Arthur is a diabetic. His doctor said he needs to exercise at least 30 minutes every day, but Arthur doesn’t like to exercise so he doesn’t. What he likes to do is sit and watch sports on TV, so he does. He typically eats a bag of potato chips as he lounges in his La-Z-Boy, and downs a few beers. He’s 40 pounds overweight, and gaining. He’s supposed to do finger sticks twice a day to check his blood-sugar level, but pricking the end of his finger is painful, so he often “forgets” to do it. Arthur is a worst-case scenario in self-management of diabetes.

“Once diagnosed, diabetics have to deal with several lifestyle changes all at once,” says Kevin Pearce, the University of Kentucky’s Michael Rankin Professor of Family Medicine. “It has been estimated that between 80 to 90 percent of type 2 diabetics don’t manage their disease the way they’re supposed to,” he adds. Type 2 diabetes, sometimes called adult-onset diabetes, accounts for 90 to 95 percent of all diagnosed cases.

At the University of Kentucky, a team of researchers is tackling the problem of
The UK diabetes study is one of several under way as part of the Kentucky Ambulatory Network (KAN) program. KAN is a primary-care, practice-based research network established in 2000 by UK in cooperation with the University of Louisville and the Kentucky Academy of Family Physicians.

KAN currently includes 127 community-based physicians, nurse practitioners and physician assistants in 37 Kentucky counties, 36 family practice faculty, and 37 faculty in other fields from UK and the University of Louisville. The network is supported by federal grants from the U.S. Department of Health and Human Services.

“_VERTEX “

“The novel part of this adherence trial,” says Matheny, “is that we’re testing the effectiveness of a support person—a relative or close friend—to ‘intervene’ to help the patient remember to take his medicine, keep doctor’s appointments, improve eating habits, encourage regular exercise, and so forth. The intervention group in this study will include this close support; the control group will not. Our goal is simply to improve adherence to treatment for diabetics to reduce their cardiovascular risk.”

“It’ll be interesting to see if a partner’s management helps a patient to be more regular in their treatments,” says Jeffrey Fox, a physician in private practice at Central Baptist Hospital in Lexington. “If we find out there’s a difference, we’ll start recruiting more friends or relatives to help.

“This study is a good opportunity for those of us in private practice—who don’t have funding to do research—to be a partner in answering important health questions,” says Fox, who earned his medical degree from UK in 1980.

“And Dr. Pearce and the UK staff have made it easy for us to participate.”

Matheny, who has served as chair of family practice since 1993, is clearly excited by what KAN can do. “It’s a grassroots approach to both science and patient care,” he says. “Its mission is to advance knowledge and to promote what are called ‘best practices’ at the primary-care level, through the study of common health problems.”

An important aspect of the network is that these health problems are discussed and treated in the settings where people get most of their health care most of the time—in the primary-care physician’s office. “We’re taking this approach,” Matheny says, “because we want to broadly represent primary-care practices in Kentucky and the patients they serve, many of whom are in rural communities.”

“Sam got us off and running with this, and it’s full-throttle now,” says Pearce, who came to UK five years ago from the Wake Forest University School of Medicine. He adds that the program got off to a good start with a little help from their friends.

“First, we simply called our medical friends in Kentucky and told them about the research network we were building. We made an appointment to meet with them and talk about how they might participate in KAN.”

“We emphasize the flexibility of the network,” says Love, who has been a UK teacher and researcher since 1992. “We make it clear that participating clinicians can be as active as they like—they can propose studies, participate in studies, or both. We want to conduct research that matters to them.”

In addition to the project on social support for diabetic patients, current
studies under way include screening for colon cancer, electronic information management, the prevalence of chlamydia (a sexually transmitted disease) among young adults in Kentucky, and barriers to medical treatments and services in the state.

One of Love’s roles in this outreach effort is informational, she says. “I talk with UK researchers to let them know about the various KAN projects. It could be that the best way for researchers to get answers to the questions they have is to work with a practice-based network.”

KAN’s first major study, which began in 2001, replicated the National Ambulatory Medical Care Survey and added four items suggested by Kentucky physicians: tobacco use, obesity (as measured by height and weight), chronic pain, and depression/anxiety. This study involved 56 community-based clinicians who collected data from around 2,200 patient visits. The study focused on the demographics of patients, their reasons for visiting a doctor and the treatment they received.

Larry Fields, a physician in private practice in Ashland, Kentucky, participated in this study. “Because it’s a broad-based approach, the research results are a lot more powerful,” he says. “With so many investigators involved, there’s now a great database available for us. I think this approach is going to be the way that practice-based research is conducted in the future,” adds Fields, a graduate of the UK College of Medicine who has been in private practice for 20 years.

One value of the data generated from this study, Pearce says, is that primary-care physicians in Kentucky can now see how their diagnoses compare with those of other physicians in the commonwealth and nationwide. Kentucky physicians can also zero-in on problems that should be targeted for more research at the primary-care level.

For example, although the three most common diagnoses in the KAN study—hypertension, respiratory infection and diabetes mellitus—are also among the most commonly diagnosed by doctors nationally, hypertension was the main reason for the patient’s visit more often in Kentucky (7.8 percent versus 5.8 percent). These relatively high Kentucky stats didn’t surprise Matheny.

“High blood pressure is a major risk factor in cardiovascular disease, which is the leading cause of death for all Kentuckians,” he says. In 1999, 27.5 percent of Kentuckians had been told at some time by a doctor that they had high blood pressure. Other risk factors for cardiovascular disease include smoking, obesity, high cholesterol levels, and lack of physical activity.

Matheny says that individual primary-care physicians can benefit from results of this first KAN study in several ways. “One interesting finding was that among Kentucky physicians, depression or anxiety contributed to 17 percent of KAN visits. So if a doctor realizes he hasn’t seen these kinds of numbers in his practice, he might want to consider whether he’s asking patients the right questions.

“In considering our contribution to this program, I like to think of UK as a university without walls,” Matheny says. “I’m passionate about this opportunity to look at a set of health-related questions from practitioners of our state. The future of medicine will clearly be improved when a community of physicians is so committed to such a strong partnership.”

“The novel part of this adherence trial is that we’re testing the effectiveness of a support person—a relative or close friend—to ‘intervene’ to help the patient remember to take his medicine, keep doctor’s appointments, improve eating habits, and encourage regular exercise.”

—Samuel Matheny