Gwen Johnson was at the casino this spring, enjoying a bit of fun, when chest pains struck her. An unlucky event, yes, but she knows she was fortunate. The heart attack was serious, but prompt treatment and bypass surgery mean she’s on her way to recovery.

Seven days after her surgery, Johnson was getting ready to transfer from the hospital to a rehabilitation center in Squirrel Hill. She was still in her hospital gown but sitting up in a chair next to the bed, with her black hair pulled up. And she was talking to
her grown son Alonzo and daughter Lavon, about clothing options for the transfer—she intended to be well-covered. The oxygen tube still ran to her nose, but she looked and sounded well, if upset with her body’s inability to jump up and leave.

“I haven’t been in a hospital since she was born,” said Johnson, 69, looking over at Lavon Johnson, who quickly concurred.

“My mother has never been sick. She walks all the time. She’s a very health-conscious person.”

You could say the surgery has given her a new lease on life, and Johnson would agree. It’s a lease the normally active grandmother fully intends to take advantage of. Yet, the role of recovering patient has proved more difficult than she expected. Johnson is used to taking care of others, used to plowing forward in the face of illness or difficulty, and the slow pace of recovery has been difficult for her.

Nurse Carol Mitchell, who also visited Johnson that day, reminded her that recovery from a major surgery takes time, that she would need to let people help her for a change. Looking over at Johnson’s son and daughter, she reminded Johnson that she’s fortunate to have such a wonderful family waiting to help. In another two weeks, you’ll notice a big difference, she said. In four weeks, even more. It’s normal for an active person, especially someone so used to taking care of others, to have a hard time adjusting to being in the position of needing help, Mitchell noted.

Mitchell, a friendly, petite woman, is a research nurse at the University of Pittsburgh. She sat on the bed next to Johnson’s chair and began to explain a research project. Not only have studies shown that there is a link between heart disease and depression, she said, but people who show symptoms of depression after a heart attack are likely to have a longer recovery. They are even more likely to become a “repeat offender,” that is, to suffer another heart attack.

This came as a surprise to Johnson and her family. Even more of a surprise was that, according to the questionnaire that Mitchell gave her the day before, Johnson tested positive for indicators of depression. The questionnaire was just an initial screening—Mitchell would follow up with her in two weeks to see if the symptoms were still there. Like most people, Johnson had never heard of a link between her heart health and mental health. She knew that she was feeling a bit down, but she hadn’t even considered depression. “She’s someone who always keeps moving forward,” noted Lavon Johnson.

Gwen Johnson agreed. When her sister was alive, she used to call her occasionally if she needed a pick-me-up. Nowadays, she keeps herself busy helping others.

After grilling Mitchell about the use of her personal information—and being reassured about the University’s policies—Johnson agreed to participate in the study.

Like Johnson, many of the patients Mitchell sees are surprised by their reaction to bypass surgery. The nurse explains that if you took a poll of the patients she talks to, about 80 to 90 percent of them would probably tell you they were blindsided by the heart attack. Even if a person knows he or she has high blood pressure or another risk factor, most people don’t really expect the heart attack itself. And, like Johnson, most have little if any time to prepare themselves for bypass surgery or the long and painful recovery that follows it.

When it’s put like that, it seems almost intuitive that a life-changing event like coronary bypass surgery could trigger a depressive episode or, conversely, that a depressive episode could make for a more difficult recovery.

“Treatment for mental health conditions, such as depression, anxiety, and bipolar disorder, has come a long way in the past few decades. As basic and clinical research have advanced, doctors now have at their disposal well-studied, effective treatments for many psychiatric conditions—what are known as evidence-based guidelines. Yet many patients still aren’t being diagnosed and treated effectively. Johnson nearly fell into this amorphous realm.

In 2000, a national study of 3,000-plus Americans published in the Journal of General Internal Medicine found that nearly half of those with mental illness received no treatment, and only about one-seventh received evidence-based treatment.

In part, this is because of the societal stigma attached to seeking mental health care. Many people still see depression and anxiety as personal problems or failings, not medical conditions that warrant treatment. Or, like Gwen Johnson, they simply don’t realize the possibility that their symptoms are something they ought to discuss with a doctor. At the same time, doctors don’t systematically screen for mental health disorders. Certainly, such screening is generally considered beyond the scope of specialists like the surgeon who repaired Johnson’s heart.

“It takes a lot of time—it’s not your 15-minute visit,” says Grant Shevchik (Res ‘81), a primary care doctor with three Pittsburgh-area offices. And time is at a premium among doctors, be they specialists or family practitioners. For example, at Shevchik’s nine-doctor primary care practice in the suburbs of Pittsburgh, there are 45,000 “doctor-patient contacts” every year. That’s 45,000 actual meetings. Add to that appointments handled by nurses or advice given over the phone.

“Physicians can only do so much. They need help from other people,” Shevchik says.

University of Pittsburgh Associate Professor of Medicine Bruce Rollman sits in a small conference room near his office at 230 McKee Place. Even sitting, the man projects an aura of momentum. Armed with a set of surprisingly interesting PowerPoint presentations, he explains his current passion—identifying hurdles to effective mental healthcare delivery and devising ways to overcome them. The first presentation describes a study his team recently completed in which they improved the quality of treatment for panic and generalized anxiety disorder. The second set of slides is an introduction to the study for which Gwen Johnson was screened, called Bypassing the Blues. The anxiety study was so successful that Rollman has been able to hit the ground running with Bypassing the Blues, adapting the same model to depression treatment. He
seems a bit amazed by how well things are going. In addition to receiving a recent vote of tenure, he was asked to speak at the opening plenary session at the Society of General Internal Medicine’s 2004 annual meeting. And now, he’s leading nearly $8 million worth of National Institutes of Health–funded studies.

The anxiety study seems to have been a catalyst. He broke the blind on it last year, and he and his colleagues, including Katherine Shear and Charles Reynolds, coprimary investigators and professors of psychiatry, are still flush with the results. The study compared patients who were assigned a telephone-based “care manager” to patients who received their doctor’s usual care. It turns out anxiety symptoms of the patients paired with a care manager improved measurably; that group also experienced a generally improved mental-health-related quality of life.

“To me, this [degree of improvement] was very surprising. This was a very impaired group,” says Rollman. The patients who paired with care managers also functioned measurably better in their work lives. Of those assigned a care manager, 94 percent were working a year after they started treatment; 79 percent were working in the usual care group. The care-manager group also worked significantly more hours, had less absenteeism, and used fewer expensive healthcare resources.

“This was really striking. Nobody’s ever reported findings like this before,” he says.

Rollman came to Pittsburgh from Johns Hopkins University in 1995. It was here that he met Herbert Schulberg, former Pitt professor of psychiatry. Schulberg, who is now at Cornell University, is the author of several books on mental health treatment. He turned Rollman on to the issues of mental healthcare delivery, issues Rollman took to and quickly made his own.

“Through Dr. Schulberg, I learned that doctors were poorly adherent with guidelines, and patients were poorly adherent with the treatments,” he says.

“You have all these people at Western Psych who are developing these great treatments. We’re trying to test new ways of taking these discoveries to typical patients so that they can take advantage of these treatments.”

Rollman’s is a pretty simple model. The idea is to bring in someone besides the doctor—for example, Carol Mitchell—to perform screenings and monitor care. The nurse (a.k.a., care manager) meets and screens patients. (In the anxiety study, care managers screened patients at the doctor’s office; in the ongoing depression study, they’re screening patients in the surgical wards.) Then every couple of weeks, the care manager calls to check in on patients who qualify for and enroll in the study. During these calls, the care manager asks about progress, discovering problems and facilitating communication between the patients and their doctors. A specialist is on call to assist with emergencies. The care managers don’t treat patients themselves, they just make sure patient needs—for therapy or medication for instance—don’t fall through the cracks. They ask patients questions like, Did you keep your therapist appointment this week?

It’s a relatively simple and cheap intervention—by design. Rollman wants to keep this intervention affordable. Cost-benefit analysis was on his mind when he decided to examine factors like workplace absenteeism, hours worked, and use of health services.

“[Business owners] want to know, ‘Are my employees going to be at work tomorrow?’” he says. “And, ‘Am I getting value out of my healthcare premium?’”

As it turns out, Johnson screened into the Bypassing the Blues study, which meant she still showed indicators of depression two weeks after meeting Mitchell. As we went to press, we learned she was back home and managing well.

Doctors believe that the link between heart disease and depression is a physical one. “The relationship is bidirectional,” says Reynolds, who directs Pitt’s late-life depression evaluation and treatment center in the School of Medicine. That is, depression triggers changes in the body that can leave it more vulnerable to a heart attack and vice versa. For the Bypassing the Blues study, researchers will also monitor patients’ physical recovery from the heart attack and surgery.
“I think Bruce’s work is really innovative,” says Reynolds, a senior member of the faculty and recognized expert in geriatric psychiatry. Reynolds provided financial backing for some of Rollman’s early work at the University and agreed to team up on the anxiety study and Bypassing the Blues. “We can successfully translate evidence-based guidelines into practice with a care manager,” he says. “And I think this will be shown to be a cost-effective measure.”

The antecedents of this kind of innovation showed up early in Rollman’s career. Before there were care managers there were inventions. There was his anatomically designed bicycle seat—an inspiration during his first year at Jefferson Medical College in Philadelphia. Then, while he was still in school, he watched his dad come home from a hospitalization. Amid the stress of his father’s illness, his visually impaired mother struggled with a demanding set of drug regimens. Rollman realized that the small-print childproof bottles most prescriptions come in weren’t making his parents’ lives any easier, so he designed and patented a set of color-coded, easy-to-open bottles and matching large-print wall charts. The idea was to help patients with complicated drug schedules keep their pills straight. He even put together a grant application to study the system. The reviewers told him it sounded like an interesting project, but they thought the principal investigator (him!) needed more research experience.

He took the advice to heart and pursued a research fellowship at Hopkins, where he earned a master’s degree in public health. Soon he had his first New England Journal of Medicine paper: “Medical Specialty and the Incidence of Divorce.” (In case you’re curious, psychiatrists and surgeons are most likely to see their marriages end in divorce.) In his office at Pitt, along with his degrees, patents, and many photos of his family, hangs a gift from his wife: a framed collection of newspaper articles that covered those findings, including one from the Wall Street Journal.

He kept inventing while at Hopkins. That’s where he wrote a business plan with his wife to promote Rollman Product Number Three—an improved device to read electrocardiograms. He moonlighted weekends in an emergency department to finance his business plans and put in $20,000 of his own money before the project stalled.

Devising interventions to improve mental health treatment calls on all those research and business skills Rollman began cultivating in medical school and further developed at Hopkins.

“Anybody can do a prototype,” says Rollman. He explains his point: His prototype bicycle seat worked great, you see, but when he took the design to manufacturers, they determined that it would be too complex to mass-produce at a reasonable cost. He has taken that lesson to heart as a researcher. He’s not trying to add to the literature of novel treatments; he’s finding a way to get good treatment to those who need it. “I think a lot of people do things in research that, outside of grant support, would fall down in the real world.” Getting his intervention model to last past his research grant is a goal that’s influenced every aspect of Rollman’s studies. He knows who’s likely to be making decisions about payment: insurance plan managers already wary of the costs of mental health care. Although Rollman, Shear, and Reynolds have not actually codified a plan to get their research in front of major insurers, they clearly consider that to be the audience to convince.

Right now, psychiatric treatment is commonly “carved out” of health insurance plans. What this means is that the insurance company subcontracts psychiatric care to another provider, paying a set per-patient fee and letting the secondary provider manage the care.

Shevchik, whose primary care practice took part in the anxiety study, has a number of patients with mental health issues. He explains that carve outs hurt his ability to make sure these patients get well.

With nonpsychiatric referrals, Shevchik can choose a specialist to recommend to a patient. For mental health conditions, he would like to do the same. But carve outs don’t allow him to refer a patient at his discretion to, say, someone who works well with depressed patients or who has a background in marriage counseling. Right now, Shevchik can only tell his patients to call the 800 number on their insurance cards for psychiatric referrals and hope things work out. Because he doesn’t know which doctor or therapist a patient will end up with, follow-up is difficult to manage.

Shevchik was very pleased about the successes of his patients in the anxiety study: “It really was a great thing. Our patients really appreciate it.” And he appreciated the collaborative nature of the undertaking as much as anything else—especially the discussions he was able to have with the other doctors. It seems straightforward to assume that communication between doctors treating the same patient is necessary for good care, but it’s something that has been largely eliminated by the way insurance companies manage mental health treatment.

During the anxiety study, one of Shevchik’s patients became suicidal. Even though the care manager was not in the office, she, Shear, and Shevchik were all in contact as they managed the crisis. The patient came through fine. Psychiatric carve outs have pretty much eliminated this kind of interaction from his normal practice. However, he says his future patients will benefit from what he has learned.

He’d love to continue using the model. But then he turns to the question that plagues Rollman: “Who’s going to pay for it? There’s no question that it works.”