It’s been a rough stretch for McKinsey Bennett. In the last year and a half, she tells firefighters, she’s lost 50 lbs. and made more than 40 trips to the hospital. Gastroparesis has left her in near-constant pain and unable to keep food down. She’s also diabetic. At 24, she says, “I’m at the same weight I was in sixth grade.” She hasn’t worked in 10 months.

Care coordinators Ryan Dudley and Joel Willits are gentle but focused with their questions. Yes, Bennett has a primary-care doc, also a gastroenterologist. She sees them; they talk. She’s learning what makes her GI pain better and worse (yogurt is good, pineapple juice bad). She knows diet is her key to staying out of the hospital—one wrong thing can set it off—but osteomyelitis in both feet makes shopping hard. The only family around to help is her mother, a flight attendant who’s often gone.

The firefighters say they’ll help connect Bennett with a nutritionist, and Dudley offers to drop off some healthy-eating books that might help. She’ll also be trying a liquid diet. These aren’t definitive solutions, but they might help Bennett call 9-1-1 and go to local hospitals a bit less as doctors work on her problems. “I’ll take all the help I can get,” Bennett says, frustrated. “It’s been two years of a lot of rigmarole.”

Nonemergency Medical Services
Young, sharp and engaged in her own care, Bennett isn’t the kind of patient you typically associate with community paramedic-type programs. But when her relentless GI pain drove her to summon 9-1-1 and
visit local emergency departments enough times, she caught the attention of the local Kent (WA) Fire Department RFA.

Kent’s FD CARES program (CARES stands for Community Assistance, Referrals and Education Services) aims to get chronic users of 9-1-1 and other local emergency services to use those services less. It does this by helping them meet their nonemergency and low-acuity needs through more appropriate means. In half a year or so working with Bennett, its care coordinators have helped cut her calls, though she sometimes still takes herself to EDs. Their visit in May was a proactive one just to check for any signs of trouble.

In Kent like everywhere, there are a lot of people like Bennett: overwhelmed by multiple issues, nowhere but 9-1-1 to turn.

“The vast majority of these people know they need help and are accepting of it,” says Division Chief Mitch Snyder, who drove the creation of FD CARES and now oversees it. “We don’t want to be their case managers. We just want to be the hub of the wheel that gets everybody connected.”

In Kent like everywhere, there are other resources that can help people like Bennett—once those people are familiarized and connected with them. You can call EMS and fire departments doing this community paramedicine or mobile integrated healthcare; Kent prefers nonemergency medical services. Over the last several years the department has developed a sophisticated method of identifying patients who can benefit from it and an extensive array of partners to support its delivery.

The expected payoff is cost savings across the system, but the approach also furthers the other Triple Aim goals of better care for individuals and better health for populations. In an era that increasingly values patient experience, it leaves folks satisfied.

“I think this has to be an example of how we want our healthcare system to be successful in the next 5–10 years,” says Cameron Buck, MD, ED medical director at the University of Washington’s Valley Medical Center, which is working with Kent on a pilot to bring nurses to the field. “You have to have a win for the patients—they have to get better care in their healthcare system. Part of that means being satisfied with that care, and sometimes it’s not satisfying for patients to go to the ER when they’re not sure what to do. It takes time and effort, and they don’t really get answers to their questions.

“It has to be a win for the payers, even if we don’t want to say that. If the payers can win by better resource utilization, and we can document that in outcomes and analytics, then programs will grow. And it has to be a win for the providers, meaning the fire department, the hospitals and the clinicians. They have to feel they’re making a difference and getting fairly compensated for their decision-making and intelligence product.”

If FD CARES can achieve all that, it can be an important national model for EMT-level NEMS. And in fact, replicability is at the heart of its design.

**Freedom to Problem-Solve**

FD CARES emerged from a pair of earlier Kent programs, one that focused on fall prevention and one for frequent callers. Those programs met patients’ immediate needs but couldn’t address their underlying causes.

They were ultimately combined, and their services expanded to help any resident who might benefit from illness and injury prevention. Now Kent’s FD CARES unit, CARE71, operates 24/7, and around 30 of the department’s roughly 250 members spend time on it.

These “care coordinators” can connect patients with physicians and specialists, mental health and sobriety and other social services, and other professionals and resources that might help (like a nutritionist for Bennett). They can work with payers for needed equipment and obtain and install and teach people to use it. They can help patients seek temporary shelter and low-cost meds.

“For our younger folks, it offers a lot of freedom to problem-solve,” says John Willits, the department’s deputy chief for operations (and Joel’s father). “It can be a great opportunity; some guys really rise to the occasion and get good at it. Problem-solving is a big part of what I see us doing.”

**Graphics on the supervisor’s vehicle help promote the FD CARES program’s services.**

John Erich
Capt. Ray Shjerven’s first shift on CARE71 featured a 9-1-1 call from a woman whose main complaint was sore throat and nasal congestion. Now, at 10 p.m. on the third day of it, she wanted to go to the hospital.

“I told her, ‘You don’t really need to go to the hospital; you need to see a physician. Why did you wait until now?’” recalls Shjerven, also the head of IAFF Local 1747, which represents Kent personnel. “She said, ‘Well, my mother arrived, so now I have child care.’ That was the issue for her. I asked her if we could schedule a cabulance [an alternative nonemergency transport option offered by local ambulance partner Tri-Med] for her the next morning. My partner called Tri-Med and set up the pickup time, and they came and took her to a local clinic and back.

“I don’t know who her insurance company was; I just know she had struggles she couldn’t get around,” Shjerven adds. “It took us probably 20 minutes to navigate her to an appropriate facility, and she left as a happy customer.”

And Shjerven as a happy provider: “What I remember when Ray came back,” says Chief Jim Schneider, “was that he said it was one of the most satisfying calls he’d ever had. Because he’d actually accomplished something for somebody, and gotten them into the system and navigated them to a resolution.”

Currently, Snyder says, while crews are still learning the full complement of resources and where to best steer patients, they’re navigating about 30% of the patients they see. Kent figures this saves $70,000–$80,000 a month.

**The Data Does Your Assessment**

These aren't unusual types of activities for CP-MIH programs. What makes FD CARES unique is its foundation in data.

“We tell other departments, if you’re going to do this, you need to understand the patients you’re seeing,” says Snyder. “Fix your data collection systems and understand what your data says. You hear in all these seminars that you need to do a community assessment; we say the data does your community assessment. If you look at your data properly, you’ll see where your problems are and what needs to be done.”

For Kent that started with identifying its highest utilizers. Originally firefighters had just referred patients into the program, but most of those turned out to be one-time callers. So department data guru Randy Droppert was charged with combing the records to find the real biggest users.

Droppert gathered the department’s most recent few years of 9-1-1 responses, excluding nonmedical, trauma and MVCs, then went through a painstaking process of detecting variations in spelling and other slight differences that might make one patient look like two. “We had one person whose name was spelled 18 different ways,” Droppert recalls, “with multiple calls under all 18.” When those identities were correctly merged, the patient became a high utilizer, with around 150 calls in a year and a half.

The other half of the equation was getting data from hospitals on patients who arrived by means other than 9-1-1. To identify who was taxing the community’s health system, those had to be accounted for too.

With those numbers combined, a true portrait of gaps emerged. And truthfully, it wasn’t much different than most systems’. But it put names and faces and addresses on the issue, a necessary step toward resolving them.

“You hear people say communities are different, so every program needs to be different,” says Snyder. “We have a different belief: We don’t think communities really are that different. One community might have a higher count of a particular patient type—for example, San Diego may have more homeless patients than us, or the Phoenix area might see more Medicare-aged patients with age-related illnesses—but that doesn’t mean other communities don’t have those patient types. They just have have them in different numbers.”

Having found these patients, the next challenge was tracking them. The department needed a database system that allowed ongoing chronicling of individuals’ complete system use without the possibility of missed visits or unreconciled alter egos. Local number-crunchers at the University of Washington’s Department of Biostatistics also said their case volume alone wasn’t large enough to draw meaningful conclusions about interventions and their benefits.

What they thus needed, Kent leaders realized, was a standardized framework that could be used by any department to collect and combine the same data the same way, thus providing hundreds of thousands of aggregate data points by which to evaluate problems and remedies. They hired a program writer to build one.

The result met Kent’s needs and is now offered to other departments. It allows any department that implements it to keep using its current records management system and cleans the data as it’s imported from Excel, then identifies high utilizers along with info like call complaint, provider impressions and incident disposition.

FireTrex helped Kent bring it to the field through a Web-based application that lets crews see past calls and dispositions and update with additional visits and new information from both 9-1-1 calls and proactive visits.

A tiering system helps prioritize crews’ attentions (see sidebar). It has multiple levels based on frequency of use of 9-1-1, EDs, other hospital care, etc. Tier #1 patients have used 9-1-1 or a hospital...
emergency department 25 times or more in 12 months and are so the highest priority for FD CARES intervention. To further hone in on who can be helped and how, each tier is further divided into categories, segregating fall patients, diabetics, neurological cases, 30-day readmits, etc.

“Everything needs to be data-driven,” says Snyder. “If every system across the nation were sharing this data on the backside, we could say things like how many mental health patients are high utilizers in this dispatch category and tier across the nation, and we would be able to identify that there’s a gap in the care of mental health patients. “We know that; everybody knows that. But this type of data sharing, at very low cost, with large numbers, is what we believe is really going to drive national healthcare change in EMS.”

The whole point to this approach is to cast the widest possible net. If you’re only looking at certain patient types, Snyder says, you’re not utilizing your system to its highest capacity.

Take homeless patients. They often burden 9-1-1 systems with nonemergent needs. But even if they’re transported by ambulance to an emergency department, they’re relatively low-cost patients to the system as a whole. Mere blocks away, meanwhile, could languish a complex Medicare patient with COPD and more who has multiple hospital discharges and 30-day readmissions. “That patient is a very expensive patient,” Snyder says, “and truly has a medical need that isn’t getting attention unless you’re looking at every patient a system has.”

A number of other departments in Washington have signed on to participate with the FD CARES program, along with others from Colorado, New Mexico and Hawaii. (For more: www.fdcares.com.)

‘Overwhelmingly Positive’

After their morning visit with Bennett, Dudley and Willits go to see Susan White. White’s problem is her knee. She had it surg-

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### Determining Patient Tiers and Categories

Kent’s FD CARES program uses the following algorithm to place patients into tiers, thus determining their priority.

1. Has the patient had 25 or more responses (not counting home visits) in the past 12 months?
   - Yes: **Tier #1**
   - No: Go to question 2.

2. Has the patient had three or more responses (not counting home visits) in the past 12 months?
   - Yes: **Tier #2**
   - No: **Tier #3**

3. Has the patient had four or more transports to the emergency room in the past 12 months?
   - Yes: **Tier #4**
   - No: **Tier #5**

4. Has the patient had four or more transports to the emergency room in the past 30 days?
   - Yes: **Tier #6**
   - No: Patient is not in a tier.

If the patient falls into a tier, they then have a category determined. That’s done through a second algorithm using description codes from import data. Categories are calculated in the following order:

**Category 9:** Mental illness
1. Anxiety
2. Depression
3. Other psychiatric

**Category 1:** Referred patient
Identified by manual entry in patient’s profile

**Category 2:** Fall patient
1. Trauma (use trauma tab)
2. No injury or illness

**Category 3:** Diabetic patient
1. Hypoglycemia—caused by insulin
2. Hyperglycemia (>300)—patient is diabetic
3. Hyperglycemia (>300)—patient is not diabetic or unknown
4. Dialysis problem
5. Other metabolic/endocrine (nondiabetic)

**Category 4:** Medicare readmit patient
1. Suspected MI—STEMI
2. Suspected MI—other
3. CHF
4. Asthma
5. Emphysema/COPD

**Category 5:** Neurologic patient
1. Seizure
2. Syncope
3. Suspected CVA
4. Suspected TIA
5. Other neurologic

**Category 6:** Other
All remaining call descriptions not identified above.
If you call 9-1-1 and enter an ED, you're by family members, firefighters or other through the 9-1-1 system or be referred CARES program. They can also come substantially—up to sixfold, Snyder estimated. Other than that, as long as you're utilizing our system, our data will tell us whether you need assistance.

On the day the crew visited White, there were no patients in Tier #1—they'd all been visited, and their overuse rectified. That let focus fall to the Tier #2s—those who'd used 9-1-1 three or more times and local EDs four or more times in 12 months.

In addition to scheduled visits, CARE71 goes on select 9-1-1 responses; dispatchers determine acuity and send it with a code for nonemergent calls. The non-driving member calls the patient en route to verify the nonemergency, provide an ETA and make sure they're comfortable.

“Getting a phone call after you call 9-1-1 is sort of a new model,” notes Capt. Matt Madlem, an FD CARES supervisor. “Lots of folks don't know they're going to get that, and when they do it's comforting. The response in folks' homes has been overwhelmingly positive.”

King County is a tiered system, with paramedics separate from the fire department; FD EMTs on BLS calls can upgrade to ALS (via King County EMS) if needed or down-grade to NEMS if appropriate. CARE71 can also upgrade. Tri-Med provides supporting ambulance and cabulance transport.

Tending toward caution, dispatchers still often send BLS responses to NEMS calls. If that can be reduced, savings will increase substantially—up to sixfold, Snyder estimates, if all calls can be correctly classi-fied and all patients successfully navigated. “Right now they're missing about 50% of the responses this unit could go on,” Snyder says. “Roughly 10% of our call volume gets that type code, and they're missing about half. But we're comfortable with that in these early stages because this unit is very busy already.”

It fixes White's problem, though, as Wil-lits attaches an elevated seat to her toilet. “I wish I'd called before I spent money on the bars in the bathroom, because maybe they'd have given them to me for free,” White chuckles. “You wouldn't expect there's a part of the fire department that could do that for you. For elderly folks who don't know what's going to prevent them from falling, I think it's perfect.”

Moving Forward
In an effort to further improve FD CARES' results, Kent is experimenting with some additional tweaks over the second half of 2015. In partnership with King County EMS and the county mental health department, an effort began in July to utilize a master's-level social worker to help build out its array of resources and utilize them optimally.

“We give it our best effort with the assistance of the King County mobile crisis team and crisis center, but we're not social workers—we're not treating at that level,” says Madlem. “We think an MSW will be a big benefit in helping us determine what care should be for those patients.”

One thing that does differentiate systems is the number and types of resources for nonemergent patients they have in their communities. Overnight, Kent sometimes has to send patients up to Seattle, where the nearest 24-hour facilities are. A planned sobering center in town can't open fast enough. “The only reason people go to the ER is because there are no alternatives,” says John Willits. “If we had a place we could navigate them—just an urgent care that was open 24/7—we could fill it.”

Another plan will bring nurses to the field; UW Valley Medical Center and Pre-mera Blue Cross are funding that. There have also been chats with ACOs.

Tri-Med has been a valuable partner on the transportation side, but it doesn't get paid for alternative destinations. Legislative efforts are afoot to change that. Telemedi-cine may become an option through talks with a company in Seattle. As the regional administrative provider for the EMS system, countywide programs, and a local ALS provider, King County EMS is tightly linked with Kent and FD CARES. It's experienced with similar programs, hav-ing trialed community medical technicians to answer low-acuity calls back in 2011, then in 2012–13 testing their referral of patients to community resources. Its current third CMT pilot was developed with an eye toward greater integration with county fire departments.

CARE71's last call of the day isn't a pro-active visit. Instead it's summoned to assist with a 9-1-1 call that's ending in an involuntary psych commitment. A woman who's the sole caregiver to a mother in decline is at the end of her rope and threatened to shoot herself.

PD and another ambulance are already on scene. The woman weeps in the back of that rig. She doesn't want to talk. Willits and Dudley head inside to deal with mom. Mom is lovely and sweet and cooperative but has no idea. My daughter takes care of me, she tells them. Your daughter probably won't be home tonight. Is there someone else? There isn't.

Meanwhile, officers quietly perform a cursory search for firearms (result: none) and Madlem employs a smart trick, going to the kitchen in search of a current wall calendar. It's there above the sink, open to the right month and showing notes, numbers and other signals of activity—a positive sign the woman has some functioning circle of family/friends/caregivers. A sticky note bears a name and number labeled social worker. They ask mom if she has a social worker. She says no.

This isn't a call like White's, that can be resolved here today. This is a “best we can do for now, let's get her through the night” kind of call. Substantive help for mother and daughter will take time.

They leave a message for the social work-er. They knock on the door across the hall and ask the neighbor there if she'll check in on mom once or twice during the evening. Tomorrow morning the crew of CARE71 will stop back by. ©