Perceptions of Physicians on the Barriers and Facilitators to Integrating Fall Risk Evaluation and Management Into Practice

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BACKGROUND: Falls are common, treatable, and result in considerable morbidity in older adults. However, fall risk factor evaluation and management targeted at high-risk patients is largely neglected in clinical practice.

OBJECTIVE: To identify barriers and facilitators to the implementation of fall risk management by primary care providers.

DESIGN: Qualitative study using a semi-structured interview.

PARTICIPANTS: Primary care providers who received an academic outreach visit.

APPROACH: Self-reported facilitators and barriers to evaluating and managing fall risk in older patients.

RESULTS: Physician factors, logistical factors, and patient factors intersect to either facilitate or impede fall risk evaluation and management by primary care providers. Physician factors include awareness, competing risks, appropriateness of referrals, training, and tie-in to familiar activities. Logistical factors include availability of transportation, time requirements of immobile patients, reimbursement, scheduling, family involvement, and utilization of other health care providers. Physicians' perceptions of patient factors include reporting, attitudes toward medication, and positive feedback.

CONCLUSION: Strategies to improve the adoption of fall risk evaluation and management in primary care should address the specific physician, logistical, and patient barriers perceived by physicians who had received an informative, motivational intervention to assess and manage falls among their patients.

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Falls among community-living older adults are common and cause considerable morbidity. Over one third of persons over age 65 fall each year; the proportion increases to 50% by age 80.[1] In 2002, approximately 1.6 million elderly adults in the United States were treated in an emergency department (ED), and 388,200 were hospitalized, for fall-related injuries.[2] Falling and suffering a serious fall injury increase the risk of skilled nursing facility placement 3- and 10-fold, respectively; falls are major independent determinants of functional decline and restricted activity days.[3] Observational studies reveal that the risk of falling increases as the number of risk factors increases, suggesting that falling is a multifactorial health condition that results from the accumulated effects of coexisting conditions and their treatment.[4,5]

Multifactorial prevention strategies, targeted at known risk factors, have been shown to reduce the rate of falling by 30% in several randomized-controlled trials.[6–8] Based on the available evidence, the American Geriatrics Society (AGS) recommends that all patients over 65 be asked annually whether they have fallen. American Geriatrics Society further recommends that patients with recurrent falls or 1 fall and evidence of impaired gait and balance be evaluated for postural hypotension, arthritis, muscle weakness, low vision, home safety, and use of multiple medications, particularly psychotropic medications.[9]

Despite existing evidence and recommendations, the identification and management of elderly patients at high risk for falls remains largely neglected in clinical practice. Only 37% of elderly persons in primary care are even asked about falls.[10] A robust body of research has produced multiple strategies to change physician behavior. These professional behavioral change strategies have demonstrated a wide range of effectiveness.[11,12] One strategy that has been shown to be effective combines academic outreach with social marketing. Academic outreach uses an educator to provide a focused information session to a physician in their office. Social marketing uses focus groups to develop a message and obtain buy-in from opinion leaders.[13]

The Connecticut Collaboration for Fall Prevention (CCFP) is a coalition of health care providers, sites, and agencies that serves the community-living elderly population throughout the greater Hartford area. The goal of CCFP is to imbed an evidence-based multifactorial approach to fall prevention into the health care of elderly adults. The core group of CCFP team members includes physicians, nurses, and physical therapists. The CCFP team has utilized professional change strategies such as in-services, academic outreach, patient activation, opinion leaders, social marketing, and the media to encourage the incorporation of fall risk evaluation and management into the primary care of older adults. The target audience has included primary care physicians, physical therapists, home care nurses, emergency room personnel, and patients.[14]

During academic outreach visits to primary care providers, a CCFP physician described the importance of falls in older adults, risk factors for falls, and their treatment. The CCFP physician shared practical approaches for incorporating fall risk assessment and treatment into a busy office practice. Emphasis was placed on identification of patients at risk for falls, treatment of balance and gait problems, postural hypotension,

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and medication review and reduction. Physicians were given checklists to focus their evaluation of fall risk, educational materials to use with patients, brochures to display in the office, and information about billing for fall risk evaluation and treatment. Outreach visits lasted 15 to 30 minutes

The aim of this qualitative study was to investigate the specific barriers and facilitators to fall risk evaluation and management in primary care. As no previous study has investigated this specific topic, we used qualitative methods, that have been shown to be effective for concept development, and hypothesis generation where previous literature is limited.[15] All physicians interviewed had been exposed to an academic outreach visit from a CCFP physician. Our intention was to determine the themes that highly informed physicians identify as integral to fall risk evaluation and management and based on these findings, offer suggestions to a broader audience to improve implementation.

METHODS

Study Design and Sample

We conducted a qualitative study based on semi-structured telephone interviews with primary care physicians from September 2003 to June 2004. Of 212 primary care offices in the greater Hartford area, 125 received an outreach visit, 13 offices accepted CCFP materials without a visit, and 74 primary care offices (35%) refused. The physicians in the 125 offices who had received an outreach visit from a CCFP physician were eligible for participation in the present study. These physicians were approached to participate in this study in the order that they had initially received their outreach session. Accepting physicians were interviewed at least 3 months after the outreach session in order to give time to implement any new recommendations. Physicians were interviewed until no new themes were identified by additional interviews.

Data Collection

A standard interview guide was developed by the research team based on our formative work with opinion leaders. Interviews lasted 15 to 30 minutes, and were conducted between a single interviewer (W.C.C.) and a single respondent. Each interview followed the guide in order to promote uniformity in questioning and sufficient latitude to expand on individual responses. The interview guide was piloted with the first 3 physicians interviewed, and modified to improve the clarity of questions.

To facilitate physicians' recall of prior experiences and to ensure a greater focus of discussion, we organized the interview around 3 specific fall evaluation and management interventions. The interview script included a set of open-ended introductory questions and specific probes related to orthostatic blood pressure assessment and management, medication review and reduction, and referral to physical therapy when appropriate (Table 1). We chose to concentrate on these particular components because they each require a discrete physician intervention that is broadly applicable to the care of elderly patients. Moreover, these components have been shown to reduce the risk of falls; all 3 are included in the AGS recommendation for fall risk evaluation.

Physicians were asked to reflect on their recent experiences evaluating fall risk in elderly patients. Areas that they found problematic were probed further with an emphasis on moving beyond solely reflective responses. All interviews were audiotaped and transcribed. This protocol was approved by the Yale University Human Investigations Committee.

Table 1. Script Excerpts

"A few months ago a physician team visited you in your office to provide you information on how to incorporate fall risk assessment and treatment into care of your elderly patients. As you recall, the informational visit focused on fall risk evaluation and management through checking orthostatic blood pressures, medication review and reduction, and referral to physical therapy. Tell me how your practice is implementing this strategy. Are there aspects of the strategy that you have found difficult?"
"One of the aspects of fall risk treatment was medication review and reduction. Thinking back to your last several patients over 70, what has been your experience with medication discontinuation or reduction?"
"If an elderly patient has CAD, diabetes, hypertension, and takes over 6 medications, is fall risk evaluation and management a part of your evaluation?"

Data Analysis

Data coding was performed by a 3-person team comprising of 2 physicians and a medical sociologist. Each team member independently reviewed a subset of transcripts with an open coding technique to identify emerging themes using the constant comparative method of qualitative analysis of Glaser and Strauss.[16] The team developed a coding structure based on agreement of themes and subthemes. Themes were also conceptually organized into "barriers and facilitators." When no new codes or themes emerged from the interviews, data collection was stopped. Another subset of transcripts was then intensively coded by the group to assure final agreement on the accuracy of codes and their definitions. A software program designed for coding-and-retrieval of qualitative data (N6® QSR International Pty Ltd, 1991 to 2002, Doncaster, Victoria, Australia) was used for the application of coding to all transcripts and to facilitate data analyses.

RESULTS

We reached theme saturation after 18 interviews. Forty physicians were contacted to enroll these 18 participants. The physicians who declined to participate either cited lack of time as the reason for refusal, or simply did not return calls. The range of practice size contacted was 1 to 5 physicians. The size of the practice did influence recruitment into the study. The average practice size of accepting and nonaccepting physicians was 1.6 and 2.7 physicians, respectively; this difference was statistically significant ($P=.01$). All of the accepting physicians were in practices with 1 or 2 physicians. Scheduling interviews with larger practices usually required an office manager intermediary; this step added a layer of difficulty to communicating with the physicians and may have influenced recruitment into the study. Thirteen respondents were male; 5 were female. For privacy reasons, no information was collected about the number or types of patients in each practice.

The overarching tripartite theme that emerged from the interviews was that physician factors, logistical factors, and physicians' perceptions of patient factors each played a role in

Table 2. Barriers and Facilitators to Fall Risk Evaluation and Management

Themes	Subthemes	Barrier or Facilitator	Examples
Physician factors	Awareness	B	Falls not at the same level as cancer screening
	Priorities and tradeoffs among competing morbidities	B	Hypertension treatment requires more medications
	Appropriateness of referrals	B	Patients referred to physical therapy when medical intervention (lab or neurologic evaluation) is more appropriate
		F	Observance of unsteady gait leads to physical therapy referrals
	Training	B	Disease-based medical education shifts physician focus away from multifactorial problems
		F	Geriatric principles and content incorporated into training
	Tie-in to already performed activities	F	Falls linked to osteoporosis prevention
Logistical and systemic factors	Transportation	B	Patients have no travel to physical therapy
	Time required for immobile patients	B	Physically difficult and time consuming to check orthostatics in frail patients
	Reimbursement	B	Components of fall risk management do not increase reimbursement
	Schedule	B	Fall risk not evaluated unless part of regular evaluation schedule
	Family	B	Attendance needed for accurate reporting
		F	Attendance improves treatment execution
	Other health care providers	F	Home care nurses, outpatient, and home physical therapists provide evaluation
Physicians' perceptions of patient factors	Reporting	B	Underreport falls because of denial, memory loss, fear of consequences
		F	Complaints of dizziness prompt physician action
	Attitude toward medications	B	Patients emotionally attached to certain medications
		F	Potential savings on medication expense facilitates discontinuation
		F	Patients want justification for medications prescribed by multiple specialists
	Positive feedback	F	Satisfaction expressed after visit to physical therapy

facilitating or impeding the incorporation of fall risk evaluation and management into the care of elderly patients.

Physician factors are characterized by physicians' attitudes about the importance of falls and their experience with older patients. Logistical factors refer to processes that require advanced planning or coordination with external agencies to execute. Physicians' perceptions of patient factors include the multiple ways in which physicians believe that patients influence their own care. Each of these factors is further subdivided into more specific subthemes (Table 2). In our review of these themes and subthemes, we provide a selection of representative quotes that best illustrate the larger body of data.

Physician Factors

Awareness—Some respondents felt that fall risk evaluation and management has not reached a level of consciousness sufficient to trigger action. Medical problems that do not reach this threshold are not routinely addressed.

> Hopefully, we can incorporate this more and more into part of our screening protocol and give it the same importance that we give colon cancer, PSA measurements, and mammographies.

Competing risks and priorities—Nearly all respondents struggled with the balance between the risk of an elderly patient falling and the risk of morbidity from other illnesses. Examples of this dilemma included the risk of falls from antihypertensive medications versus the risk of stroke from long-term untreated hypertension.

> By stopping this medicine are the advantages going to outweigh the disadvantages?

The delicate balance not only influenced their decision to reduce medications but also whether falls would be addressed during the visit. Physicians struggled with prioritizing the use of time during clinical encounters:

> You say let's look at fall risk assessment as much as a fall is a horrible thing to happen, it is a nicety in a sense. A lot of my patients have COPD and they are coming in with an exacerbation . . . or they are coming in with their blood pressure poorly controlled.

Appropriateness of referrals—Several respondents were concerned about sending inappropriate referrals to physical therapy. They cited past negative experiences and concern about using physical therapy as a substitute for diagnostic acumen as significant barriers to referral:

> I had a patient go to physical therapy, but then I discovered that she had a really high TSH level. She was basically having falls as a result of severe hypothyroidism.

Conversely, physicians also reported that observation of unsteady gait resulted in more physical therapy (PT) referrals:

> I think we are referring patients more to physical therapy, who, if not by report, subjectively, but by our clinical judgment come in a little unsteady on their feet.

Training—Physicians felt that exposure to geriatric training during medical school or residency had a lasting influence on their approach to fall risk evaluation and management.

> Some time in my third year of residency we got a crash course in geriatrics. And the thing that really stuck with me was if they break their hip they have a huge mortality.

Conversely, the organ- and disease-specific basis of most medical training keeps physicians' focus away from nondisease-specific, multifactorial problems such as falls:

> In medical school we're taught about heart and lung disease. So, we have it drilled into us from day one that this is what we think about.

Tie-in to already performed activities—Many respondents were more likely to conduct fall risk evaluation and management

when they linked it to a familiar activity that is already part of their routine. Tie-in with familiar activities gives fall risk evaluation and management a point of entry into a clinical encounter.

> I think it's been paralleled a lot with osteoporosis treatment. When we get people treated and evaluated for osteopenia and osteoporosis, I think the fall prevention naturally follows.

Logistical Factors

Transportation—Many elderly patients do not have a good way to get back and forth from home and medical visits. A majority of respondents believed that elderly patients' lack of access to transportation not only limits referrals to physical therapy but also limits medical visits to the physician.

> We try to get them into whatever program is either closer to where they live or within the scope of their dial-a-ride . . . So it is not that we are not referring, but they do not have the means of getting there and getting back.

Time required for immobile patients—Several respondents cited impaired mobility as a significant barrier to checking orthostatic blood pressures. The time and extra personnel required to get a frail elderly patient safely off the table and standing up was often prohibitive.

> Somebody has to be able to hold them, and it just ties down a person in my office for 15 minutes, which in the middle of they day we don't have.

Reimbursement—Respondents felt that the time required to assess fall risk was not reimbursed by Medicare. While none cited reimbursement as the primary determinant of the decision to address falls, the pressure to meet financial and time obligations was universally felt by all respondents.

> Fall prevention might take a long time and you don't get reimbursed at all for any of the fall prevention counseling you do.

Scheduling—When respondents left fall risk evaluation and management to ad hoc evaluations, they often had no time to address the issue. Some respondents felt that including fall evaluation and management as a component of a regular comprehensive evaluation increases the likelihood of addressing the issue at least once a year.

> Maybe it is something that would have to be scheduled in a comprehensive evaluation, where you schedule an appointment to catch up on issues that have fallen by the wayside.

Family—Physicians stated that family involvement was crucial to the successful application of fall risk evaluation and management, and to management of elderly adults in general. Respondents used family to elicit histories of falls, review medication compliance, and verify treatment plans.

> I usually request that their daughters or sons, who try to manage their medications, also come in so they understand what I am doing.
>
> You usually have to ask family members if they are having problems maneuvering through the house or getting outside, rather than direct questioning of the patient.

Other health care providers—Physicians noted that the ability of home care nurses or physical therapists to perform fall risk evaluation and management enhances the likelihood that these evaluations would occur. However, many respondents were either unaware of these services or had limited time to arrange them.

> In the private sector it's very hard to do, because you have to get so much paperwork and approvals done in order for a nurse or social worker to go out there to assess fall safety.

Physicians' Perceptions of Patient Factors

Reporting—Respondents believed that patients underreport falls and gait difficulties. Fear of consequences, denial, and memory loss were all cited as reasons for underreporting.

> They are not going to report, "Oh, well I fell." Our patient population does not see it as a big thing. They are not going to report near misses. They are barely reporting any falls at home. These are not patients who are going to admit that they are losing mobility, because they think the next step is a nursing home.
>
> A lot of times the senior citizens who I speak to are in denial. They don't want to be sick and they are not going to tell you. Either that, or they don't remember.

However, patient reports of dizziness were a common trigger for further evaluation through orthostatic blood pressure checks.

> Orthostatics would be checked mainly if they had symptoms like dizziness or unsteadiness. So we don't routinely do orthostatics with everyone all the time.

Attitudes toward medication—Responding physicians felt that elderly patients had conflicting attitudes toward their medications. Patients' attachment to certain medications increased the difficulty of medication discontinuation.

> There are other medications that I would like to get rid of, the insomnia medications, the allergy medications, that people really don't want to give up.
>
> A lot of these patients are on these medicines for a while and it is psychologically tough for them to switch medicines or to lower the dose.

However, respondents identified patients' out-of-pocket costs for medication as a facilitator of medication reduction. While the physicians did not raise these concerns, they responded to cost concerns voiced by their patients.

> These people have to pay for their drugs, so sometimes they will actually come in and say, "Do I actually need to take such and such?"

Respondents felt that many patients were confused about multiple medications prescribed by multiple physicians. A patient's demand for clarification was a powerful motivator to review and reduce medications.

> I am a minimalist; I try to decrease medications for my elderly patients. Number one, because they can't afford it, or number two, they usually get it from other physicians and don't understand why they are taking it.

Positive feedback—When patients returned from physical therapy with positive remarks, respondents expressed more interest in referring to PT in the future.

> I've gotten positive remarks from some of my patients saying PT was really a great experience for them and improved them a lot; it improved their balance and well being.

DISCUSSION

The physicians interviewed articulated a set of physician, logistical, and patient factors that intersect to either facilitate or impede the incorporation of fall risk evaluation and management into the primary care of elderly patients. The results of this study suggest several obstacles to identifying elderly patients at high risk of falls and directing treatment toward this group. First, clinicians must appreciate the significant morbidity that results from falls among elderly patients. Second, clinicians need to have sufficient awareness of the importance of falls to consider addressing it during clinical encounters. Third, clinicians who are willing to address falls should be ready to maneuver the logistics of fall risk evaluation and

management. Finally, patients and their family members require motivation to request fall-related services and to participate in the management process.

Many of the hurdles cited by respondents are not unique to fall risk evaluation and management. Any new intervention considered preventive must overcome reimbursement and time constraints.[17] Transportation, family involvement, and medical training themes could be applied to the entire spectrum of geriatric health issues. Physicians have cited patient adherence as a barrier to adoption in several settings.[18,19] Because these themes are not unique to fall risk management, they invite strategies that cannot only improve management of falls, but management of elderly patients in general.

One challenging set of physician strategies requires an understanding of the motivators of patient behavior and the willingness to use this understanding to pursue fall risk reduction. Physicians who recognize the shame and denial that elderly patients associate with a fall may be less likely to wait for patients to report falls spontaneously. Physicians can improve their identification of patients at high risk for falls by directly asking the patient or family whether they have fallen in the last year. As recommended by the AGS, routinely asking this simple question to all elderly patients would identify a group that would most benefit from intervention. Furthermore, physicians who recognize patients' concerns over the costs and appropriateness of multiple medications can use these concerns to motivate patients to accept medication reductions.

A different set of physician strategies requires modifications to their approach to familiar clinical problems. For example, the goal of osteoporosis management is the same as fall prevention-injury reduction. By tying fall risk directly into osteoporosis management, physicians increase their awareness of falls and the likelihood of addressing fall risk on a regular basis. An additional physician strategy is to use fall risk evaluation and management as a tool for approaching a common problem, such as dizziness. Linking fall risk evaluation and management to a complaint of dizziness gives physicians a series of helpful interventions in response to a common (prevalence 18% to 30%)[20,21] difficult-to-treat symptom.

Another group of strategies focuses on logistical preparation. Physicians' offices could contact the families of elderly patients and encourage them to attend visits regularly. Family members can play a significant role in obtaining an accurate history of falls, investigating medication effects, and participating in treatment decisions. Patients could be alerted before a visit that they should bring their medications to office visits for review. Physicians could prepare their office staff and organize visit flow so that postural blood pressure checks and review of medication effects occur regularly with elderly patients at risk for falls. Finally, knowledge of public transportation options for the elderly, familiarity with physical therapists versed in gait and balance treatment, and understanding of eligibility requirements for home safety assessments and outpatient rehabilitation services are all essential components of successful treatment plans. Accumulating this knowledge requires an up-front investment of time by busy physicians, nurses, and social workers. The physician's commitment and leadership in investing this time could result in more efficient and effective care of elderly patients that would address many of their unmet needs.

Several systemic responses could increase implementation of fall risk evaluation and management. The available International classification of Diseases, 10th revision (ICD-10) codes are cumbersome for fall risk assessment; providers must use various codes pertaining to the individual conditions that increase the risk of falls. A single ICD-10 code for a high risk of falls could enhance the likelihood that providers would perform fall risk evaluation and management and that these services would be covered. Development of fall risk management-specific current procedural terminology (CPT) codes could further improve the chances of fall evaluation. Increased state and local funding of transportation programs for elderly citizens will enhance all aspects of their medical care. Although the current cost environment makes any increase in expenditures difficult to achieve, thoughtful systemic actions should reflect the unique medical and social requirements of elderly patients.

Medical schools and residency programs shape how physicians weigh the harms and benefits of treatments for patients with multiple morbidities. This study was not designed to determine the relative importance of different exposures to geriatrics. Nonetheless, our results suggest that an increased focus on multifactorial geriatric health conditions could influence how physicians balance the risk of falls against the risk of other illnesses.

Finally, patients and families should be educated about the importance of fall prevention, and empowered to report falls and fall-related symptoms to their physicians. The challenge for fall prevention advocates lies in effectively communicating the message to patients and increasing their involvement in decision making.[22] Toward this end, CCFP has used posters, the internet, newspapers, television, billboards, public service announcements, and personal outreach at senior centers to motivate patients and families to discuss falls with their physicians.

The qualitative design of this study limits our ability to make conclusions about the relative importance of the themes. However, our primary goal was not to quantify the relative importance of factors, but to identify key themes. Another limitation of our study was a low response rate in a sample of physicians who had participated in outreach sessions on fall risk evaluation and management. Our results may not be applicable to physicians who have not had a similar outreach session. Although our sample is narrow, we suspect that the content of our conclusions reflects the experience of most primary care providers. Furthermore, the goal of this study was to determine the facilitators and barriers to fall risk evaluation and management in a best-case scenario—a physician informed of the existing research and willing to be interviewed. Insights gained from this study will improve future efforts to promote fall risk evaluation and management to less informed audiences. Finally, physicians' perceptions of patient wishes may not correlate well with actual patient wishes.[22] Further research should investigate whether physicians' perceptions accurately reflect patient attitudes toward falls.

Fall risk evaluation and management in elderly patients requires the integration of multiple complex factors. With many potential barriers to successful adoption, falls are often omitted from a clinical encounter. The actions discussed above offer strategies for enhancing the incorporation of fall risk evaluation and management into the clinical care of elderly patients. Modifications in physician, systemic, and patient activities will result in primary care that is more responsive to the needs of older patients.

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