

Vermont Falls Prevention Quality Improvement Learning Collaborative: Strategies, Successes, and Lessons Learned

In the United States, more than one in four adults aged 65 and older falls each year, resulting in \$31 billion in direct medical costs annually for injuries related to falls.^{1,2} In 2015, 116 Vermont adults aged 65 and older died due to a fall.³ Falls occur as a result of various risk factors, many of which are preventable.

This issue brief provides an overview of the Vermont Falls Prevention Quality Improvement Learning Collaborative, developed by ASTHO in partnership with CDC and the Vermont Department of Health (VDH). Four counties and affiliated hospitals participated in the learning collaborative, including Bennington (Southwestern Vermont Medical Center), Newport (North Country Hospital), Burlington (University of Vermont Medical Center), and Lebanon (Dartmouth-Hitchcock Medical Center in New Hampshire). This brief also describes the counties' progress following the project's implementation, and provides strategies and lessons learned that other states and territories can use to promote and implement interventions to reduce older adult falls.

Steps Taken:

In the first year, the Vermont Falls Prevention Quality Improvement Learning Collaborative sought to raise awareness and increase referrals to the regional evidence-based program, *FallScape*, as well as provide other available resources to patients in different care settings in two counties: Newport and Bennington. The collaborative's goal was accomplished by building reciprocal relationships and systems among practitioners and administrators in organizations that serve the at-risk populations. In Year 2, the learning collaborative included two additional hospital-affiliated community teams, Burlington County and Lebanon County (NH), to address fall-related injuries and deaths for older adults in these states. All four community teams focused on reducing injuries, hospitalizations, and deaths from falls by standardizing screening and referral processes, creating and strengthening local partnerships across professions, and using existing data sources to track outcomes.

Reducing Older Adult Falls: Strategies for State and Territorial Health Agencies

- Strengthen existing community partnerships.
- Look for and cultivate project buy-in from senior hospital management.
- Treat falls prevention like a chronic disease and use language that practitioners and administrators understand.
- Understand the environment into which the project will be integrated.
- Recruit diverse provider types.
- Assess the current state of falls prevention resources.
- Develop and disseminate additional falls prevention resources.
- Provide guidance on screening and referral tools.

One of the goals of this project was to raise awareness about existing resources that older adults could access in their local communities. Therefore, in Chittenden County (Vermont's most populated county), VDH sought to collaborate with the University of Vermont Medical Center to coordinate the breadth of services provided by their hospital system. Similarly, project partners focused on integrating standardized, evidence-based screening and assessment tools into the workflow for healthcare providers in different settings (e.g., emergency departments, inpatient, in-home, and pre-hospital,

community care settings). A notable example included involving personnel from North Country Hospital’s quality improvement program in creating integrated falls screening fields in their emergency department’s MedHost electronic health record (EHR), as well as the EHR used for the annual Medicare wellness visits.

Aim statements are measurable descriptions of a project’s overall mission and purpose. Each community team’s aim statement incorporated ASTHO’s recommended elements: 1) being time-limited, 2) identifying the overarching goal and purpose of the project, 3) providing a measurable target that will improve from a baseline, and 4) identifying the target population. Throughout the project period, ASTHO and VDH provided technical assistance and support to the community teams on the implementation of PDSA (Plan-Do-Study-Act) cycles via a series of in-person and virtual meetings that facilitated engagement among the different partners.

VDH and project community teams will continue their collaboration through their membership in [Falls Free Vermont](#), as well as any future projects focusing on falls prevention. The culture of Vermont is community-oriented, and the relationships within communities are very strong. This culture, combined with its small size (population and geographic), allows for initiatives and resources to be mobilized and spread quickly. Leveraging the existing relationships formed during this project between community teams and VDH will inform future work.

Results:

The project reached 908 members of the target population through screening and referral processes in both Newport and Bennington counties. In addition, there was a decrease in falls-related EMS calls over the project period, compared to the previous calendar year. Newport reported 14 fewer calls from January-June 2016, as compared to January-June 2015, and Bennington reported 56 fewer calls over that same period.

The following table breaks down the project’s reach in Newport and Bennington:

	Older adults screened	Older adults screening positive for fall risk	# Adults referred to FallScape program as a result of screenings	# Adults referred to other programs	# Patients who had PCP notified about using program	# Providers trained on falls screening and referral
Totals	314	275	115	68	100	36

Note: as of February 2018, Burlington and Lebanon are still assessing their reach, and do not yet have quantitative data yet.

The two-year duration of this project highlighted the issue of falls among older Vermonters, and ways in which different regions of the state could collaborate under the leadership of VDH, which led to the

strengthening of *Falls Free Vermont*, the state's falls prevention coalition. Additionally, clinical systems of care were enhanced through quality improvement processes using PDSA cycles, and incidences of falls-related EMS calls decreased even further over the project period compared to Year 1.

This project also allowed for the creation, modification, and dissemination of falls prevention tools based on the [CDC STEADI Toolkit](#). VDH created the following tools in response to needs expressed by community partners during the project period:

- **Adaptation of STEADI algorithms** to help providers screen and refer at-risk patients to available falls prevention interventions within each community ([Newport](#) and [Bennington](#)).
- **FallScape patient-provider feedback form** designed to close the feedback loop between primary care providers who refer patients to the *FallScape* program and EMS *FallScape* leaders.
- **VDH Falls Prevention Resource Guide** developed to provide a user-friendly catalogue of evidence-based programs for falls prevention and other related chronic conditions.
- **Patient factsheet** distributed in the emergency room or in-patient settings after a fall. The factsheet is designed to direct them to next steps and available services to prevent a future fall.
- **Falls Free Vermont website**, which underwent a significant upgrade and now offers falls prevention resources, as well as a county-based list of falls prevention classes.
- **Three additional screening questions from the CDC STEADI Toolkit** were added to the state's EMS electronic reporting system (SIREN), which provides EMS personnel with a tool to screen patients for falls risk.

Community partners also developed new materials that can be shared as models for other communities. The University of Vermont Medical Center developed an [information packet](#) to provide to hospitalized patients on preventing falls. Similarly, Bennington Rescue developed a HIPAA-compliant release form authorizing EMS agencies to obtain permission from participants to discuss falls history with primary care providers. North Country Hospital's quality improvement personnel created integrated falls screening fields into their emergency department's electronic medical records system.

Lessons Learned:

- From the state's perspective, lessons learned include: the need to establish a cloud-based document center at the outset of the project to foster collaborative work on projects and enable shared access to resources (i.e., STEADI links, role descriptions, etc.). It will also be beneficial for project partners to identify evaluation needs at the outset and work with community team leaders to track and share the proper information.
- One community found that while the STEADI tool was extremely useful in an inpatient setting, it was too long and difficult to implement in emergency departments. Their solution was to take the STEADI tool and extract a few key questions, which they were then able to add to their EHR system. They suggested that it might be helpful to tailor the tool to different settings, as different agencies have different priorities. They also stressed the importance of involving leadership and having a process owner at the facility. Creating great partnerships within the

hospital system, such as the hospital CEO and the IT/clinical informatics staff member, was one way that they were able to accomplish this.

- State teams also stressed the importance of innovation. For example, as the number of referrals to FallScope increased, EMS no longer had the proper capacity to manage the referrals. In order to combat this challenge, the hospital began sending volunteers from the community to EMS to help build their capacity. Additionally, states found that the use of rapid PDSA cycles helped them quickly determine what was working and what was not working. Instead of focusing on getting everything right the first time, they were able to learn from their mistakes and move on, making improvements along the way.

VDH recommends that future grantees:

- Focus on strengthening existing community partnerships, and utilizing existing resources and programming, instead of attempting to recreate them. It is difficult to obtain observable results within the small project timeframe.
- Reach out to hospital senior leadership for project buy-in and administrative support. Many community team members for this project expressed concern that their immediate supervisors did not understand this project and, consequently, were not supportive of their participation. Senior leadership can offer an explanation about the project and stress the importance of quality improvement work, in order to improve patient care and outcomes.
- Consider associating falls prevention with chronic disease management and emphasize the positive correlation between falls and chronic diseases (i.e., as the number of chronic diseases increases, so does the risk for falls).
- Develop a comprehensive understanding of the patient care environment before implementing any changes. Focus on the following points:
 - a. Who does screenings?
 - b. How are they done?
 - c. How much time is available?
 - d. What screening and assessment tools are used?
 - e. How are the results documented in the electronic medical records?

Strategies for Sustainability and Spread

- Demonstrating success through data and stories.
- Coordinating with ongoing healthcare reform initiatives.
- Expanding into numerous types of healthcare settings.
- Continuing to foster and leverage community partnerships.

Knowing the answers to these questions will allow states to better target areas to improve the clinical care system and understand why these areas need improvement.

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¹ Stevens JA, Ballesteros MF, Mack KA, et al. "Gender differences in seeking care for falls in the aged Medicare population." *Am J Prev Med*. 2012. Available at <https://www.ncbi.nlm.nih.gov/pubmed/22704747>. Accessed on 2-5-2017.

² Burns EB, Stevens JA, & Lee RL. "The direct costs of fatal and non-fatal falls among older adults—United States." *Journal of Safety Research*. 2016. Available at <http://www.sciencedirect.com/science/article/pii/S0022437516300172>. Accessed on 1-10-2017.

³ Vermont Department of Health (VDH). "Falls among Older Adults – Data Brief 2016 Vermont Behavioral Risk Factor Survey". Available at http://www.healthvermont.gov/sites/default/files/documents/pdf/HSVR_brfss_db_wv_falls_2016.pdf. Accessed on 1-18-2018.