Creating a Hospital-Wide Network to Prevent Falls

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By building a strong team of dedicated professionals who approach fall risk assessment and prevention from a variety of angles, one VA hospital has found a way to foster innovation at all levels of care without overtaxing resources.

As a population, U.S. veterans are at particularly high risk for falls and fall-related injuries.[1] Research has shown that both the incidence of falls in older adults and the severity of fall-related complications increase steadily with age and comorbidities.[2] The percentage of the current veteran population aged 65 or older is about 34%—and rising. Within 10 years, this figure is expected to reach 42%.[3] By comparison, the 65-and-older group currently comprises only 12% of the general U.S. population. In addition, chronic diseases are highly prevalent among veterans. Together, these demographic and clinical risk factors highlight the urgent need for effective clinical fall prevention programs within the VHA.

Historically, the health care community had viewed fall prevention primarily as a nursing management issue in the inpatient setting and a primary care issue in the outpatient setting. In other words, the burden of recognizing and assessing fall risk, determining when specialized consultation was necessary, and seeking out these consultations generally had been placed on the nurses and physicians treating patients who had fallen or were likely to fall in the future.

In recent years, however, research and clinical experience have revealed specific risk factors for falls and clarified the complex interactions between these factors,[4,5] prompting an ideologic shift toward an interdisciplinary team approach to managing patients' fall risk.[6–8] This approach involves a group of dedicated and highly qualified professionals who methodically analyze each patient's intrinsic and extrinsic fall risk factors and develop individualized interventions based on this analysis.[4,9]

But despite the proven effectiveness of this approach,[6,10,11] few expert clinical teams focusing on fall assessment and risk management currently exist within—or outside—the VHA. Assuming a lead role in this movement, therefore, the James A. Haley Veterans' Hospital (JAHVH) and the VISN 8 Patient Safety Center of Inquiry joined forces in 2001 to implement a hospital-wide Fall Prevention Network (FPN). The key component of this network is an interdisciplinary team that conducts an outpatient falls clinic and serves as a catalyst for programmatic policy changes throughout the hospital's inpatient and nursing home care units.

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In this article, we'll describe how the FPN was conceived and implemented, the functions it currently performs, and the direction it's expected to take in the future. In addition, we'll outline what we've learned thus far from FPN data about veteran outpatients who are at risk for falling and offer examples of beneficial changes we have effected in response.

CREATION OF THE FPN

The current health care environment requires that clinical programs be designed in a cost-effective and personnel-efficient manner, using existing resources. When initiating a new fall prevention program, therefore, VISN 8 and JAHVH leaders recruited a team of clinical falls experts from existing JAHVH staff and asked them to conceptualize a model for the FPN. The team—a geriatrician, an advanced registered nurse practitioner (ARNP), a pharmacist, a physical therapist, and a licensed practical nurse (LPN)—devised an FPN model that builds upon patient assessment as a basis for providing coordinated, specialized fall risk management (Figure). This model was designed specifically to meet the needs of veterans and to optimize the use of team members' time and resources while promoting their involvement in all aspects of fall prevention throughout the facility.

At the heart of the FPN is the falls clinic team, which plays a pivotal role in coordinating and integrating all elements of this model. The team is supported by two additional staff members: a site coordi-

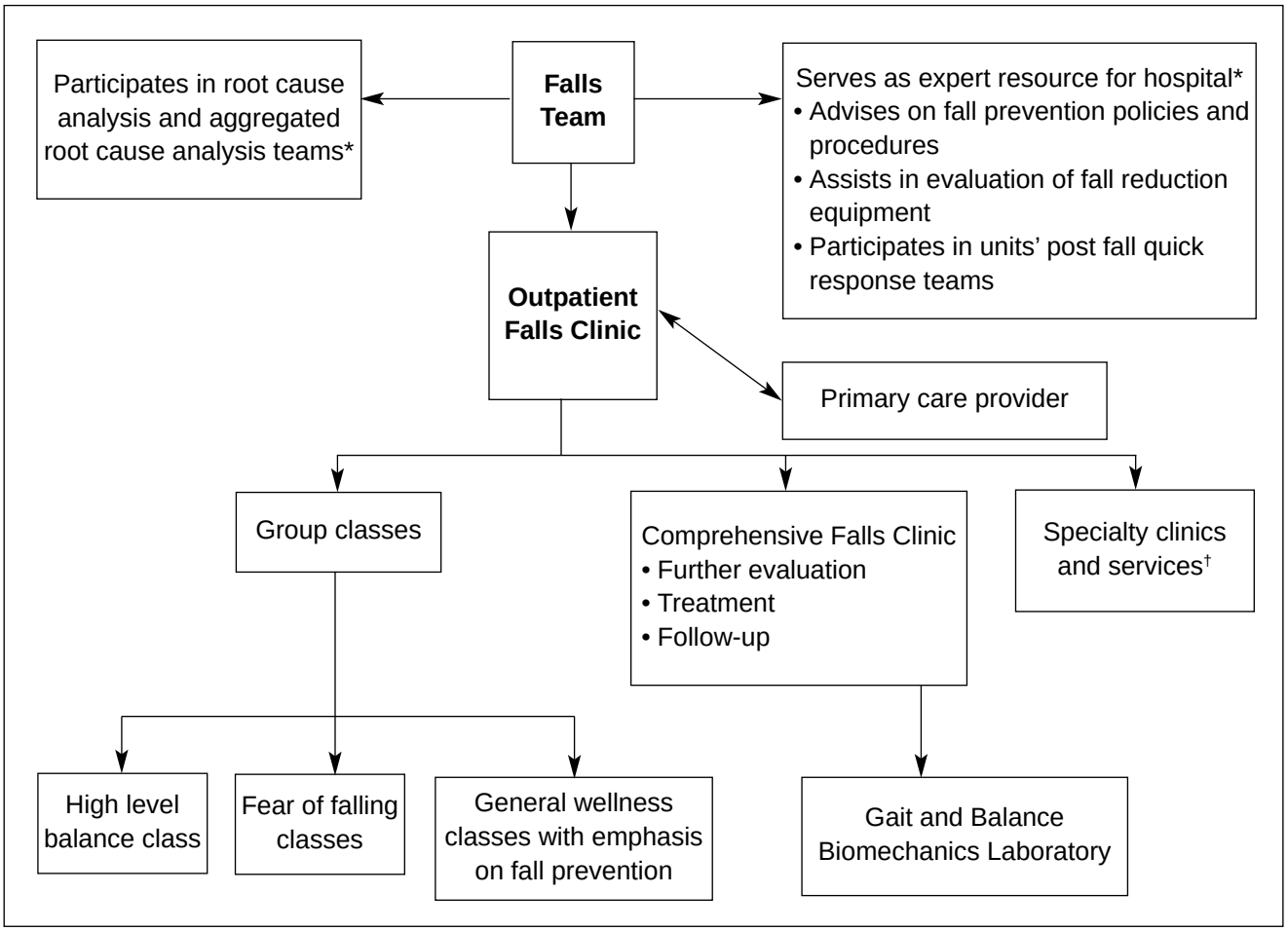

Figure. Fall Prevention Network model devised for the James A. Haley Veterans' Hospital. *Hospital fall prevention initiative. †These include cardiology; ear, nose, and throat; neurology; podiatry; urology; home health; physical therapy, occupational therapy, and kinesiotherapy; geriatric clinic; rehabilitation; and orthotics and prosthetics.

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nator (who oversees, on a daily basis, all aspects of the program's administration, management, data acquisition, and database management) and a patient scheduling clerk. The three main duties of clinic team members are to operate the clinic, participate in root cause analysis and aggregated root cause analysis, and serve as expert resources on falls for the hospital.

THE OUTPATIENT FALLS CLINIC: EVOLUTION AND FUNCTION

Once the team was assembled and the basic FPN model conceived, the fall program coordinator (a temporary team member employed to get the program off the ground) delegated tasks to team members in order to establish and develop a framework for the outpatient falls clinic. It was decided that this clinic would serve as a gateway to all of the FPN's outpatient fall prevention services. Patients who were referred to the outpatient falls clinic would be triaged by the team to determine which, if any, of these FPN services would be appropriate and whether the patient could benefit from any of the other specialized services offered by the hospital. Using detailed assessments, the team would formulate recommendations to be communicated as expert feedback to the referring provider.

The first tasks for the team were to secure a clinic location and develop a clinic schedule. This was somewhat challenging given the limited space available at the JAHVH. The team was able, however, to find an existing clinic room that was closed for blocks of time and to negotiate access to that space during these scheduled down times. Currently, the team holds outpatient clinic hours two days per week.

Next, the team developed clinic admission criteria, including a referral policy and protocol designed to focus team resources on individuals most likely to benefit from an extensive interdisciplinary fall assessment. These criteria include current residence in a setting with little or no supervision and a history of falls or a high fall risk as identified by the referring provider. Patients also must be medically stable; be cognitively intact (able to learn and follow simple directions); have been at least partially ambulatory over the past month; and have an impaired gait, be taking multiple medications, or have multiple medical problems.

In response to the need to streamline and standardize documentation, the falls clinic team developed and pilot tested templates for documenting patient evaluations and treatment recommendations. At the time, the technology of the JAHVH's computerized patient record system (CPRS) didn't allow multiple team members to create a single clinical note in separate sessions. The team circumvented this problem by having one team member initiate the note and the others code their portions as addenda to the original note. While not ideal, it was the only solution pending an upgrade in programming.

Prior to opening the clinic, we also needed to address workload capture—that is, to ensure that the clinic workload was reported to the VA for budget and resource allocation purposes. After consulting various hospital resources, the team developed coding forms and made sure the outpatient falls clinic was added as a reimbursable entity to the CPRS.

In order to build awareness of and support for the new clinic, the team devised and initiated a hospital-wide marketing strategy. This consisted of in-service education to targeted providers (especially primary care physicians), letters to service chiefs announcing the formation of the clinic and the new referral policies, and e-mail announcements to all providers with the potential to refer patients to the clinic (chiefly physicians, nurse practitioners, and physician assistants).

Finally, to optimize the limited clinic time, the team developed several strategies for previsit team preparation. Most of this preparation occurs through a previsit chart review, performed by the various team members on a rotating basis. To facilitate this review, the team worked with the hospital's information management service personnel to create the Personalized Falls Clinic Health Summary, which automatically gathers from the patient's electronic medical record preselected information identified as significant to fall risk. Immediately prior to the patient's clinic appointment, the team meets briefly to discuss the information reviewed and to identify possible risk factors that need to be addressed during the visit. Fall-related information from the review also is used in the history and physical examination portions of the team's evaluation note.

Another element of the previsit preparation is a patient questionnaire that's sent prior to the clinic appointment in conjunction with a confirmation of the date, time, and location of the appointment. This questionnaire covers such areas as the patient's home environment, activity level, use of assistive devices, and fall history (including specific questions about frequency and mechanisms of past falls and associ-

ated injuries). Patients are asked to complete the questionnaire to the best of their ability prior to the clinic visit and present it at registration, so that team members can review it during the appointment.

Clinic appointments generally take two hours and consist of a complete, interdisciplinary assessment involving all team members. The physician or ARNP performs an in-depth medical assessment, the pharmacist interviews the patient regarding fall history and medication adherence, the physical therapist evaluates any deficits in gait and balance, and the licensed practical nurse collects data on postural vitals (such as orthostatic hypotension) and administers Folstein's Mini-Mental State Examination.

Any environmental, prosthetic, or medication issues that arise are addressed immediately by the team members. When all assessments are completed, the team holds a brief conference to discuss their findings and compile their recommendations.

Among the recommendations the team may make are referrals to the hospital's Comprehensive Falls Clinic and Gait and Balance Biomechanics Laboratory. These resources help provide the patient with optimal, individualized care through further one-on-one evaluations, treatment, and follow-up as needed. Patients referred for these services generally are those who present with more complex fall etiology and who require highly specialized, impairment driven interventions. For patients whose needs are less complicated, the FPN provides group interventions that address common fall-related risk factors through education and exercise. Thus far, these group classes have demonstrated good functional outcomes while remaining cost-efficient.

GUIDING INPATIENT POLICIES ON FALLS

The falls clinic team has served as a valuable resource in the development of various hospital-wide fall prevention endeavors. For example, the team spearheaded the formulation of and continues to help refine the JAHVH's standardized inpatient fall risk assessments, which are performed by nurses at patient admission. With the aim of driving the standard of care in inpatient fall prevention, these assessments are guided by fall prevention protocols and encourage the use of fall prevention technologies when indicated.

Other key efforts by the team to establish an environment of safety with regard to falls within the facility include the standardization and computerization of fall incident reporting templates, the generation of clinical alerts, and the development of fall clinical pathways. Furthermore, team members' participation in aggregated root cause analysis has been pivotal in identifying system problems and devising potential solutions.

By involving team members in these hospital-wide administrative activities, the FPN model optimizes use of the team's resources. It allows the team to help address fall risk and prevention in patients who do not meet referral criteria for the outpatient clinic—without compromising the time they dedicate to those patients believed to benefit most from in-depth, interdisciplinary assessments. This approach represents a basic change in philosophy, and we believe that, ultimately, it will reduce the frequency of falls and fall-related injuries.

MEETING CHALLENGES OF IMPLEMENTATION

By far, the greatest factor that facilitated the success of the JAHVH's FPN was the VA's ongoing dedication to fostering an environment of innovation within its facilities in order to secure a position as a national leader in delivering the highest possible quality of care to the population it serves. The VA manifests this commitment by supporting the development and implementation of a variety of programs that seek to improve the care and well-being of veterans by translating the latest research into evidence-based practice. For our program, we were able to obtain VA grant funds, which provided necessary initial support for creating the full-time site coordinator. This staff member plays a pivotal role in our FPN, facilitating all aspects of program implementation and motivating, supporting, and encouraging its success.

As with any new program, various obstacles stood in the way of opening the outpatient falls clinic. Foremost among these were obtaining volunteer staff support from participating disciplines and finding available space for the clinic. The first step in overcoming the former obstacle was approaching the chief of physical medicine and rehabilitative services, who offered full support. Next, the team held meetings with service chiefs to discuss the positive impact of the falls clinic on the workload of their respective services, thus encouraging further staff donations. As described earlier, the team used

creative scheduling to negotiate the use of existing clinic space.

A close working relationship with the hospital's information management service has been essential in meeting the ongoing challenges in electronic documentation and provider communication stemming from limitations of CPRS. This relationship allows the team to take advantage of technologic advancements as they occur within the system and find new ways to improve the processes of documentation and communication. For example, communication with the referring provider already has been enhanced by the creation of a template that the team can use to summarize their findings and recommendations in the patient's electronic medical record. When the clinic consultation has been completed, the referring provider gets an electronic alert and then must open the clinic's note in the patient's record to read the recommendations.

Finally, obtaining "buy in" from clinicians and administrators at all levels was crucial to the clinic's success. The team addressed this issue through aggressive clinic marketing and educational programs that targeted all stakeholders. Furthermore, team members' informal assistance with complex cases at the request of providers or nurse managers has reinforced their credibility as experts in fall prevention, which builds further support for clinic activities.

THE FPN AS A DATA COLLECTION TOOL

Realizing that the outpatient falls clinic generates useful information that could be used to formulate a profile of the typical patient at high risk for falls and to drive the development of new and better fall prevention interventions specific to the VHA population, the falls team identified requisite elements of the database needed to collect and store this information. The database now tracks patients' demographic, psychosocial, and referral information; fall history; and functional status—along with the team's recommendations. Additional data monitoring involves a detailed composite of referral information being gathered to assess the specific needs of the clinic's patients with respect to other JAHVH disciplines and services.

Thus far, the FPN has collected data on 248 individuals seen in the outpatient falls clinic between October 2001 and June 2002. An analysis of these data reveals that the majority of patients referred to the clinic are male (89.5%), white (86.7%), married (70%), and fluent English speakers (97%). The mean age is 73.7 years. Following referral, patients are able to access the clinic within a mean of 49.9 days. Major reasons for referral to the clinic are history of falls (39.3%) and gait or balance issues (34.6%).

Analysis of recommendations by the clinic team indicates that 55% of patients who visit the clinic receive education, have their medication adjusted, are issued durable safety equipment, and are prescribed home exercise programs by the clinic team. The other 45% receive these clinic interventions plus referral to other specialized services (such as the eye clinic, neurology, or physical medicine and rehabilitation). At three-month follow-up, 71% of patients report they are very satisfied with their experience in the falls clinic, and another 22% report being somewhat satisfied.

EXPANDING AND REFINING THE FPN

With the falls clinic well established at the JAHVH, we are now in the process of developing and expanding other areas within the FPN. Most notable of these is greater team involvement with inpatient fall prevention. Already, the team's involvement has led to the identification of system issues that are being addressed.

One such problem is the lack of available fall prevention technology in the acute care setting. Now that risk-based fall prevention measures have been incorporated into nursing care plans, we must make sure that inpatient units stock such devices as bed alarms, mats, and hip protectors.

The FPN also has initiated the creation of a clinical falls package for CPRS. This element, which is under development, would allow the integration of fall risk assessment and preventive interventions into all settings of clinical practice throughout the hospital. Upon a patient's initial entry into the VA health care system, the provider assessing the patient would enter any "fall alerts" into the electronic medical record. These alerts would be visible to other providers accessing the electronic record and would generate clinical reminders that would systematically guide the provider in the formulation of interventions based on the patient's fall risk status. In addition, the complete computerized clinical falls package will include data retrieval and analysis programs for facilitating fall-related patient safety improvements, monitoring clinician and system improvements, and evaluating the cost-effectiveness of fall prevention programs.

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ANSWERING THE CALL

As the proportion of veterans over age 65 continues to rise,[1] the VHA must be prepared to serve the needs of its aging population. The JAHVH has responded to this call by assembling an interdisciplinary falls clinic team and developing the hospital-wide FPN. These actions have sparked a highly specialized and coordinated effort to address fall risk in the veteran population.

The outpatient falls clinic plays a pivotal role in evaluating fall risk and implementing appropriate, individualized care plans for veterans at high risk for falling. As a catalyst for a hospital-wide change, FPN team members also have led the facility in developing and implementing standards of care for fall risk management. We believe that this shift in practice ultimately will diminish the incidence of injurious falls within the JAHVH's patient population in a cost-effective manner through the optimization of current resources.

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