our stage of growth," says Brown.



To Your (Post-Operative) Health: *The VOX Telehealth team wants to help patients stay on course, even after they leave the hospital. David Brown, left, Will Passano, and Lindsay Chang.*

With a bachelor's degree from Roanoke College, Class of 1978, and a master's degree from Columbia, Passano worked in a family medical publishing business in Baltimore. He moved to Princeton to be president of Ascend Media, a medical publisher that bought Medical World Communications (U.S. 1, June 28, 2006). He sold the company in 2008 and joined Skyscape, a mobile firm that provides medical information at the point of care.

Then he ran NetLearning, which offers web-based training for hospital staff on mandatory compliance requirements, and sold that business in 2012. His ticket to another job in Princeton came on parents weekend at Vanderbilt University, where he met a Princeton-based parent who gave him three contacts in the healthcare industry. One was David Brown, and Passano joined VOX Telehealth in April.

The third employee is Lindsay Johnson Chang, director of program management. She majored in biomedical engineering at Duke, Class of 1999, has a master's degree from the University of Texas and 10 years of experience as project manager for Zimmer's Biologics. She will map the program development process as well as the program implementation process.

The timing couldn't be better. With nearly one in five Medicare patients returning to the hospital within a month — about 2 million people a year — readmissions cost the government more than $17 billion annually. Until recently hospitals had little incentive to cut readmission rates. On a fee for service model, every time a patient was admitted, the hospital would be paid.

In October, 2012, the Centers for Medicare and Medicaid Services (CMS) first issued fines to hospitals with high patient readmissions within 30 days of discharge. With the maximum penalty set to double in October and reaching 3 percent of reimbursement, this set into motion the new patient engagement mandates and the evolving payment models that will become outcomes-based rather than simply fee-for-service. "With these actions by CMS and the resulting response by hospitals, our industry was officially 'birthed' and all that we had been working on was 'right timed,'" says Brown.

"As a country we have every reason in the world to be really excited about the direction of healthcare," says Brown. "We are moving from a treatment-centered and fee-for-service model to a model based on patient-centered outcomes. We are bringing patients into the process and aligning them with institutional improvement. The next 25 years will be a very exciting time for our country as we see the evolution continue."

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