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'Sickest of the sick': Caring for patients who account for lion's share of costs

New Intermountain clinic may hold key to making health care cheaper — and change the way it's delivered

By Daphne Chen , Deseret News
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Health care advocate Misty Porter talks with Tamara Barbieri at Intermountain Medical Center in Murray on Wednesday, Nov. 25, 2015. Intermountain has been running an experimental clinic for two years attempting to find a solution to "hotspotters" — the small percentage of patients that cause the most amount of cost to a health system. (Jeffrey D. Allred, Deseret News)

MURRAY — Tamara Barbieri is warm and personable and smart. She never thought her life could unravel as quickly as it did, starting in 2000, when she was hit by a series of medical problems.

By the time she was in her early 50s, Barbieri had diabetes, degenerative disc disease, kidney disease, liver disease, congestive heart failure and chronic pain — to name just a few.

She was so sick that her primary care physician recommended her for an experimental clinic at Intermountain

Healthcare. The clinic specializes in treating what health providers call "hot spotters" — the small percentage of patients who account for as much as half of what Intermountain spends on patient care.

"They are the sickest of the sick," said Dave Henriksen, who oversees operations at the clinic.

Yet a team of doctors, nurses, pharmacists and researchers at Intermountain believe these patients — known in the industry as "super-utilizers," "frequent fliers" or "hot spotters" — hold the key to making health care cheaper for everyone, and may change the very way it's delivered.

'I want to be done'

The Comprehensive Care Clinic is tucked away at the far end of the third floor of a nondescript office building at Intermountain Medical Center in Murray.

Henriksen and Dr. R. Neal Davis,

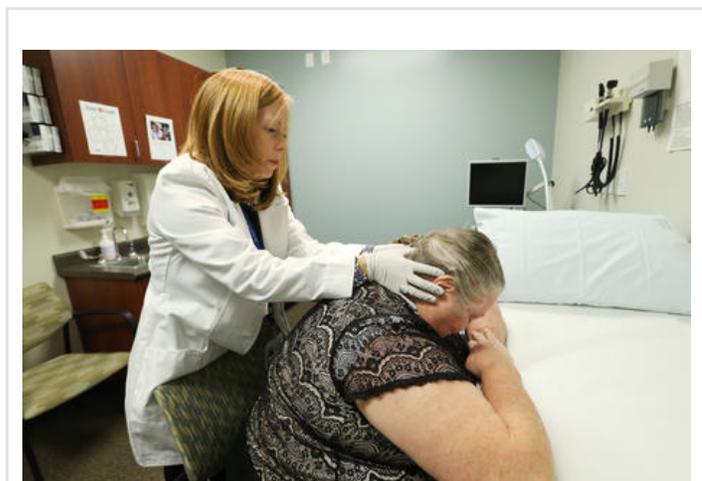
the medical director of the clinic, were inspired by the work of Dr. Jeffrey Brenner, who pioneered hot spotting in Camden, New Jersey, one of the poorest cities in the U.S.



Tamara Barbieri talks about her numerous medical issues at Intermountain Medical Center in Murray on Wednesday, Nov. 25, 2015. Intermountain has been running an experimental clinic for two years attempting to find a solution to "hotspotters" — the small percentage of patients that cause the most amount of cost to a health system. (Jeffrey D. Allred, Deseret News)

Brenner found a pattern: A small group of patients were ending up in doctor's offices and local emergency rooms again and again, driving up health care costs while never seeming to get better. They described being shunted from doctor to doctor, taken on and off Medicaid with little explanation, or given complex care plans from different specialists that they had no way of managing.

Researchers at Intermountain, looking at their own numbers, found that 1 percent of patients accounted for 24 percent of patient costs. The top 5 percent accounted for nearly 51 percent of costs.



Neurologist Alyssa Lettice prepares Tamara Barbieri for Botox injections to relieve her migraines at Intermountain Medical Center in Murray on Wednesday, Nov. 25, 2015. Intermountain has been running an experimental clinic for two years attempting to find a solution to "hotspotters" — the small percentage of patients that cause the most amount of cost to a health system. (Jeffrey D. Allred, Deseret News)

"Even for us in the state of Utah, where we have some of the lowest health care costs in the country, we had the same proportions," Henriksen said.

So they began recruiting patients, looking for those who had been in the top 10 percent of costs for the past two out of three years. They screened out patients who were receiving cancer treatments or organ transplants. And they looked for patients for whom Intermountain bore "full financial risk" — people on the SelectHealth insurance plan,

Medicaid, or the uninsured.

What they found stunned them.

The average hot spotter had 15 active medical problems and took as many as 20 or more medications. They had diabetes and heart disease and lung disease — and often all three. They tended to have multiple physicians, who prescribed them a multitude of treatment plans. They were in and out of the hospital and emergency room constantly. Some had been to the ER upward of 130 times in a year.

"I was truly surprised — the extent of



substance abuse, the culture of utilizing the ER or InstaCare on a continuous basis," said Dr. Regina Drueding, one of the clinic's two physicians.

But above all, she said, mental health issues were "the common denominator."

Barbieri was a classic example. The school teacher from West Jordan was born with one kidney, which doctors didn't discover until too late.



Tamara Barbieri hugs grandson Trenton Barbieri while waiting to see a doctor at Intermountain Medical Center in Murray on Wednesday, Nov. 25, 2015. Intermountain has been running an experimental clinic for two years attempting to find a solution to "hotspotters" — the small percentage of patients that cause the most amount of cost to a health system. (Jeffrey D. Allred, Deseret News)

By the time Barbieri entered the clinic, kidney failure had turned into liver disease, pulmonary disease and congestive heart failure. Neuropathy had set into her hands and feet. She was taking 15 medications, consisting of 23 pills a day. She was seeing her primary care physician every week and a specialist every other week.

The paperwork piled up — for her insurance, for her oxygen tank, for her lab results. Barbieri's teacher pension disappeared, swallowed by the bills for insulin that gave her rashes and lab tests that didn't make her better. Barbieri used to organize the canned food drives at her school. Now she and her husband were standing in line at the food bank.



Tamara Barbieri has Botox injections to relieve her migraines at Intermountain Medical Center in Murray on Wednesday, Nov. 25, 2015. Intermountain has been running an experimental clinic for two years attempting to find a solution to "hotspotters" — the small percentage of patients that cause the most amount of cost to a health system. (Jeffrey D. Allred, Deseret News)

going to make it," Barbieri said. "I want to be done."

Anxiety and chronic pain made things that much harder.

"I hurt a lot," Barbieri said. "And I'm not as nice a person as I should be."

By the time she was recruited into the clinic, she had lost control — medically, financially, mentally and emotionally.

"I told my family, 'If I'm here at 60, I'll be really lucky. I don't think I'm

Payment model

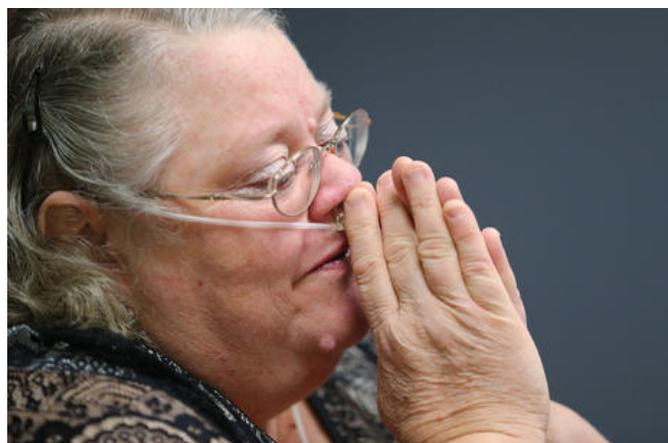
It's not that these super-utilizers are taking advantage of the system, said Brenner, the Camden doctor who made hot spotting famous. Instead, it's a system that fails these patients.

"Let's break it apart here," Brenner said. "When I was in practice, the faster I'd run from room to room to room, the more money I'd make. When I stop and I talk to people, I lose money."

Health care has evolved, sometimes grotesquely, around this fee-for-service payment model, Brenner said.

He described one patient — middle class, with a master's degree, getting care in a five-hospital integrated system — who received 147 CT scans in the span of a few years.

Brenner's hot spotting team, which includes a psychologist, talked to the patient. They found out she had an



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anxiety disorder that she was self-treating by repeatedly going to doctors. "They just had to click a tab in the electronic health record to see the CT scans," said Brenner.

Instead, each doctor just kept ordering more.

"If you're complicated, if you're sick, if you're older, if you don't speak English, if you're poor, if you're homeless, if you're drug-addicted, if you're mentally ill — the whole thing starts to crumble," Brenner said.

At Intermountain, researchers found that the top 100 patients who were eligible for the hot spotting pilot program consumed \$10.5 million worth of health care over three years.



Tamara Barbieri's oxygen tanks are seen at Intermountain Medical Center in Murray on Wednesday, Nov. 25, 2015. Intermountain has been running an experimental clinic for two years attempting to find a solution to "hotspotters" — the small percentage of patients that cause the most amount of cost to a health system. (Jeffrey D. Allred, Deseret News)

To tackle the issue, they remade the Comprehensive Care Clinic from the ground up.

One of the first changes was to make all doctors salaried. That means each clinic doctor sees an average of four patients a day, for an hour each. By comparison, the average physician in the U.S. sees [20 patients a day](#) for about 20 minutes apiece.

Doctors at the Intermountain clinic also conduct phone visits. In fact, more than half their visits are not conducted face to face.

They are supported by a full-time pharmacist, who sorts through the patients' pills and checks if doctors have prescribed the same medication or conflicting medications.

Two social workers, a psychiatric nurse and a care manager are also tasked with helping patients. That includes cognitive therapy, handling insurance, coordinating care

between specialists and making sure patients have access to transportation and phones.

Nearly every patient at the clinic also has mental health issues, ranging from anxiety to depression to bipolar disorder. So doctors and their patients spend 90 percent of the visit "just talking," Davis said.

The consultation rooms, which are large and inviting, are designed for this purpose.

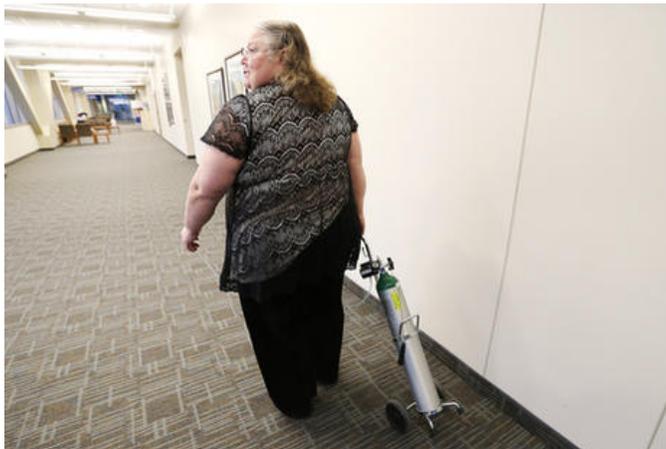
Medicare and the Affordable Care Act are increasingly pushing health providers away from the fee-for-service system and toward a system that pays based on quality of care.



Tamara Barbieri talks about her numerous medications while at Intermountain Medical Center in Murray on Wednesday, Nov. 25, 2015. Intermountain has been running an experimental clinic for two years attempting to find a solution to "hotspots" — the small percentage of patients that cause the most amount of cost to a health system. (Jeffrey D. Allred, Deseret News)

"If someone hands us a check and says, 'Take care of your community,' do we have a good process in place when that switch is pulled?" Henriksen asked.

He's working on it. Still, it's not easy — or cheap — to change the system.



Tamara Barbieri walks to a doctor's appointment at Intermountain Medical Center in Murray on Wednesday, Nov. 25, 2015. Intermountain has been running an experimental clinic for two years attempting to find a solution to "hotspots" — the small percentage of patients that cause the most amount of cost to a health system. (Jeffrey D. Allred, Deseret News)

"This clinic loses money hand over fist," Henriksen said. But "this is the stuff that makes the most difference."

'Pirates and renegades'

Early results from the clinic are encouraging.

ER visits are down. Costs are down. And survey results show that half of the patients report better health and 80 percent reported more confidence.

Other hot spotting studies have also shown promise.

A [report](#) combining the outcomes of five hot spotting programs in Pennsylvania showed that inpatient admissions dropped by 52 percent and ER visits dropped by 21 percent.

A recent analysis of a similar program at Stanford Medicine showed that use of the ER decreased by more than half and hospital admissions decreased by nearly a third, according to clinic director Ann Lindsay. And the overall cost of care decreased 13 percent.

But researchers warned that the data should be taken with a grain of salt. Sophisticated statistical modeling is needed to prove that the improvement isn't just what statisticians call "regression to the mean" — the phenomenon that patients usually get better over time, even if they don't get treated.

"Across the country, this is the big thing," said Davis, who added that Intermountain researchers are working on the problem. "Stanford, Harvard, they couldn't tell us how to do it."



Tamara Barbieri looks over her numerous medical supplies at Intermountain Medical Center in Murray on Wednesday, Nov. 25, 2015. Intermountain has been running an experimental clinic for two years attempting to find a solution to "hotspots" — the small percentage of patients that cause the most amount of cost to a health system. (Jeffrey D. Allred, Deseret News)

The solution would be a large, randomized controlled trial — but that's both time-consuming and costly.

Last year, Brenner and the community-based Camden Coalition partnered with star economists from the Massachusetts Institute of Technology to design the only randomized controlled trial of hot spotting. It is almost certain to be a groundbreaking study — if it's ever completed. They're halfway through their research, but their federal grant runs out Dec. 31. Now Brenner's scrambling in one of America's poorest cities to piece together the remaining funds.



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"What Intermountain is doing is really important, because we're like a band of pirates and renegades here in Camden," Brenner said. "I don't have the resources to figure this out. The fact that Intermountain is committing the resources, the time, to figure this out is huge."

That's the road ahead for Henriksen and Davis, who hope to have results to share by mid-2016.

For Barbieri, her job is different, but no easier: to get healthy again.

A visit to the clinic typically takes

three to four hours. "Dr. Drueding starts at the tip of my toes and goes clear up to the top of my head," Barbieri said.

She saw a dietician. She met with the pharmacist. She worked with the clinic's community pharmaceutical representative, who helped Barbieri get thousands of dollars of savings — discounts she's always been eligible for but never had the time to go after herself.

And then there's the therapy.

"They sat down with me," Barbieri said, describing how a counselor guided her through a chronic illness management course and had her write her feelings on a blackboard. "Why I felt angry, why I felt depressed, why I felt frustrated, or helpless, or hopeless. That really helped me."

Since she joined the clinic, Barbieri's breathing has improved. She's cleared the fluid from her body and no longer suffers from congestive heart failure. And the chronic pain that she used to rate an 8 or 9 on a 10-point scale has been cut to 3s and 4s.

Somewhere along the way, Barbieri said, something changed.

"For a long time, I thought I was a sick person," she said. "But now, I'm a person who's sick." She wondered if that made sense. "I'm a person, and I can do something about it."

Barbieri adds that she hopes to see her granddaughter, who is 2 years old, go to prom.

Spreading her arms wide, Barbieri smiled. "I feel like I can live," she said.

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