Montana Telehealth Diabetes Prevention Program

Integrating public health and primary care can both improve quality of care for a population and lower health costs. Both components of the health system share a common goal of health improvement, have similar funding streams and resources, and share many partnerships. If aligned, public health and primary care working together could achieve lasting, substantial improvements in individual and population health in the United States. State and territorial health agencies can make a significant impact in this area by decoding the key elements for successful integration, which can then be shared with others to promote further integration efforts, increase healthcare quality, lower costs, and improve overall population health.

The Montana Department of Public Health and Human Services (MDPHHS) partnered with a community hospital in the state to implement a group-based diabetes prevention program lifestyle intervention for adults at high risk for developing type 2 diabetes and cardiovascular disease (CVD). The program is available both at the hospital and via telehealth.

BACKGROUND
Diabetes is a costly and debilitating disease that affects an estimated 8.3 percent of the U.S. population, or nearly 26 million people. The diabetes rate in rural populations is 17 percent higher than in urban populations and individuals living in rural communities are less likely to seek regular medical care, specialized care, and post-hospital home care.\(^1\) Rural communities often do not have registered dietitians, certified diabetes educators, or other trained professionals who can administer diabetes prevention programs. Utilizing telehealth video conferencing to deliver group-based diabetes prevention program lifestyle interventions has the potential to overcome barriers to offering such services in remote communities.\(^2\)

OVERVIEW OF THE INTEGRATION EFFORT
Prior to the partnership, MDPHHS assessed the capacity of existing diabetes self-management education programs to provide prevention services to adults at high risk for developing CVD and type 2 diabetes. To reach more at-risk individuals throughout the state, MDPHHS adapted an evidence-based, group-based diabetes prevention program shown to reduce the incidence of diabetes in high-risk individuals by 58 percent over three years, with an estimated annual reduction of diabetes of 19.3 percent.\(^3\)

In 2008, MDPHHS submitted a request for proposal to identify partners to serve as pilot sites for the delivering the diabetes prevention program intervention to at-risk individuals in group settings on-site and via telehealth. Holy Rosary Healthcare, a community hospital in southeastern Montana, was awarded as a pilot site. Holy Rosary was instrumental in launching the program and expanding it to additional sites for telehealth delivery. MDPHHS secured funding and provided training to program coaches, ongoing technical assistance and support, and program data analysis. Local primary care

Aim of the Integration:
To increase the availability of diabetes prevention programs for at-risk individuals living in rural Montana, reduce rates of type 2 diabetes and CVD statewide, and decrease healthcare costs.
providers supported the program by referring at-risk patients, spreading the word about the program, and providing testimony at legislative sessions to help secure funding.

The telehealth intervention targeted individuals in remote frontier communities with risk factors for type 2 diabetes and CVD. To be eligible, participants needed to be overweight and have at least one additional risk factor, such as prediabetes, impaired glucose tolerance/impaired fasting glucose, history of gestational diabetes, delivery of an infant greater than nine pounds, hypertension, and dyslipidemia. Between 2009 and 2013, the telehealth intervention was delivered at six sites and reached 203 individuals. Each site offered 16 weekly one-hour sessions followed by six monthly one-hour sessions.

Two main sources of funding helped make the program possible. First, leadership from MDPHHS’ Public Health and Safety Division recognized the burden and costs associated with type 2 diabetes and the need to implement evidence-based interventions like the diabetes prevention program to address this issue. In 2008, the division leadership put forth a request for state funding to implement this effort, which was approved for approximately $625,000 per year. The second source of funding came from a 2010-2012 CDC Healthy Communities Cooperative Agreement that enabled the program to expand to additional sites. Additional state funding was obtained in 2013 for an additional $125,000 per year, which will support expanding the number of diabetes prevention program intervention sites throughout the state. In addition to these two main sources of funding, Montana Medicaid covers up to $500 for Medicaid beneficiaries to participate in the diabetes prevention program and some employers cover part of the costs for their employees to participate in the program.

RESULTS/BENEFITS
At the first telehealth intervention site, more than 45 percent of participants achieved the 7 percent weight loss goal, which nearly matched results from the on-site intervention. Behavioral outcomes, clinical outcomes, and cost-effectiveness of the telehealth diabetes prevention program delivered from 2009 to 2013 are still being measured. Overall, the program has an estimated 19.3 percent reduction in diabetes incidence per year.

Direct medical and indirect costs attributable to diabetes in Montana are approximately $560 million for 49,700 people with diabetes annually, or $11,268 per person with diabetes per year. The costs of administering Montana’s diabetes prevention program to 698 persons at its eight on-site groups totaled approximately $400,000 in 2010 ($557 per participant on site). Based on the program’s estimated diabetes reduction, the costs of administering the program, and the costs of treating diabetes, the program estimated an annual return on investment (ROI) of $1.1 million for 2010. Because the program delivered via telehealth costs less per person ($470 per participant), telehealth delivery of the program could anticipate an increased ROI.

INFRASTRUCTURE TO SUPPORT COLLABORATION AND SUSTAINABILITY
MDPHHS is working to secure additional employer reimbursement and coverage so more employees at high risk of developing type 2 diabetes and CVD living in Montana can participate. The CDC-led national diabetes prevention program is promoting training to increase the workforce, obtaining program recognition to assure quality, developing more intervention sites to support delivery, and using health marketing to support program uptake. The combination of these efforts have the potential to make similar intervention programs available to more individuals in Montana and other states to reduce type 2 diabetes and CVD rates, decrease relevant healthcare expenditures, and improve quality of life.
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3 Ibid.