



n the fourth floor of the Given Building at the Larner College of Medicine, Adam Atherly, Ph.D., surveys the space outside of his newly-painted office. Two adjacent doors open into rooms with empty desks. A common area includes space for a few more cubicles with top-notch views of the Green Mountains. In one corner, a coat rack hangs on otherwise empty walls. Outside the glass door, a sign reads: UVM Center for Health Services Research. Although the offices may be a work-in-progress, the mission for the new center is clear: Foster cutting-edge research that improves the delivery of healthcare, leading to better population health in Vermont and across the country.

As the first director of the Center for Health Service Research just a few months into the job, Atherly sees the space as brimming with possibility. Soon enough, the cubicles and offices will be filled with analysts and researchers. Faculty from across the university will be stopping in for statistics suppor and consultation on their work. Brown bag lunche hosted by the center will allow faculty from across disciplines to get to know each other and find new collaborators from across the university.

"We want to help researchers who've got clinica and policy-relevant questions build good research design, work with data in appropriate ways, and publish their research in leading scientific journal says Atherly, who was hired in February of 2018 af a national search.

Adam Atherly, Ph.D., founds the UVM Center for **Health Services Research** to identify new solutions for improving care.

BY ERIN POST

es	The time is right to focus on health services
	research, as Vermont is embarking on a bold
	experiment in healthcare reform. The state is one
	of two that has received a waiver from the federal
	government to create an all-payer system, shifting
t	from fee-for-service to a value-based model over
S	time. As the state's sole medical school, the Larner
6	College of Medicine has the opportunity to become
	a national leader in evaluating how the delivery
	of care affects health outcomes. What happens in
ally-	Vermont could inform the country's trajectory.
L	This shift in state policy, combined with Vermont's
	relatively small population, proximity to other rural
s,"	populations in neighboring states, and unique acces
ter	to data, make it a prime location for studies focused
	on health services. >>



Senior Associate Dean for Research Gordon Jensen, M.D., Ph.D., sees the Center for Health Services Research as a catalyst for collaboration among investigators affiliated with the center, making the College even more competitive for large extramural grants.

"By bringing interdisciplinary skills together, we have greater strength," he says. "I'm very optimistic about where we're going. I think we'll be able to compete for major funding opportunities that ultimately will pay big dividends for the health of Vermonters."

Jensen's vision extends to northern New England. With New Hampshire, Maine, Vermont and northern New York all delivering healthcare to rural populations in different ways, the region "allows a beautiful model for looking at the impact of new, innovative health services and programs on outcomes."

UVM Medical Group President and CEO Claude Deschamps, M.D., points to the new center as a "solution shop" to help researchers access data and develop rigorous research projects. The UVM Health Network — which now extends through much of northern Vermont and into the upper reaches of New York State - offers boundless opportunities to ask good questions that lead to innovation in the ways health care is delivered.

"I think we have something to teach the rest of the world," he says. "Through publishing research we can educate others."

This living laboratory is in part what prompted Atherly to take on the leadership

role at the College; as the director of the new center, he's in a prime position to drive the national conversation on population health, which focuses on improving outcomes across a group and addressing disparities between groups.

"There's the opportunity here, given the uniqueness of the state, to build a data system that will allow us to do population health research that would be hard to match anywhere else in the country," he says.

Building a Center from the Ground Up

Atherly comes to Vermont with a track record of success. Considered a national expert on the Medicare system and its effect on health outcomes, he's been consistently funded since 2002 by agencies including the Centers for Disease Control and Prevention, the NIH, the Centers for Medicare and

> Medicaid Services, and the Robert Wood Johnson Foundation. His research spans numerous methodological and topical areas, including healthcare spending and expenditure modeling, scale development and psychometric analysis, evaluation of efforts to improve quality of care and patient safety, and cost-effectiveness analysis.

At the Colorado School of Public Health, Atherly was the founding chair of the Department of Health Systems, Management and Policy. His work recruiting leading investigators and building the infrastructure for a successful research program helped

Center for Health Services Research

Mission.

The mission of the center is to facilitate and conduct rigorous quantitative health services research using secondary data. Our research is clinically and policy relevant and focused on the discovery of new knowledge to enhance quality, value, and satisfaction in the healthcare system. Our research draws lessons from healthcare reform in Vermont to healthcare reform efforts in other states at the national level and internationally.

Vision.

To use secondary data to make causal inferences about how to change the healthcare system to improve the health of the population.

to propel the department onto the national stage, even as he continued his own research into the economics of aging and consumer decisions regarding health plan choice. This research has made him a soughtafter speaker: He's presented his work at more than 75 national and international professional meetings.

In his first months at UVM, he's met with as many researchers as possible from across the University, sharing the broad goals for the center and getting input on its mission and vision. Atherly points out that the vision statement that has emerged -- "to use secondary data to make causal inferences about how to change the healthcare system to improve the health of the population" - is very much focused on action. The inclusion of "causation" was intentional: The goal is to show how an action leads to an outcome, providing clear evidence for intervention or policy change.

"There's a perspective that you can never do causation without randomization," he says. "Health services research says you can if you do a good quasi-experimental design."

Key to crafting that design is the availability of data, and Vermont has it in droves. Atherly points to the Vermont allpayer claims database, or VHCURES - which is housed at the Larner College of Medicine and includes almost the entire population of the state — as one potentially rich source of data. The fact that the UVM Medical Center provides care for a very large percentage of the region's population is also a benefit, as

electronic health records provide another key resource for researchers.

With the volume of data, and the broad scope of inquiry that health services research encourages, investigators have a wealth of opportunities to collaborate and ask questions of the medical system and beyond.

"There's a lot of talk around the medical center about the effect of housing on health outcomes. That's a health services research kind of question," says Atherly. "We might look at costs. We might look at quality of life. We might look at satisfaction. There's a whole range of life outcomes that we can explore."

"A Strength of the College"

In his new role at UVM, Atherly is quick to point out that he joins colleagues who are already leading the way in the field.

"We're starting a center, but we're not starting health services research. The Dean's Office believes about a third of all the research in the college right now is health services research. So it's already a strength of the college, but it's a hidden strength. We want to bring this strength to the surface, make it more visible, bring together people who are working separately. We're building an infrastructure that can connect people."

UVM Professor and Chair of Biochemistry Gary Stein, Ph.D., director of the UVM Cancer Center, is one such leader. He's a principal investigator for a five-year, \$20 million NIH Clinical and Translational Research grant that is funding a joint program between UVM and Maine Medical Center to develop the Northern New England Clinical and Translational Research Network, which will build capacity and foster collaboration to address health problems endemic in northern New England, including addiction, cancer, and cardiovascular disease, as well as the barriers that compromise rural health care delivery.

Stein says the Center for Health Services Research comes along at the right time to provide important support to researchers.

"What we really need to understand is how do we fulfill our responsibilities as a medical center? As a cancer center? As a cardiovascular center? As a pulmonary center? As a behavior and health center dealing with problems that relate to addiction? The Center for Health Services Research is positioned to be able to identify and frame the questions that can be asked, that should be asked, says Stein.

Another leader in health services research, UVM Henry and Carleen Tufo Professor of Medicine Benjamin Littenberg, **M.D.**, has been working in the field for over

Program.

"We teach students about large data sets, which are the backbone of health services research," says Littenberg. "Our emphasis is on how to learn from humans and populations about how best to take care of individuals and populations."

The Center for Health Services Research stands to help students hone their research questions, find collaborators, and provide support for data analysis.

The State of Vermont and Beyond

"This is probably the best area of College of Medicine, and the University. Bar none," Jensen says. "The medical center and the health network are very interested in health quality, and health quality and health services research you can really view as part of a continuum. We can share our investment and share our resources."

The Center for Health Services Research promises to bring together regional institutions all looking to improve the delivery of care, says Gordon Jensen, amplifying their collective effect. alignment of interest between the medical center, the health network, the Larner

UVM Associate Professor of Hospital Medicine Allen Repp, M.D., expects the medical center's leadership on quality improvement — which is focused on prospectively applying evidence to improve clinical practice — to inform the work of the center, and vice versa. As vice chair of quality for the Department of Medicine and director of the primary care internal medicine unit at UVM Medical Center, he sees plenty of opportunities for collaboration across the UVM Health Network.

"As we move towards an integrated electronic health record, we'll have a wealth of data from all of these different sites that we can leverage," he says.

In addition to an educational mission, there will also be a connection to state policy makers. UVM Associate Dean for Primary Care Charles MacLean, M.D., says the center is poised to conduct research in real time as Vermont continues to implement changes in how healthcare is paid for and delivered. The Green Mountain Care Board, the Vermont Department of Health, and other state and regional health agencies will all be important partners.

two decades, publishing important work on the management of chronic conditions like diabetes, asthma, and obesity. He also trains Ph.D. and master's degree students in UVM's Clinical and Translational Science



"How should we deliver care; what can we

learn about quality of care; do we need more capacity in certain areas? We'll be able to answer those kinds of questions, and we'll have the data to be able to back up decisions," says MacLean.

The Road Ahead

Atherly expects to be conducting many interviews in the months ahead, with two new faculty hires planned for the next year. He'll be bringing on several programmers as well as claims analysts, data specialists and faculty with expertise in fields including rural health, genomics, pediatric health services research and quality of care. The center's first new member — Eline van den Broek-Altenburg, Ph.D. — arrived in June of 2018. An assistant professor of psychiatry, she completed her doctorate in health services research with a focus on economics and biostatistics.

In Vermont, she's looking forward to having plenty of collaborators and colleagues to help puzzle through these research questions and more.

"There's so much data and so much to study and figure out. And there are so many enthusiastic people who are thrilled to have you working on those things. It's a really great environment." VM

Healing Communities

As the Larner College of Medicine continues to focus on research related to health services and population health, the UVM Health Network, under the leadership of Chief Population Health and Quality Officer Steve Leffler, M.D., is partnering with local social services agencies to offer programs that address non-medical contributors to poor health and preventable disease.

For example, Housing as Healthcare helps provide housing and support services for individuals experiencing chronic homelessness or living in unsafe conditions that inhibit their recovery from a medical condition. The Community Health Investment Fund supports programs that address basic needs, such as food and housing, as well as initiatives that improve systems for complex problems like opioid addiction.



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