

Recommendations for Older Adult Fall Prevention in Kansas

Prepared for the Kansas Department of Health and Environment, Office of Injury Prevention and Disability Programs by:

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Acknowledgements

The work described herein was supported by Grant #5U17CE724763-04 from the National Center for Injury Prevention and Control, Centers for Disease Control and Prevention. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention.

Four volunteers contributed to the Expert Panel Q&A session: Katie Burenheide, Pharm.D., M.S. from Stormont Vail Health Care; Burt DeWeese, P.T. from Rebound Physical Therapy; Rich Hanley, Director Harvey County Department on Aging; and Patrick D. Osborne LMFT, Health Strategies/Life Strategies Foundation.

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Executive Summary

Fall injuries are a significant public health problem in Kansas. Between 2003 and 2007, falls were the second-leading cause of unintentional injury deaths and the fourth-leading cause of death due to overall injuries. In this period about one in five unintentional injury deaths were due to fall-related injuries.

To address this problem, the Kansas Department of Health and Environment's Office of Injury Prevention and Disability Programs convened the Kansas Older Adult Fall Prevention Symposium. The Symposium brought together 60 interested stakeholders from across the state to develop these Recommendations for Older Adult Fall Prevention. Injury Prevention and Disability Program staff selected a consensus conference process to engage the stakeholders because granting agencies look for stakeholder buy-in when making funding decisions. Stakeholders read briefing materials before attending. At the Symposium, they met in small groups to prepare questions for a panel of invited experts, got those questions answered, and met in small groups again to draft action-plan recommendations for fall prevention. The entire group then discussed how to combine similar recommendations. For a 24-hour period following the Symposium, individual stakeholders used an online ballot to rank-order their preferred recommendations.

Participants ranked these three recommendations the highest:

1. Media campaign; awareness. Create an up-to-date, multifaceted education/information campaign to create awareness of the risk of falls containing consistent and reliable information targeted appropriately to diverse audiences. The campaign should be named something other than fall prevention. Employ social marketing techniques.
2. Develop toolkit that provides individual, community, and professional resources for resource rich and resource poor settings. The toolkit should include standardized tools for assessing fall risk, for use by health professionals and laypeople (possibly separate resources), similar to the pathways tools already in use for such things as congestive heart failure. Toolkit also includes: medication assessment, vision and hearing checks, balance assessment, ADL (activities of daily living), home environment assessment, nutrition and hydration.
3. An education program delivered at the community level. Standardized, convenient, comprehensive education program on older adult fall prevention created to be delivered to agencies, health care professionals, and individuals by knowledgeable people.

Introduction

Fall injuries are a significant public health problem in Kansas. Between 2003 and 2007, falls were the second-leading cause of unintentional injury deaths and the fourth-leading cause of death due to overall injuries. In this period about one in five (N=919; 19%) unintentional injury deaths were due to fall-related injuries.

Age-adjusted fall related injury deaths for all ages are higher among males compared to females (9 males vs. 5.6 females per 100,000 populations). However, females have higher rates of hospitalization due to fall injuries (28.5 females vs. 21.3 males per 100,000 population). This pattern holds for older Kansans as well. Among Kansans ages 85 and above, males have a higher fall-related death rate compared to females (180.9 males vs. 140.2 females per 100,000 population). In that same age group, females have higher rates of hospitalization due to fall injuries (485 females vs. 301.5 males per 100,000 population).

For both deaths and hospitalization, falls are highest among older adults ages 75 and above. Kansans ages 85 and above have the highest fall-related death rates (158.1 deaths per 100,000 population). The second-highest rate is among those ages 75 to 84 (51.6 deaths per 100,000). Similarly, these two groups have the highest and second-highest fall-related hospital discharge rates (429.8 and 181.5 per 100,000 population, respectively).

Falls are the most common cause of trauma in Kansas. In 2006, 2,721 unintentional fall-related traumas (ICD-9 E-codes 880-888) were reported to the State Trauma Registry. Injury severity was minor (ISS 1-8) for approximately half (53%) of patients, moderate (ISS 9-14) for 31% of patients, and severe (ISS > 15) for 16% of patients.

The average length of stay across all ages was 5.7 days. Twelve percent of patients stayed in the hospital one day, 58% stayed for 2-5 days, 23% stayed 6-10 days, and 7% stayed for more than 10 days.

Traumas due to falls result in a significant amount of morbidity. Discharge disposition for more than two-fifths of patients was either to a skilled nursing facility (24%), a nursing home (6%), or rehabilitation facility (11%). Half of patients who fell were discharged to home or to home with health care. Death was the outcome for 4.37% of patients.

To address the problem of older adult falls in Kansas, the Kansas Department of Health and Environment's Office of Injury Prevention and Disability Program convened the Kansas Older Adult Fall Prevention Symposium. The Symposium brought together 60 interested stakeholders from across the state to develop these Recommendations for Older Adult Fall Prevention. The Symposium was held June 24, 2009, in Salina, Kansas, at the Rolling Hills Wildlife Adventure Conference Center.

Injury Prevention and Disability Program staff wanted a highly efficient process that would gather input from a large group of stakeholders who all had many other activities competing for their time. The staff selected a participatory process called a One-Day Consensus Conference to structure the Symposium. The process takes a diverse group of stakeholders with varying amounts of knowledge about a topic and puts them on a level playing field so they can reach consensus on a decision.

Symposium participants read carefully prepared briefing materials ahead of time. Participants later broke into small groups to discuss what they still needed to know to make informed choices among the wide variety of potential approaches and interventions for preventing falls among older adults. They drafted questions for an invited panel of experts, came back together in a large group to have them answered by the expert panel, then broke up again into small groups to draft action plan recommendations. The entire group then discussed how to combine similar recommendations. For a

24-hour period following the Symposium, individual stakeholders used an online ballot to rank-order their preferred recommendations.

Participants selected these recommendation priorities:

1. Media campaign; awareness. Create an up-to-date, multifaceted education/information campaign to create awareness of the risk of falls containing consistent and reliable information targeted appropriately to diverse audiences. The campaign should be named something other than fall prevention. Employ social marketing techniques.
2. Develop toolkit that provides individual, community, and professional resources for resource rich and resource poor settings. The toolkit should include standardized tools for assessing fall risk, for use by health professionals and laypeople (possibly separate resources), similar to the pathways tools already in use for such things as congestive heart failure. Toolkit also includes: medication assessment, vision and hearing checks, balance assessment, ADL (activities of daily living), home environment assessment, nutrition and hydration.
3. An education program delivered at the community level. Standardized, convenient, comprehensive education program on older adult fall prevention created to be delivered to agencies, health care professionals, and individuals by knowledgeable people.

This report details each step of the consensus conference to show how participants arrived at their recommendations, and then presents the recommendations themselves in more detail. The report is quite detailed because people who go on to implement these recommendations may not necessarily be the same as those who developed the recommendations. People who implement these recommendations need to know the thinking behind them in order to stay true to the Symposium participants' intentions.

The Symposium

The Symposium’s consensus conference process started with e-mail recruitment of stakeholders selected by Injury Prevention and Disability Program staff. 75 people responded to e-mail solicitations by registering online for the Symposium. Sixty people attended the Symposium; of those, 55 completed evaluation forms and provided their demographic information. The participants were mostly female (87.3%), mostly ages 55-64 (30.9%, and another 30.9% were ages 65 and older); mostly white (90.9%); and mostly college-educated (47.3% had bachelor’s degrees). Information gathered from registration information for all 60 participants indicates most (63.3%) represent health care facilities, including hospitals, assisted-living facilities, and nursing homes.

Table 1: Demographics of Symposium Participants

Gender		Education	
Male	12.7%	Trade or Technical School	7.3%
Female	87.3%	Associates Degree	14.5%
		Bachelors Degree	47.3%
Age		Masters Degree	27.3%
18-24	1.8%	Ph.D.	1.8%
25-34	23.6%		
35-44	18.2%	Organizations Represented	
45-54	25.5%	County government agency	6.7%
55-64	30.9%	Educational institution	8.3%
65+	30.9%	Health care facility	63.3%
		Nonprofit organization	6.7%
Race		State agency	15%
White	90.9%		
African American	5.5%		
Other	3.6%		

Note: All figures except those for “Organizations Represented” include the 55 participants (out of 60) who completed evaluation forms. The “Organizations Represented” numbers are based on registration information for all 60 participants.

Briefing Materials

Injury Prevention and Disability Program staff compiled information about older adult falls for inclusion in a packet of briefing materials. Well-organized background information is important in a consensus conference because it allows participants to start from a common base of information. This can help reduce the imbalances that occur in group decision-making when some group members have access to more information than the others. The Symposium briefing materials (reprinted in Appendix C) included:

- Statistics on falls in Kansas, as well as national data on hip fractures
- A summary of risk factors for falls
- Excerpts from the Centers for Disease Control and Prevention’s (CDC) publication, “The 5 Building Blocks of Effective Community-based Fall Prevention Programs.”
- Summaries of 14 interventions drawn from the CDC’s publication, “Preventing Falls: What Works: A CDC Compendium of Effective Community-based Interventions from Around the World.”

- An explanation of how the One-Day Consensus Conference works.

Session 1: Draft Questions

Participants were randomly assigned to one of eight small groups when they arrived at the Symposium. Small groups had from seven to nine participants, as well as a small-group facilitator who helped the group deliberate. Limited resources did not allow for note takers in each group, so digital audio recorders were used to keep a record of each group's discussions. Each group also submitted all notes taken on easel pads during the discussions.

Small-group participants were told to discuss the briefing materials and background presentations, then draft two questions per group they still would like answered in order to make fully informed decisions about what fall-prevention strategies to recommend. There was time to answer the following questions:

- How do we work with physicians to provide tips/education/resources regarding age-related risk factors and individualized prevention plans throughout the life process?
- What are some funding ideas to address the issues in the building blocks?
- How do you account for diversity in choosing activities for fall prevention, i.e. motivation, collaborating with community agencies, medications, and fashionability of gadgets?
- Should nutrition and hydration be considered as a component of a fall reduction program?
- What resources are available to give us the capacity to access older adults?
- How do we implement a program in resource-scarce areas?
- Considering all of the evidence-based practices require a trained professional to implement the program, how do you propose adaptation for rural or frontier areas with scarce resources and practitioners implement program without compromising effectiveness?
- How do we get interest from people who need it, i.e. pharmacists, occupational therapists, etc.?
- How can we reach/incentivize those without insurance, or who don't regularly visit a physician, due to fear of stigma they will be seen as "feeble" or be "put away in a home"?
- What standardized tools/evaluations are being used to address the building blocks in the home and care facility settings?
- Is the risk of fall different for those in institutions (acute care short hospital stays, long term care, etc.) vs. those in community settings, and are all falls preventable?
- How do we get people motivated to participate in the program?

Unfortunately, time for Session 1 ran out before these questions could be answered:

- What has been done in fall prevention for populations similar to Kansas?
- How do we educate all parties involved?
- How do we get buy-in from all stakeholders (individuals, families, communities, physicians, pharmacies, Physical Therapists/Occupational Therapists, rehabilitation ,

Area Agencies on Aging , home health, etc.) for implementing one consistent, evidence-based, standardized program?

- How do we locate resources?

Session 2: Q&A with Expert Panel

Four volunteers comprised the expert panel: Katie Burenheide, Pharm.D., M.S. from Stormont Vail Health Care; Burt DeWeese, P.T. from Rebound Physical Therapy; Rich Hanley, Director Harvey County Department on Aging; and Patrick D. Osborne LMFT, Health Strategies/Life Strategies Foundation.

The expert panel's responses to the participants' questions were as wide-ranging as the questions themselves. Here are some highlights of the panel's responses:

Working with physicians? Dr. Burenheide recommended getting fall-prevention messages into "doc talks" and grand rounds meetings for physicians at health care facilities. Mr. DeWeese said it's a matter of informing community members about the seriousness of falls, and how they can be prevented. "Really, it's a matter of educating them so they can be their own advocates to physicians," he said.

How do you account for diversity? Mr. Osborne said his facility works to make older adults comfortable with coming out to exercise, for instance by holding classes when there are not a lot of young people running around and sending the message, "We're here to get stronger together." Mr. DeWeese said playing sports video games, such as bowling and tennis, using the Nintendo Wii appeals to nearly everyone: "These are things they used to enjoy doing." Mr. Hanley pointed out that tai chi lends itself well to diverse groups because it doesn't require interaction, or sweating, or even standing up.

Implementation in resource-scarce areas? Mr. Hanley said tai chi is accessible to rural areas because it's inexpensive and easy. A Sunday school class, for instance, could send someone to a training session and have that person then teach the group. He noted the Arthritis Association offers a three-day session costing \$295. Mr. Osborne mentioned the SilverSneakers program, saying it's possible to get free materials and equipment with the right number of participants.

How to reach people? The panelists suggested going to places where there is social networking—coffee shops, churches, feed mills and feed lots, and even bars. Blood pressures are taken at senior centers and flu shot delivered at feed lots, so why not fall prevention information?

What is Tai Chi? Hanley, a Tai Chi instructor, answered this question with a demonstration. He asked the entire audience to stand up and follow along while he demonstrated several Tai Chi forms. He pointed out how simple and easy the forms are, and noted they can be done by anyone—even from a seated position for those with limited mobility.

Session 3: Draft Recommendations

The small groups met once more, this time tasked with drafting two recommendations each for which items should be included in the Recommendations for Older Adult Falls Prevention. The items they drafted, in the groups' original wording, were:

1. Create a statewide (fall) health policy.
2. Create a standardized and adaptable fall assessment form.
3. Provide evidence-based outcomes (incentive driven).
4. Tai chi and/or science-based physical activity programs; promotion through volunteers.
5. Promoting local networking; falls/aging coalitions.
6. Older adult fall prevention messages; consistent, reliable messages developed at the state level, flowing to local—professional and citizens.

7. Standardized, convenient, comprehensive education program on older adult fall prevention created to be delivered to agencies and individuals by knowledgeable person.
8. Implementation of evidence-based, age-specific exercise programs that are accessible geographically and structurally in urban and frontier areas.
9. Educating the individual about the importance of maintaining a current list of medications, including prescriptions, over the counter, herbals, for periodic review by the healthcare professional.
10. Have programs that are evidence linked but adapted to context in Kansas, i.e. considering lack of transportation, cost, and general lack of resources in some parts of the state—need different approaches for different areas.
11. Involve diverse populations of older participants in planning the programs. Often older participants are not involved in the planning because of stereotyping older people, especially if perceived as frail.
12. Provide programs that improve and/or maintain function, considering the setting, i.e. facility setting or community setting, because the fundamental issue is function.
13. Development of a media campaign to reduce the stigma of fall prevention program—rename the program.
14. Seek funding and distribute to all communities in Kansas through county agencies (health department), churches, hospitals, area agency on aging, senior centers, etc.
15. Develop core measures (best practices) and communicate to all agencies working with older adults to measure the effectiveness of a plan based on the five building blocks that is flexible, available, modifiable, and consistent.
16. Develop a toolkit that provides individual, community, and professional resources for resource rich and resource poor settings.
17. Develop an awareness campaign based on social marketing. Examples: Multimedia, transtheoretical model, etc.
18. Identifying/mobilizing resources that are required for fall prevention initiatives, e.g. volunteers, grants funds, Emergency Medical Services, Physical Therapists, etc.
19. The Kansas Department of Health and Environment develop a fall prevention program that is adaptable and flexible for individual communities and includes:
 - a. Collaboration with local government
 - b. Train the trainer program that incorporates tai chi trainer instruction.
 - c. Fall prevention resources guide.
 - d. Uses the Five Building Blocks and adds nutrition and hydration.
 - e. Uses input from senior citizens.
20. Investigate collaboration with summer meal programs (USDA).
 - a. Include education on nutrition and hydration.
 - b. Provides intergenerational socialization.
21. Education/media campaign—public, seniors, families, professionals.
 - a. Using TV, radio, newspaper, classes.
 - b. Education of professionals to include pathways for fall prevention.
 - c. Target clergy, public health, city government, health professionals.
22. The state adopts the medical reconciliation process as defined by the Joint Commission (and inclusion of over the counter (OTC) meds) as part of hospital licensing requirements.
23. Protocols for pharmacies to include medication review—asking if patient takes other medications not received through the pharmacy (i.e. online ordering and OTC) to check for drug interactions.

24. State coordinates information to ensure consistency of messages:
 - a. Assessment at physician visit based on age and/or risk factors (similar to mammogram, colonoscopy, prostate checks)
 - b. Assessment includes: medication assessment, vision and hearing checks, balance assessment, ADL (activities of daily living)
 - c. Recommendations for home environment assessment
 - d. Education regarding importance of personal care and resources (exercise, nutrition, hydration, shoes)
 - e. Multifaceted information awareness campaign, including public service announcements (PSAs), doctors' offices, community centers, churches, Department of Motor Vehicles, pharmacies, clinics, extension offices, etc.

Sessions 4 & 5: Narrow Down Recommendations, Generate Voting Ballot

After drafting recommendations in their small groups, participants met in one large group to discuss each recommendation. To aid the discussion, the Symposium facilitator printed a handout for each participant listing all the recommendations, and also displayed the recommendations on two large projection screens in the meeting room. The facilitator began by reading each recommendation aloud, then asking participants whether they had questions about each small group's set of two recommendations. This led to a number of clarifications of each group's intent; the Symposium facilitator edited the wording of recommendations and added clarifying notes. The editing was done on the projection screens so all could see the changes and approve or reject them as they wished. After this process, the recommendations looked like this (additions are underlined, deletions are struck out):

1. Create a statewide (fall) health policy.
2. Create a standardized and adaptable fall assessment form.
 - a. That can be handled by anyone.
3. Provide evidence-based outcomes (incentive driven).
 - a. What's in it for the person to participate?
4. Tai chi and/or science-based physical activity programs; promotion through volunteers.
5. Promoting local networking of falls/aging coalitions.
 - a. Area agencies on aging, pharmacists, older adults.
6. Older adult fall prevention messages: consistent, reliable messages developed at the state level, and flowing to local professionals, and citizens via networks of fall/aging coalitions.
7. Standardized, convenient, comprehensive education program on older adult fall prevention created to be delivered to agencies and individuals by knowledgeable person.
 - a. Knowledgeable could be a lay person, formal or informal training. Left open so it can work in communities all across the state.
8. Implementation of evidence-based, age-specific exercise programs that are accessible geographically and structurally in urban, rural and frontier areas.
9. Educating the individual about the importance of maintaining a current list of medications, including prescriptions, over the counter, herbals, for periodic review by the healthcare professional.

10. Have programs that are evidence linked but adapted to context in Kansas, i.e. considering lack of transportation, cost, and general lack of resources in some parts of the state—need different approaches for different areas.
 - a. Evidence linked as opposed to evidence based, because most of the latter referenced in CDC publications are developed by university researchers in densely populated urban environments. We want to take the best we can out of evidence based programs, adapt it and label it evidence linked.
 - i. For example, a medication checklist intended for a pharmacist can be used by other individuals. Might have to be adapted.
11. Involve diverse populations of older participants in planning the programs. Often older participants are not involved in the planning because of stereotyping older people, especially if perceived as frail.
 - a. Diversity: One approach is to not be exclusive. But what can we do to be proactively inclusive?
 - b. Not only ethnicity and culture, but socioeconomic status, geographic diversity, first language, a whole list of personal characteristics.
 - c. Notion is to be inclusive of a heterogeneous group of older adults.
12. Provide programs that improve and/or maintain function, considering the setting, i.e. facility setting or community setting, because the fundamental issue is function.
13. Development of a media campaign to reduce the stigma of fall prevention program—rename the program.
 - a. People don't get involved until they have a fall. To prevent they need to get involved early on.
 - b. If it were named something that promotes maintaining your independence longer, they might be apt to be involved earlier.
14. Seek funding in money and grant opportunities and distribute both money (e.g. seed money) and information on getting more money to all communities in Kansas through county agencies (health department), churches, hospitals, area agencies on aging, senior centers, etc.
15. Develop core measures (best practices) and communicate to all agencies working with older adults to measure the effectiveness of a plan based on the five building blocks that is flexible, available, modifiable, and consistent.
16. Develop toolkit that provides individual, community, and professional resources for resource rich and resource poor settings.
17. Develop an awareness campaign based on social marketing. Examples: Multimedia, transtheoretical model, etc.
 - a. We don't have a spokesperson to give clout to the whole concept of what we're trying to do.
 - b. Do we need one? If the message is strong enough and packaged appropriately, we can get it out.
 - c. Jonathan Winters? – spokesperson for the National Fire Protection Association's Remembering When program
 - d. Marketing research has discovered it's much more effective to identify with the recipient of the campaign. Associate with the message, not the celebrity.
 - e. Kansas Health Foundation's "Take a Second. Make a Difference." Campaign
 - f. Symbolic images rather than a person.
 - g. Consistency of message is key.

18. Identifying/mobilizing resources that are required for fall prevention initiatives. For example, volunteers, paraprofessionals, funding agencies, and professionals.
19. KDHE (or similar organization!) develop a fall prevention program that is adaptable and flexible for individual communities and includes:
 - a. Collaboration with local government
 - b. Train the trainer program that incorporates tai chi trainer instruction.
 - c. Fall prevention resources guide.
 - d. Uses the Five Building Blocks and adds nutrition and hydration.
 - e. Uses input from senior citizens.
 - f. Funding unavailable at KDHE. Perhaps Department on Aging finds funding.
20. Investigate collaboration with summer meal programs (USDA).
 - a. Include education on nutrition and hydration.
 - b. Provides intergenerational socialization.
 - c. Doing through the school, a program set up schools with high percentage of students doing free/reduced lunch. Don't know if it has to be provided only at school building. Available only in the summertime? Intergenerational.
21. Education/media campaign--public, seniors, families, professionals.
 - a. Using TV, radio, newspaper, classes.
 - b. Educating professionals, to include pathways for fall prevention.
 - c. Target clergy, public health, city government, health professionals.
22. The state adopts the medical reconciliation process as defined by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) (and inclusion of OTC meds) as part of hospital other health care facility licensing requirements.
23. Protocols for pharmacies to include medication review—asking if patient takes other medications not received through the pharmacy (i.e. online ordering and OTC) to check for drug interactions.
24. State coordinates information to ensure consistency of messages:
 - a. Assessment at physician visit based on age and/or risk factors (similar to mammogram, colonoscopy, prostate checks)
 - b. Assessment includes: medication assessment, vision and hearing checks, balance assessment, ADL (activities of daily living)
 - c. Recommendations for home environment assessment
 - d. Education regarding importance of personal care and resources (exercise, nutrition, hydration, shoes)
 - e. Multifaceted information awareness campaign, including PSAs, doctors' offices, community centers, churches, DMVs, pharmacies, clinics, extension offices, etc.

The goal for the day was to develop three recommendations, so the Symposium facilitator moderated a discussion aimed at narrowing down the number of recommendations. The facilitator opened by asking participants whether there were similar items that could be combined. The first suggestion from participants was that items dealing with an awareness campaign in the media could be combined. The facilitator led a discussion on which items to combine and how to word the combined recommendation. The result was this wording:

- A. Media campaign; awareness. Create an up-to-date, multifaceted education/information campaign to create awareness of the risk of falls containing consistent and reliable information targeted appropriately to diverse audiences. The

campaign should be named something other than fall prevention. Employ social marketing techniques.

The discussion continued with suggestions to combine the items dealing with an education campaign. That discussion resulted in this recommendation:

B. An education program delivered at the community level. Standardized, convenient, comprehensive education program on older adult fall prevention created to be delivered to agencies, health care professionals, and individuals by knowledgeable people.

Time allowed for just one more discussion of combining similar items, resulting in this recommendation:

C. Develop toolkit that provides individual, community, and professional resources for resource rich and resource poor settings. The toolkit should include standardized tools for assessing fall risk, for use by health professionals and laypeople (possibly separate resources), similar to the pathways tools already in use for such things as congestive heart failure. Toolkit also includes: medication assessment, vision and hearing checks, balance assessment, ADL (activities of daily living), home environment assessment, nutrition and hydration.

The facilitator sought consensus approval from the entire group before finalizing the wording for each of the above items. Because time was short, other recommendations were left as-is. All told the narrowing-down discussion resulted in the elimination of recommendations 2, 4, 6, 7, 13, 17, and 24, because they were combined into the above recommendations. The final ballot is shown in the next section.

Participants also completed an evaluation of the Symposium (see Appendix B).

Voting on the Recommendations

For a 24-hour period following the Symposium, individual stakeholders used an online ballot to rank-order their preferred recommendations. The Symposium facilitator limited the length of the balloting to 24 hours to ensure the preliminary consensus achieved during the Symposium was fresh in the minds of individual participants when they voted.

The text of the recommendations was the same as in Table 2 below, with recommendations A, B, and C presented first, followed by the remaining recommendations in numerical order. Due to a clerical error, “Area agencies on aging, pharmacists, older adults” erroneously appeared as an item on the ballot. Participants could rank up to 16 of the 22 items.

Recommendations A, C, and B emerged as the clear consensus choices, with scores of 690, 682, and 642, respectively. The next-highest item, Recommendation 11, received a score of just 381. Scores were calculated like this: When an item received a ranking of 1, meaning it was that participant’s highest preference, it received 16 points. A ranking of 2 earned the item 15 points, and so on. By way of example, here is how Recommendation A fared:

$$(10 \times 16) + (14 \times 15) + (13 \times 14) + (5 \times 13) + (1 \times 12) + (1 \times 11) + (2 \times 10) + (2 \times 9) + (1 \times 8) + (0 \times 7) + (0 \times 6) + (0 \times 5) + (0 \times 4) + (1 \times 3) + (0 \times 2) + (1 \times 1) = 690$$

Full voting results are in Appendix A.

Table 2: Recommendations Ballot Results

Ballot Item	Score
A: Media campaign; awareness. Create an up-to-date, multifaceted education/information campaign to create awareness of the risk of falls containing consistent and reliable information targeted appropriately to diverse audiences. The campaign should be named something other than fall prevention. Employ social marketing techniques.	690
C: Develop toolkit that provides individual, community, and professional resources for resource rich and resource poor settings. The toolkit should include standardized tools for assessing fall risk, for use by health professionals and laypeople (possibly separate resources), similar to the pathways tools already in use for such things as congestive heart failure. Toolkit also includes: medication assessment, vision and hearing checks, balance assessment, ADL (activities of daily living), home environment assessment, nutrition and hydration.	682
B: An education program delivered at the community level. Standardized, convenient, comprehensive education program on older adult fall prevention created to be delivered to agencies, health care professionals, and individuals by knowledgeable people.	642
11 Involve diverse populations of older participants in planning the programs. Often older participants are not involved in the planning because of stereotyping older people, especially if perceived as frail.	381
8 Implementation of evidence-based, age-specific exercise programs that are accessible geographically and structurally in urban, rural and frontier areas.	370
9 Educating the individual about the importance of maintaining a current list of medications, including prescriptions, over the counter, herbals, for periodic review by the healthcare professional.	352
10 Have programs that are evidence linked but adapted to context in Kansas, i.e. considering lack of transportation, cost, general lack of resources in some parts of the state—need different approaches for different areas.	346
14 Seek funding in money and grant opportunities and distribute both money (e.g. seed money) and information on getting more money to all communities in Kansas through county agencies (health department) churches, hospitals, area agencies on aging, senior centers, etc.	340
5 Promoting local networking of falls/aging coalitions.	337
15 Develop core measures (best practices) and communicate to all agencies working with older adults to measure the effectiveness of a plan based on the five building blocks that is flexible, available, modifiable, and consistent.	321
19 KDHE (or similar organization!) develop a fall prevention program that is adaptable and flexible for individual communities and includes: a. collaboration with local government b. A complete fall prevention “train the trainer” program that includes, for example, tai chi trainer instruction. c. Fall prevention resources guide. d. Uses the five building blocks and adds nutrition and hydration. e. Uses input from senior citizens.	296
16 Develop a toolkit that provides individual, community, and professional resources for resource rich and resource poor settings.	258
1 Create a statewide (fall) health policy.	239
4 Tai chi and/or science-based physical activity programs; promotion through volunteers.	232

Ballot Item	Score
12 Provide programs that improve and/or maintain function, considering the setting, i.e. facility setting or community setting, because the fundamental issue is function.	230
18 Identifying/mobilizing resources that are required for fall prevention initiatives. For example, volunteers, paraprofessionals, funding agencies, and professionals.	209
23 Protocols for pharmacies to include medication review--asking if patient takes other medications not received through the pharmacy (i.e. online ordering and OTC) to check for drug interactions.	182
21 Education/media campaign--public, seniors, families, professionals. a. Educate professionals to include Pathways for Fall Prevention. b. Target clergy, public health, local government, health professionals.	178
3 Provide evidence-based outcomes (incentive driven).	172
22 The state adopts the medication reconciliation process as defined by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) (and inclusion of OTC medications) as part of hospital and other health care facility licensing requirements.	109
Area agencies on aging, pharmacists, older adults.	84
20 Investigate collaboration with summer meal programs (USDA). Include education on nutrition and hydration. Provides intergenerational socialization.	71

Writing and Reviewing the Recommendations Report

After writing a first draft of this report following the Symposium, the facilitator e-mailed the draft to Symposium participants and gave them time to comment on it by e-mail, postal mail or fax machine. Several participants praised the Symposium itself, but no one offered comments on this report.

Appendix A: Full Voting Results

Recommendation	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
A: Media campaign ...	10	14	13	5	1	1	2	2	1	0	0	0	0	1	0	1
B: An education program ...	10	15	11	4	2	1	0	1	0	1	0	0	0	0	0	0
C: Develop toolkit that ...	21	5	11	3	3	2	1	0	0	0	1	0	1	0	0	0
1 Create a statewide ...	2	0	2	6	0	3	1	1	1	2	2	0	0	1	2	8
3 Provide evidence-based ...	0	0	1	0	4	1	2	3	3	1	1	0	0	1	5	2
4 Tai chi ...	0	1	1	2	4	2	2	1	1	3	2	3	0	5	1	5
5 Promoting local networking ...	0	1	1	2	8	8	2	0	4	2	0	1	5	0	3	1
Area agencies on ...	0	0	0	0	0	0	1	4	0	1	0	3	0	4	2	0
8 Implementation of evidence ...	0	1	1	3	4	6	5	4	3	3	5	3	1	2	1	0
9 Educating the individual ...	0	3	2	4	2	4	2	6	3	1	3	4	2	1	2	1
10 Have programs that ...	1	2	0	1	5	3	4	2	6	5	3	1	6	2	0	0
11 Involve diverse ...	2	1	2	2	5	4	2	3	6	3	2	3	5	3	2	0
12 Provide programs that ...	0	0	0	1	1	2	4	1	3	6	3	4	4	2	3	2
14 Seek funding in ...	0	1	1	5	2	4	2	7	2	2	5	4	0	3	2	2
15 Develop core measures ...	1	1	1	3	2	4	5	2	5	1	2	2	5	1	4	1
16 Develop toolkit that ...	0	4	1	2	1	0	2	2	4	4	3	2	2	3	1	1
18 Identifying/mobilizing ...	0	1	2	2	0	0	1	2	3	4	4	2	2	4	2	2
19 KDHE develop ...	2	0	3	3	3	1	3	1	0	6	2	5	2	0	3	4
20 Investigate collaboration ...	0	0	0	0	1	0	0	3	0	1	0	1	1	0	5	6
21 Education/media ...	1	1	0	0	2	2	2	2	1	0	5	1	3	2	0	2
22 The state adopts ...	2	0	0	1	0	1	0	1	0	2	0	2	1	4	1	2
23 Protocols for pharmacies ...	0	1	0	2	2	0	6	0	1	0	1	3	3	3	3	1

Note: Cell entries are the number of times particular rankings were chosen for particular options. For example, 10 people chose Recommendation A as their #1 preference and 14 people chose it as their #2 preference.

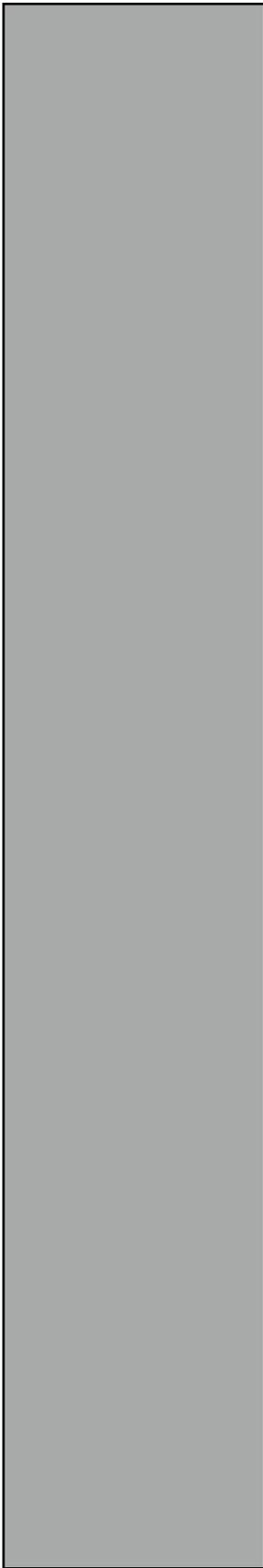
Appendix B: Evaluation of the Older Adult Falls Prevention Symposium

Participants completed evaluation forms at the end of the Symposium. Results from the 55 completed surveys showed participants were satisfied with the experience. Asked how satisfied they were overall with the Symposium, 60% responded “very satisfied” and 27.3% responded “satisfied.” Participants also rated how satisfied they were with their individual small-group facilitators, the expert panel, and the Symposium facilitator. With the individual small-group facilitators, 70.9% were very satisfied and 23.6% were satisfied. With the expert panel, 14.5% were very satisfied and 32.7% were satisfied. Finally, with the Symposium facilitator, 80% were very satisfied and 12.7% were satisfied.

As the evaluation results above indicate, a number of participants were not fully satisfied with the expert panel. An examination of open-ended comments some participants wrote on their evaluation forms, along with a post-Symposium debriefing of the small-group facilitators, revealed the following concerns about the expert panel:

- The panel had no representatives from rural and frontier counties (participants did not consider Harvey County, the workplace of one panelist, sufficiently rural)
- The panelists did not know enough about resources available for fall prevention program implementation.
- The panel had little experience with implementing fall prevention programs.

Appendix C: Briefing Materials



Briefing Materials & Agenda

Older Adult Fall Prevention Symposium
Wednesday, June 24, 2009
9 a.m. to 4 p.m.
Rolling Hills Wildlife Conference Center
625 North Hedville Road, Salina, Kansas

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Symposium Objective and Information

At the Older Adult Fall Prevention Symposium we will examine fall-prevention interventions and **recommend three that are best-suited for implementation across Kansas**. A consultant will then write a report about the Symposium and our recommendations, which you can review and comment on before it becomes final. Ultimately, recommendations generated at the Symposium will become the central part of the Kansas Older Adult Fall Prevention Plan.

The Kansas Department of Health and Environment's Office of Health Promotion, organizer of the Symposium, wants our recommendations, and ultimately the Prevention Plan, to meet the following criteria:

- Employ evidence-based interventions
- Adhere to principles of effective prevention
- Be feasible for implementation by agencies and organizations across Kansas

Unlike with other planning meetings you may have attended, the Symposium's output will not be an agenda for another meeting. **We will actually produce something at the Symposium.**

Q&A about the Symposium

Why is this important?

Falls are the most common cause of injury in Kansas, and half the falls occur among people aged 65 and older. Falls frequently cause moderate to severe injury, requiring long hospital stays and subsequent admission to

skilled nursing facilities, nursing homes, and rehabilitation facilities. Falls are costly for taxpayers because some are treated using Medicare funds, and they can be painful and even life-changing for the older adults who suffer them, as well as their families. **But falls are preventable.** You can help us select the prevention strategies best suited for implementation in Kansas.

Why do we need your help?

Three reasons. One, we want to use our existing, limited taxpayer funds wisely and efficiently. Two, we believe the best ideas come from diverse groups working and thinking together. Three, we need widespread stakeholder consensus. Because existing resources are limited, we need to seek external funding for fall prevention efforts. Granting agencies look for stakeholder buy-in when making funding decisions. **A similar effort on suicide prevention in Nebraska has already generated \$35,000 in external grants.**

Why is this packet so long?

Because everything is here, in one place. We can all recall attending planning meetings with thick binders full of handouts from a variety of sources. By contrast, one person pulled together this entire packet, designing every section to communicate only what you need to know, in the order you need to know it.

One drawback: You don't get to take home another binder.

Do I have to read this entire thing before the Symposium?

Please do. This is the minimum you need to know to make an effective contribution at the Symposium and take a meaningful step toward preventing older adult falls in Kansas. When everyone starts from the same knowledge level, participants feel empowered to contribute and more gets done because everyone is equally equipped to help.

There will be no presentations of this information at the Symposium. That's good news, in that you don't have to sit through another boring PowerPoint slideshow. But to avoid the slideshow and get right to producing a prevention plan, you have to read these briefing materials. We think you'll agree it's a good tradeoff.

What will the Symposium be like?

Highly structured and fast moving. We will move step by step through a tight agenda. We respect your time and will take breaks, eat lunch, and finish our work, all on schedule.

Here is a very brief play-by-play:

1. Randomly assigned small groups will discuss the briefing materials and the Symposium objective; then write questions to ask a panel of experts.
2. An expert panel will answer the small groups' questions.
3. Small groups will formulate three recommended strategies each for preventing older adult falls in Kansas.
4. A facilitator will moderate a large-group discussion to clarify and narrow down the small groups' recommendation. The result of the discussion will be a number of options for inclusion in an online ballot.
5. The day after the Symposium, participants will rank-order their preferred options via the online ballot.

Will there be good food?

Definitely! The Rolling Hills Wildlife Conference Center is known for the quality of its catering. Our tentative menu is:

- **Throughout the day:** Coffee, iced tea and water
- **Snacks:** Salsa, guacamole, hummus, pita bread, chips, "and of course fruits and vegetables since we are the Office of Health Promotion."
- **Lunch:** Deli sandwich buffet, homemade potato soup, and a wild greens salad with feta cheese, candied walnuts, and sherry walnut vinaigrette. Yum!

For more details, see the agenda and the session descriptions that follow.

Why just three recommendations?

We want the Kansas Older Adult Fall Prevention Plan to be reader-friendly (that is, short) and to contain only the most promising fall-prevention interventions for Kansas.

What if I have more questions?

Please feel free to call or e-mail our consultant, John Fulwider. His mobile number is (402) 202-2820, and his e-mail address is john@fulwiderpartners.com.

Introduction to the Briefing Materials

How to use the briefing materials

This packet serves as both briefing materials to read **before** the Symposium, and a detailed agenda to work through **during** the Symposium. We won't hit you with much other paper during the Symposium; this is pretty much it.

Before the Symposium

1. Carefully read all the sections from here up to the agenda.
2. Examine the agenda so you know what to expect at the Symposium.
3. Skim the agenda session descriptions, and if you have time jot down some ideas in the spaces provided.

During the Symposium

Use this packet as a workbook, following along with the five session descriptions appearing after the agenda.

Rationale for each section

Here's why we would like you to read each section in the briefing materials:

Older Adult Falls in Kansas

These data describe why falls are a problem for older adults in Kansas. Read this to get a handle on the scope of the problem.

Older Adult Fall Risk Factors

To be effective, any prevention program has to address modifiable risk factors. Risk factors for falls must be understood before interventions can be designed.

Effective Fall Prevention

We have all seen firsthand how limited staff and financial resources are in the current economic climate. When we come up with resources to put toward fall prevention, we have to use them wisely. Following effective prevention principles is a key step in making that happen.

Fall Prevention Programs

We excerpted this information from a list of evidence-based fall-prevention interventions recommended by the Centers for Disease Control and Prevention. Using interventions already proven effective is smart because a) they work and b) more and more granting agencies and organizations are requiring a basis in evidence for programs they fund.

The Symposium's Consensus Conference Meeting Format

We're using a highly structured, facilitated meeting process to get a lot done in a very short time. We'd like you to understand ahead of time why we're doing things this way.

Older Adult Falls in Kansas

Public health data

Fall injuries are a significant public health problem in Kansas. Between 2003 and 2007, falls were the second-leading cause of unintentional injury deaths and the fourth-leading cause of death due to overall injuries. In this period about one in five (N=919; 19%) unintentional injury deaths were due to fall-related injuries.

Age-adjusted fall related injury deaths for all ages are higher among males compared to females (9 males vs. 5.6 females per 100,000 populations). However, females have higher rates of hospitalization due to fall injuries (28.5 females vs. 21.3 males per 100,000 population). This pattern holds for older Kansans as well. Among Kansans ages 85 and above, males have a higher fall-related death rate compared to females (180.9 males vs. 140.2 females per 100,000 population). In that same age group, females have higher rates of hospitalization due to fall injuries (485 females vs. 301.5 males per 100,000 population).

For both deaths and hospitalization, falls are highest among older adults ages 75 and above. Kansans ages 85 and above have the highest fall-related injury death rates (158.1 deaths per 100,000 population). The second-highest rate is among those ages 75 to 84 (51.6 deaths per 100,000). Similarly, these two groups have the highest and second-highest fall-related hospital discharge rates (429.8 and 181.5 per 100,000 population, respectively).

Among adult Kansans ages 85 years and above, males have a higher fall related death rate compared to females (180.9 vs. 140.2 per 100,000 population).

Source: Kansas Department of Health and Environment, Office of Health Promotion, Injury and Disability Prevention Programs.

Trauma data

Falls are the most common cause of trauma in Kansas. In 2006, 2,721 unintentional fall-related traumas (ICD-9 E-codes 880-888) were reported to the State Trauma Registry. Injury severity was minor (ISS 1-8) for approximately half (53%) of patients, moderate (ISS 9-14) for 31% of patients, and severe (ISS \geq 15) for 16% of patients.

The average length of stay across all ages was 5.7 days. Twelve percent of patients stayed in the hospital one day, 58% stayed for 2-5 days, 23% stayed 6-10 days, and 7% stayed for more than 10 days.

Traumas due to falls result in a significant amount of morbidity. Discharge disposition for more than two-fifths of patients was either to a skilled nursing facility (24%), a nursing home (6%), or rehabilitation facility (11%). Half of patients who fell were discharged to home or to home with health care. Death was the outcome for 4.37% of patients.

Who is injured by falls?

Although a preponderance of falls occur in older individuals, falls occur in all age groups. On average, male fall patients are younger (average age 54 years) than females (average age 71 years). Half of all male patients are older than 57 years old, whereas half of female patients are older than 79 years old.

Where do fall traumas occur?

Many falls (63%) included in the trauma registry occur at home. Other places where falls occur include: residential facility (9%), public building (7%), recreation (4%), industry (3%), farm (1%), and other/unspecified place (11%). For adults more than 55 years old and children 0-4 years old, more than half of all falls occur at home. For people 85 and older, 21% of falls occur in residential facilities.

How do fall traumas occur?

A relatively large number of falls occur from slipping or tripping (30%), followed by falls from stairs (12%), ladders, scaffolding or buildings (10%), chairs/furniture (9%), and other heights (8%). The cause of over one-quarter (27%) of falls is unspecified. The number of fall traumas due to slipping increases dramatically with age. Similarly, the number of falls on steps increases with age. The number of sports-related injuries peaks at 5-14 years old and falls from ladders and buildings are highest in the 35-54 year age groups.

Source: Adapted from Kansas Trauma Program Spring 2009 “Impact” newsletter.

What about hip fractures?

The above data do not represent all hospitalized fall injuries in Kansas. One large group excluded from the trauma registry is patients who sustain isolated hip fractures from falling from the same level (slipping, tripping or unspecified fall). Here are *national* data from the Centers for Disease Control and Prevention on the frequency and cost of hip fractures.

How big is the problem?

- In 2004, there were more than 320,000 hospital admissions for hip fractures, a 3% increase from the previous year.

However, from 1996 to 2004, after adjusting for the increasing age of the U.S. population, the hip fracture rate decreased 25% (from 1,060 per 100,000 population to 850 per 100,000 population).

- Over 90% of hip fractures are caused by falling, most often by falling sideways onto the hip.

What outcomes are linked to hip fractures?

- About one out of five hip fracture patients dies within a year of their injury.
- Most patients with hip fractures are hospitalized for about one week.
- Up to one in four adults who lived independently before their hip fracture has to stay in a nursing home for at least a year after their injury.

Who is at risk?

- About 76% of all hip fractures occur in women.
- Hip fracture rates increase exponentially with age among men and women. People 85 and older are 10 to 15 times more likely to sustain hip fractures than are people ages 60 to 65.
- Osteoporosis increases a person's likelihood of sustaining a hip fracture.

Source: Excerpted from National Center for Injury Prevention and Control, Division of Unintentional Injury Prevention, “Hip Fractures Among Older Adults.”

Older Adult Fall Risk Factors

Falls are not an inevitable consequence of aging, but falls do occur more often among older adults because fall risk factors increase with age and are usually associated with health and aging conditions. These risk factors include:

Biological risk factors

- Mobility problems due to muscle weakness or balance problems
- Chronic health conditions such as arthritis and stroke
- Vision changes and vision loss
- Loss of sensation in feet

Behavioral risk factors

- Inactivity
- Medication side effects and/or interactions
- Alcohol use

Environmental risk factors

- Home and environmental hazards (clutter, poor lighting, etc.)
- Incorrect size, type, or use of assistive devices (walkers, canes, crutches, etc.)
- Poorly designed public spaces

Usually two or more risk factors interact to cause a fall (such as poor balance and low vision, which can cause a trip and fall going up a single step). Home or environmental risk factors play a role in about half of all falls.

Understanding these risk factors is the first step to reducing older adult falls. Over the past two decades, researchers around the world have used descriptive studies to identify risk factors and randomized controlled trials to test fall

Risk Factor

An attribute, situation, condition or environmental context that increases the likelihood of a fall. Risk factors must be easily modifiable. For instance, a person's physical fitness is easily modifiable; a person's gender is not.

interventions. The results of these studies show that reducing fall risk factors significantly reduces falls among community-dwelling older adults.

Many older adults, as well as their family members and caregivers, are unaware of factors or behaviors that put them at risk of falling, and are also unaware of what actions they can take to reduce their risk. Fall risk factor assessment is rarely a part of an older adult's routine health care, even if they have had a fall or fall injury. All older adults should be encouraged to seek an individual fall risk assessment from their healthcare provider, especially older adults with a history of falls and/or with mobility or balance impairments who are at highest risk for falls.

Source: Adapted from Centers for Disease Control and Prevention, "Preventing Falls: How to Develop Community-based Fall Prevention Programs for Older Adults," pp. 2-3.

Effective Fall Prevention

We would like you to consider two resources on effective fall prevention. First, we present the Centers for Disease Control and Prevention’s “The 5 Building Blocks of Effective Community-based Fall Prevention Programs.”

Second, we present nine principles of effective prevention programs. These principles were uncovered in a study not of fall prevention, but of preventing substance abuse, risky sexual behavior, school failure, and juvenile delinquency and violence. Still, we think all of them (with appropriate adaptation of Principle 5, “Positive Relationships,” and Principle 6, “Appropriately Timed”) are worth considering in any prevention effort, including fall prevention.

The 5 Building Blocks

The five main building blocks of an effective community-based fall prevention program are:

- Education about falls and fall risk factors.
- Exercises that improve mobility, strength, and balance, and that are taught by trained, nationally certified exercise instructors or physical therapists. Exercise programs include: Tai Chi individualized exercise sessions, group exercise classes, and home exercise programs with supervision until the older adult can exercise independently.
- Medication review to identify side effects or drug interactions that may

contribute to falls. The reviews should be conducted by pharmacists or healthcare providers. Medication management—adjustments to or changes in medications—should be provided by physicians.

- Vision exams by trained healthcare professionals with vision correction by an optometrist or ophthalmologist.
- Home safety assessment and home modification by occupational therapists or other healthcare professionals with specialized training, to identify and modify home hazards that can increase older adults’ risk of falling.

Building Block 1: Education programs for older adults and their caregivers

When developing a fall prevention program, it is important to include an educational component. While education alone has not proven to effectively reduce falls among older adults, it is typically combined with one of the other building blocks. Education for older adults and their caregivers can be delivered to individuals or to groups. Individual education sessions may work better for people who are hearing or vision impaired or have special needs. Sessions should be tailored to the attention span and cognitive ability of older adults. Visual aids such as brochures, fact sheets, and checklists will help facilitate the education session.

Group sessions provide the benefits of social interactions. Informal group discussions that include sharing personal experiences may reduce anxiety and increase motivation to adopt

new behaviors. Group teaching saves time and helps spread the information more quickly to more people.

Tips for developing an effective education component:

- Education should be delivered by trained professionals.
- Education should include problem solving and goal setting on the part of the learner.
- The length of the education session should depend on the individual characteristics of the older adult, such as concentration, hearing or visual impairment, etc.
- Group vs. individual education may be determined based on which other building block is being offered in combination.
- Visual aids are valuable tools in increasing comprehension.
- Materials should be designed with a high contrast background and large lettering.
- Materials should reflect literacy levels and be culturally appropriate.
- Presentations and materials should not contain abbreviations and jargon.
- Education is most effective when offered on an ongoing basis.

Building Block 2: Progressive exercise programs to improve mobility, strength, and balance

Among older adults, strength and balance exercises, such as Tai Chi, can reduce falls by improving mobility, strength, and balance. These programs focus on exercises that are specifically designed or adapted for older adults.

Tips for developing an effective exercise component: To be safe and effective, older

adult exercise programs (one-on-one or group classes) must be taught by one or more of the following professionals:

- Nationally certified fitness/exercise instructors with specialized training in working with older adults. Because exercise instructors are not licensed, having a national certification or accreditation is the minimum qualification requirement for teaching fall prevention exercise programs to older adults.
- Exercise science/physiology professionals with a bachelor's degree or master's degree in this field.
- Physical therapists.
- Occupational therapists.
- Recreational therapists with a bachelor's or master's degree.
- Tai Chi instructors, masters or grand masters, who have completed a Tai Chi course taught by a Tai Chi master or grand master, have a national certification in older adult physical activity, and have experience in teaching exercise to older adults.
- Physical, occupational, and recreational therapy assistants who are under the direct supervision of a physical, occupational, or recreational therapist.
- All professionals who teach exercise to older adults must have a current CPR/AED certification.
- To be effective in reducing falls, exercises must be performed at least twice weekly on an ongoing basis and progress in difficulty throughout the program.
- Ideally, the exercise classes should be offered on an ongoing basis for long-term attendance. Short-term programs that have a set number of sessions should provide written instructions so

participants can continue to do the exercises at home.

- Participants should be taught the exercises under the direct supervision of a trained exercise instructor or physical or occupational therapist, either in one-on-one home sessions or in group sessions, before performing them independently at home.
- Evaluate how the program instructor delivers the exercise program. Use process evaluation methods to ensure that the exercises are being taught properly and consistently. Also, obtain feedback from the program participants.
- Base program content on current published materials specifically developed for older adults by exercise science, physical therapy, or Tai Chi professionals.
- Assess older adults' strength, balance, and fitness at the beginning and end of each new exercise program.
- Limit the number of participants in group classes to no more than 15 to allow the instructor the ability to closely observe and supervise participants during the class session.

Building Block 3: Medication review and management

The purpose of medication review and management is to identify and eliminate medication side effects and interactions, such as dizziness or drowsiness, that can increase the risk of falls.

Many older adults are unaware that their daily medications may increase their fall risk. Aging affects the absorption, distribution, metabolism, and elimination of medications. Age can also increase sensitivity to potential side effects. Older adults may get prescriptions from multiple doctors. Fall risk increases with

the total number of prescription and over-the-counter medications.

Psychoactive medications (drugs that alter brain function) increase fall risk. These include antidepressants, tranquilizers, antipsychotics, anti-anxiety drugs, and sleep medications. Other medications that may cause problems include those prescribed to treat seizure disorders, blood pressure-lowering medications, cholesterol-lowering medications, heart medications, and painkillers.

Drug side effects that can contribute to falling include blurred vision, hypotension leading to dizziness and lightheadedness, sedation, decreased alertness, confusion and impaired judgment, delirium, compromised neuromuscular function, and anxiety. Review and modification of the medication regimen by a healthcare provider can frequently reverse or minimize these effects.

Clinical practice recommendations include medication reviews by healthcare providers for older adults who have fallen.

Tips for developing an effective medication review and management component

- Medication reviews are recommended for older people taking four or more medications and those taking any psychoactive medications.
- Medication reviews can be done in screening clinics, hospital programs, home visits by home health professionals, pharmacies, and doctors' offices.
- Medication reviews can be done by a pharmacist or a healthcare provider. Coordinated medication management that involves changing or reducing types or dosages of medications should be done by the older adult's healthcare provider.
- Medication review and management may include assessing the need for

vitamin D and calcium supplements as well as osteoporosis treatment.

- The amount and frequency of alcohol use should be included in a medication review.

Building Block 4: Vision exams and vision improvement

Vision changes and vision loss associated with aging are common fall risk factors among older adults. Vision loss can contribute to falls by disturbing balance and by obscuring tripping and slipping hazards.

Many vision conditions, such as cataracts, glaucoma, and macular degeneration, are gradual and painless. However, if these conditions are diagnosed early, they can be managed to minimize vision loss.

Older adults may have difficulty learning about and/or accessing community programs that offer vision care services. Community-based organizations can play an important role by providing information about and encouraging regular vision exams and care, and by referring older adults to community vision care services and resources.

Tips for developing an effective vision component

- Limited basic or simple vision screening can be performed by trained healthcare professionals such as physicians, nurse practitioners, physicians' assistants, registered nurses, and occupational therapists. However, basic vision screening does not identify all types of vision problems that need to be corrected.
- Comprehensive vision exams must be performed using specialized equipment. Therefore, these must be done by an optometrist or ophthalmologist.

- Medicare provides coverage for dilated eye exams, which are considered comprehensive vision exams.

Building Block 5: Home safety assessment and home modification

Environmental factors play a part in approximately half of all falls that occur at home. Falls can be caused by slipping and tripping hazards, poor lighting, or the lack of needed home modifications such as bathroom grab bars, handicapped showers, stair railings, and ramps.

A home safety assessment can identify factors that may put an individual at risk for falling. Many older adults can benefit from home safety assessments, but those with a history of falls and/or with mobility or balance difficulties have the greatest need for such an assessment. Home assessments can be combined with or included with other direct one-on-one services that are provided by community service programs to residents in their homes.

A self-administered home safety assessment checklist can be helpful if there is a plan for follow-up review with a trained professional and if information and referrals to home modification programs and resources are provided.

Older adults may have difficulty learning about and/or accessing home safety and home modification information and resources. Local Area Agencies on Aging (AAA) can provide information and referrals to local home modification programs. AAA can also provide information about state and federal programs that offer services and financial assistance to low-income seniors.

For an older adult who has been injured in a fall, Medicare may cover a home safety assessment and home modification if it is performed by an occupational or physical therapist. The senior must meet the home

health reimbursement criteria, and these home services must be prescribed by a doctor, nurse practitioner, or physician assistant.

Occupational therapists can conduct environmental assessments, assess how the older adult interacts with their home environment, and suggest adaptations or modifications that can help older adults with limited physical function or low vision prevent falls and live independently.

Tips for developing an effective home safety component

- Home safety assessments and modifications are most effective when they are done in the home by an occupational therapist and when they include education, recommendations, and a follow-up home visit to assess the need for additional modifications.
- Home assessments and modifications by an occupational therapist are especially effective in reducing falls among older adults who have already had a fall.
- Occupational therapists are specifically trained to help individuals adapt their living environments to their physical needs, so they can perform their daily activities as independently and safely as possible. Occupational therapists are also trained to provide education to older adults, their family members, and caregivers.
- Trained professionals such as a Certified Aging in Place Specialist (certified by the National Association of Home Builders), registered nurses, and physical therapists can also effectively carry out home assessments and modifications, in collaboration with occupational therapists.
- In addition to home modifications, some older adults may need to use personal assistive safety and mobility

devices. An occupational or physical therapist can provide the training needed to use these devices properly.

Source: Centers for Disease Control and Prevention. “Preventing Falls: How to Develop Community-based Fall Prevention Programs for Older Adults.”

Feeling ambitious? You can read the whole thing at <http://www.cdc.gov/HomeandRecreationalSafety/Falls/preventfalls.html>

9 Principles of Effective Prevention Programs

1. **Comprehensive:** Strategies should include multiple components and affect multiple settings to address a wide range of risk and protective factors of the target problem.
2. **Varied Teaching Methods:** Strategies should include multiple teaching methods, including some type of active, skills-based component.
3. **Sufficient Dosage:** Participants need to be exposed to enough of the activity for it to have an effect.
4. **Theory Driven:** Preventive strategies should have a scientific justification or logical rationale.
5. **Positive Relationships:** Programs should foster strong, stable, positive relationships between children and adults.
6. **Appropriately Timed:** Program activities should happen at a time (developmentally) that can have maximal impact in a participant’s life.
7. **Socio-Culturally Relevant:** Programs should be tailored to fit within cultural beliefs and practices of specific groups as well as local community norms.

8. **Outcome Evaluation:** A systematic outcome evaluation is necessary to determine whether a program or strategy worked.
9. **Well-Trained Staff:** Programs need to be implemented by staff members who are sensitive, competent, and have received sufficient training, support, and supervision.

Source: Nation, M., Crusto, C., Wandersman, A., Kumpfer, K. L., Seybolt, D., Morrissey-Kane, E., & Davino, K. (2003). What works in prevention: Principles of Effective Prevention Programs. *American Psychologist*, 58, 449-456.

Fall Prevention Programs

Falls are not an inevitable result of aging. In recent years, systematic reviews of fall intervention studies have established that prevention interventions can reduce falls.

Below are 14 fall-prevention interventions the Centers for Disease Control and Prevention compiled in a special report. The interventions come in three types: exercise-based, home modification, and multifaceted.

These interventions were selected because they:

- Included community-dwelling adults aged 65 and older (that is, adults not living in nursing homes)
- Used a randomized controlled study design
- Measured falls as a primary outcome (did not include intervention studies using other outcomes, such as balance improvement or reduced fear of falling)
- Demonstrated statistically significant positive results in reducing older adult falls

On the day of the Symposium, we will ask you to deliberate in your small groups about which fall-prevention strategies should be included in the Kansas Older Adult Fall Prevention Plan. It will be important that your small group consider the **compatibility** of potential strategies with local Kansas **contexts**, especially the context of small communities which may have limited **capacity** for implementation. Your group will need to consider whether **adaptation** of these strategies is necessary and desirable, while keeping in mind that **evidence-based**

Adaptation

Modifying strategies deliberately or accidentally in one of four ways: (1) deleting or adding to strategy core components; (2) modifying components included in the strategy; (3) changing the manner or intensity of administration of strategy core components called for in the manual, curriculum, or core components analysis; and (4) making modifications to suit local circumstances.

strategies are ideally implemented with **fidelity** to the original design.

Exercise-based interventions

Stay Safe, Stay Active

Intervention: Weekly structured group sessions of moderate-intensity exercise, held in community settings, with additional exercises performed at home.

Outcome: Participants were 40 percent less likely to fall and one-third less likely to suffer a fall-related injury compared with those who did not receive the intervention.

Focus: Improve balance and coordination, muscle strength, reaction time and aerobic capacity.

Content: The classes were designed by a physical therapist to address physical fall risk factors:

Capacity

Characteristics of people, organizations, or prevention systems that affect their ability to implement prevention strategies. Obvious capacity factors are financial and staff resources.

- balance and coordination
- strength
- reaction time
- aerobic capacity

The classes included the following types of exercises:

- balance and coordination exercises, including modified Tai Chi exercises
- strengthening exercises
- aerobic exercises

Key Elements: This study used health practitioners to assess and recruit participants. The program used existing services and facilities in the community, so it is likely to be sustainable and transferable to other settings.

The Otago Exercise Program

Intervention: An individually tailored program of muscle-strengthening and balance-retraining exercises of increasing difficulty, combined with a walking program.

Outcome: Overall the fall rate was reduced by 35 percent among program participants compared with those who did not take part. Participants age 80 years and older who had fallen in the previous year showed the greatest benefit.

Focus: Improve strength and balance with a simple, easy-to-implement, and affordable home-based exercise program.

Content: A physical therapist (PT) or nurse visited each participant four times at home over the first 2 months and again for a booster session at 6 months. To maintain motivation, participants were telephoned once a month during the months when no visits were scheduled. During the visits, the PT or nurse prescribed a set of in-home exercises (selected at appropriate and increasing levels of difficulty) and a walking plan. The exercises included: Strengthening exercises for lower leg muscle groups using ankle cuff weights; balance and stability exercises; and active range of motion exercises. Participant safety was ensured by tailoring the exercise program and by giving participants instructions and an illustration for each exercise.

Key Elements: PTs should understand the research evidence on which the program is based and avoid adding or subtracting exercises from the set used in the trials, as this particular combination of exercises worked to reduce falls.

Tai Chi: Moving for Better Balance

Intervention: A 6-month program of Tai Chi classes, compared with a program of stretching exercises.

Outcome: Participants in the Tai Chi classes had fewer falls and fewer fall injuries, and their risk of falling was decreased 55 percent.

Focus: Improve balance and physical performance with Tai Chi classes designed for older adults.

Content: The program included 24 Tai Chi forms that emphasized weight shifting, postural alignment, and coordinated movements. Synchronized breathing aligned with Tai Chi movements was integrated into the movement routine. Each session included instructions in

new movements as well as review of movements from previous sessions. Practicing at home was encouraged and monitored using a home-practice log.

Key Elements: Program settings can include facilities such as senior centers, adult activity centers and community centers.

Australian Group Exercise Program

Intervention: A 12-month group exercise program for frail older adults. The program was tailored to each participant's abilities.

Outcome: Overall, the fall rate was 22 percent lower among people who took part in the program, and 31 percent lower among participants who had fallen in the previous year, compared with those who were not in the program.

Focus: Increase participants' strength, coordination, balance and gait, and increase their ability to carry out activities of daily living such as rising from a chair and climbing stairs.

Content: The group classes included weight-bearing exercises and balance activities that were challenging but not so difficult as to discourage participation or cause any adverse events. The program emphasized social interaction and enjoyment.

The program consisted of four 3-month terms. The first term included understanding movement, how the body works, training principles, and basic exercise principles. This was followed by progressive strength training and increasingly challenging balance exercises, using equipment to maintain interest. In each term, the exercise sessions built on the skills acquired in the previous term.

Key Elements: Instructors should have taken an exercise instructor course as well as a specific course on teaching exercise to older adults.

Compatibility

The degree to which a prevention strategy is suited to the state and community context, based on assessment by people familiar with the local context.

Veterans Affairs Group Exercise Program

Intervention: A structured group exercise program for fall-prone older men.

Outcome: During the 3-month program, participants were two-thirds less likely to fall compared with those who did not take part in the program.

Focus: Increase strength and endurance and improve mobility and balance using a low-to moderate-intensity group exercise program.

Content: The program included:

- Strength training, during which participants increased the numbers of repetitions and the resistance levels progressively over the course of the program.
- Endurance training using bicycles, treadmills, and indoor walking sessions.
- Balance training sessions, which were held twice a week and increased in difficulty over the 12-week program.

Key Elements: The program's key features were:

- Using a group format and providing a wide variety of exercise activities
- Focusing on strength, balance, and endurance
- Providing personal encouragement and reinforcement

Context

The larger environment in which a strategy is immersed and implemented. There are two types of context: setting and population. Setting context includes institutional and organizational characteristics, such as available resources; location; and the political environment. Population context includes people's sociodemographic characteristics, such as race, age, gender, and income.

Simplified Tai Chi

Intervention: A 15-week program of Tai Chi classes that used 10 simplified movements, compared with a balance training program.

Outcome: After four months, the risk of falling more than once among participants in the Tai Chi classes was almost half that of people in the comparison group.

Focus: Improve strength, balance, walking speed, and other functional measures among seniors using Tai Chi.

Content: Participants were taught a simplified version of Tai Chi. The 108 existing Tai Chi forms were synthesized into a series of 10 composite forms that could be completed during the 15-week period. The composite forms emphasized all elements of movement that generally become limited with age. Exercises systematically progressed in difficulty.

Key Elements: The program needs to be led by a very experienced Tai Chi grand master. No elements should be changed in order to replicate these results among seniors who are similar to study participants.

Home modification interventions

Home Visits by an Occupational Therapist

Intervention: An occupational therapist (OT) visited participants in their homes, identified environmental hazards and unsafe behaviors, and recommended home modifications and behavior changes.

Outcome: Fall rates were reduced by one-third but only among men and women who had experienced one or more falls in the year before the study.

Focus: Assess and reduce home hazards.

Content: The OT visited each participant's home and conducted an assessment using a standardized tool; environmental hazards were identified. The therapist also assessed each participant's abilities and behaviors and how each functioned in his or her home environment. Specific unsafe behaviors were identified; the OT discussed with the participants ways to avoid these unsafe behaviors.

Key Elements: Using an experienced occupational therapist is critical. The researchers in this study emphasized that this study should not be used to justify widespread, untargeted home modification programs implemented by people who do not have skills in caring for older people.

Falls-HIT Program

Intervention: The Falls-HIT (Home Intervention Team) Program provided home visits to identify environmental hazards that can increase the risk of falling, provided advice about possible changes, offered assistance with home modifications, and provided training in using safety devices and mobility aids.

Outcome: The fall rate for participants was reduced 31 percent. The intervention was most effective among those who had experienced two or more falls in the previous year: the fall

rate for these participants was reduced 37 percent.

Focus: Assess and reduce fall hazards in participants' homes.

Content: The first home visit was conducted while the participant was still hospitalized. An occupational therapist and either a nurse or physical therapist conducted a home assessment and identified home hazards and determined what safety equipment a participant needed. During two to three subsequent home visits, an occupational therapist or nurse met with the participant to discuss home hazards and recommend and facilitate home modifications.

Key Elements: Participants met with intervention team members at the hospital before they were discharged, which facilitated follow-up.

Multifaceted interventions

PROFET

Intervention: Prevention of Falls in the Elderly Trial (PROFET) provided medical assessments for fall risk factors with referrals to relevant services and an occupational therapy home hazard assessment with recommendations for home modifications.

Outcome: After 12 months, those in the intervention group were 60 percent less likely to fall once and 67 percent less likely to fall repeatedly, compared with those who did not receive the intervention.

Focus: Identify medical risk factors and home hazards, and provide referrals and/or recommendations to reduce fall risk and improve home safety.

Content: A medical assessment was conducted soon after the fall that was treated in the emergency room. It included assessments of visual acuity, postural hypotension, balance, cognition, depression, and medication problems. The results were used to identify and address problems that could contribute to fall

Evidence-based strategy

Evidence-based strategies are most likely to succeed in preventing falls. They have documented evidence regarding their proven ability to prevent falls, based on research evaluations of their outcomes. Evidence-based strategies must be implemented with fidelity to the original design.

risk. Participants received referrals to relevant services, as appropriate, based on identified risk factors.

The home assessment was conducted during a single visit. The OT identified environmental hazards in the home such as uneven outdoor surfaces, loose rugs, and unsuitable footwear.

Based on findings, the OT provided advice and education regarding safety within the home, made safety modifications to the home with the participant's consent, and provided minor safety equipment. The OT made social service referrals for participants who required hand rails, other technical aids, adaptive devices such as grab bars and raised toilet seats, and additional support services.

Key Elements: For medication review and modification, a medical specialist rather than a general practitioner is recommended.

The NoFalls Intervention

Intervention: This study looked at the effectiveness of group-based exercise in preventing falls when used alone or in combination with vision improvement and/or home hazard reduction. The intervention components focused on increasing strength

Fidelity

The actual strategy implementation matches how the strategy was intended to be implemented by: (1) the original developer of the strategy; and (2) the people who made any necessary adaptations to the local context.

and balance, improving poor vision, and reducing home hazards.

Outcome: The group-based exercise was the most potent single intervention; when used alone, it reduced the fall rate by 20 percent. Falls were reduced further when vision improvement or home hazard reduction was combined with exercise. The most effective combination was the group-based exercise with both vision improvement and home hazard reduction. Participants who received all three components were one-third less likely to fall.

Focus: Increase strength and balance, improve poor vision, and reduce home hazards.

Content: There were three components:

- **Exercise:** Weekly 1-hour classes plus daily home exercises. Classes were designed by a physical therapist to improve flexibility, leg strength, and balance.
- **Vision improvement:** Referral to an appropriate eye care provider if a participant's vision fell below predetermined criteria during the baseline assessments.
- **Home hazard reduction:** An assessment consisting of a walk-through using a checklist for those rooms used in a normal week, followed by a discussion of potential changes to the rooms.

Key Elements: Although the most effective single component was the NoFalls exercise program, the complete program should be followed because partial implementation may not reduce falls.

Stepping On

Intervention: A series of small group sessions to teach fall prevention strategies to community-dwelling older adults.

Outcome: The fall rate among participants was reduced about 30 percent compared with those who did not receive the intervention. The intervention was especially effective for men. The fall rate among male participants was reduced almost two-thirds.

Focus: Improve self-efficacy, empower participants to make better decisions and learn about fall prevention techniques, and make behavioral changes.

Content: The program addressed multiple fall risk factors: improving lower limb balance and strength, improving environmental and behavioral safety in both the home and community, and encouraging visual and medical screenings to check for low vision and possible medication problems. Seven sessions were conducted in easily accessible community settings with a follow-up home visit and a three-month booster session.

The program requires a physical therapist, an occupational therapist, a person trained in road safety for older drivers who can discuss pedestrian safety, a low vision expert, and a nurse or community pharmacist who can discuss medications. Other potentially useful content experts include a podiatrist or perhaps a nutritionist.

Key Elements: Using content experts is critical. It is also important to let each expert know what is expected of them, to provide feedback, and to make sure each focuses on fall prevention.

A Multifactorial Program

Intervention: A moderate-intensity intervention that used tailored strategies based on assessments of each participant's risk factors.

Outcome: After 1 year, participants were 10 percent less likely to fall and 5 percent less likely to have an injurious fall, compared with people who received usual medical care.

Focus: Reduce disability and/or falls by: improving physical fitness, modifying excessive alcohol use, improving home safety, reducing psychoactive medication use, and improving hearing and vision.

Content: The assessments consisted of simple screening tests for six risk factors. The intervention content varied based on the individual's risk factors. Risk factors that were assessed included: inadequate exercise, excessive alcohol use, home hazards, use of psychoactive drugs, impaired hearing, and impaired vision. The program was delivered by a single nurse educator who received brief training from the research team.

Key Elements: The nurse's follow-up phone contacts and home visits may have had positive effects on participants' health that were independent of the interventions for specific risk factors.

Yale FICSIT

Intervention: Frailty and Injuries: Cooperative Studies of Intervention Techniques (FICSIT) was a tailored combination of intervention strategies based on an assessment of each participant's fall risk factors. Participants were about 30 percent less likely to fall compared with people who did not receive the intervention.

Focus: Identify and modify each participant's risk factors.

Content: This program provided an individualized intervention for each participant. The content varied based on the fall risk factors

identified. Possible intervention components included medication adjustment, recommendations for behavioral change, education and training, home-based physical therapy, and a home-based progressive balance and strengthening exercise program. The selection of interventions was guided by decision rules and priorities. A nurse practitioner and physical therapist conducted the risk factor assessments.

Key Elements: The assessments need to be clearly linked to the intervention components. The minimum risk factor interventions include:

- postural blood pressure and behavioral recommendations
- medication review and reduction (especially psychoactive medications)
- balance, strength, and gait assessments and interventions
- environmental assessment and modification.

It is essential that the progressive balance and strength exercise program includes both supervised and at-home (unsupervised) components.

The SAFE Health Behavior and Exercise Intervention

Intervention: A program of four group classes on how to prevent falls. The classes addressed environmental, behavioral, and physical risk factors and included exercise with instructions and supervised practice. The home safety portion included a home inspection with guidance and assistance in reducing fall hazards.

Outcome: Overall, participants were 15 percent less likely to fall compared with those who did not receive the intervention. Male participants showed the greatest benefit.

Focus: Reduce risky behaviors, improve physical fitness through exercise, and reduce fall hazards in the home.

Content: The SAFE health behavior intervention consisted of four one-hour group classes that used a comprehensive approach to reducing fall risks. Classes address environmental, behavioral, and physical risk factors. Each class session also had an exercise component that included a brief demonstration of fall prevention exercises and about 20 minutes of supervised practice.

During the home safety inspection, the assessor inspected the participant's home and identified fall hazards using a standard

protocol. The assessor encouraged the participant to remove or repair the hazards identified during this initial visit. The participant was given fact sheets on how to obtain technical and financial assistance for making repairs and modifications.

Key Elements: Not available.

Sources: Strategy information adapted from Centers for Disease Control and Prevention (CDC), "Preventing Falls: What Works: A CDC Compendium of Effective Community-based Interventions from Around the World." Boxed definitions adapted from various CDC prevention resources.

The Symposium's Consensus Conference Meeting Format

The Older Adult Fall Prevention Symposium employs a facilitated meeting process called a One-Day Consensus Conference designed by the Fulwider Partners consulting firm.

How it works

A One-Day Consensus Conference takes a diverse and sometimes large group of stakeholders with varying amounts of knowledge about and interest in a topic and puts them on a level playing field so they can reach consensus on some decision needing to be made. Typically, the objective is to draft a recommended action plan for using limited resources to solve a problem. The consensus built around the action plan helps conference sponsors secure internal and external funding to solve the problem at hand.

The process allows each participant a full and fair opportunity to influence the outcome, even when many people need to be consulted. Consensus conferences are designed to minimize or eliminate some negative things that can happen when diverse groups interact, such as domination of the discussion by one or two influential or high-ranking people. They can also be more efficient, stimulating and rewarding for participants than alternative processes such as brainstorming sessions and formal committee meetings.

To understand a One-Day Consensus Conference, it helps to examine each of its parts.

Briefing materials

Briefing materials are the foundation of a One-Day Consensus Conference. If organizers had to bring participants up to speed on the issue at hand through educational presentations on the day of the conference, there would be no way to accomplish so much in one day.

Organizers send participants briefing materials well in advance of the conference. Organizers carefully prepare the materials to present an objective summary of the matter to be discussed, including such things as the history of the problem, current statistics, and pro-and-con accounts of solutions tried in other times and places. Lack of knowledge is a key obstacle to people's full and fair participation in a discussion; the briefing materials help eliminate that obstacle.

Session 1: Draft questions

Participants are randomly assigned to small groups of 6-12 people, with whom they will meet twice during the conference. At the first meeting, small-group members have a broad discussion of the issue at hand, drawing heavily on the briefing materials. They ask each other questions about the briefing materials. Drawing on their own experiences and expertise, they offer additional information to the group that was not covered in the briefing materials. They determine what they still need to know in order to make a good decision, and work together to draft questions to ask a panel of experts. Small-group facilitators assist each group in its efforts.

Session 2: Q&A with expert panel

Participants meet in a large group for the Q&A. An invited panel of subject experts, chosen for their knowledge and their commitment to speak objectively, answers questions written by the small groups. The conference facilitator ensures the experts answer questions to everyone's satisfaction.

Session 3: Draft recommendations

Each small group drafts a limited number of recommendations for the action plan (e.g. this action should be taken; money should be spent this way). Groups submit their recommendations to the conference facilitator, who prepares and distributes paper handouts listing all the recommendations.

Session 4: Narrow down recommendations

The conference facilitator leads a Q&A session about the recommendations. The facilitator calls on groups to clarify their ideas in response to questions from other groups and suggests similar items that could be combined. As this happens, the facilitator re-types the recommendations on a laptop computer, displaying the work for all to see on a projector screen.

Session 5: Generate voting ballot

After a break, the discussion on narrowing down the recommendations continues. By the end of the discussion, the recommendations text the facilitator has been composing on screen is finalized. Shortly after the conference, the facilitator posts the final text online and sends participants an e-mail inviting them to vote. The vote is held open for only a short time to ensure the large group's discussion, and points of consensus that emerged during it, are fresh in each participant's mind.

Background on consensus conferences

The National Institutes of Health developed a "consensus development conference" in 1977 to "produce evidence-based consensus statements addressing controversial issues in medicine important to health care providers, patients, and the general public." Recent NIH conferences have dealt with producing "state of the science" reports on Cesarean delivery, chronic insomnia, menopause, and improving end-of-life care.

While the NIH is still using the process several times a year, consensus conferences have seen the greatest development in Europe. In the late 1980s the Danish Board of Technology adapted the process to involve lay citizens, aiming to help lawmakers understand the social context of emerging technologies and create an informed public debate about technology. The Danes have applied the model recently to teleworking, electronic surveillance, and road pricing. Elsewhere, the most popular consensus conference topic has been genetic modification of food.

The Danish consensus conference procedure employs eight days of discussion over a period of three months. The NIH's conferences typically take two and a half days. Compressing the consensus conference process into one day requires eliminating one key aspect: the writing of a recommendations report during the conference by the participants themselves. Instead, the conference facilitator writes a report based on the priorities selected in the large-group discussion, information gleaned from a debriefing session with the small-group facilitators, and a review of recordings taken during the small-group discussions. The conference facilitator e-mails the draft report to every participant and accepts comments by e-mail for a two-week period before preparing a final report and submitting it to the conference organizer.

Symposium Agenda

8:30 a.m. **Registration**

Participants randomly assigned to small discussion groups

9 a.m. **Welcome**

9:05 a.m. **Introduction to Symposium Sessions**

9:20 a.m. **Session 1: Draft Questions**

Small groups review briefing documents, draft questions for expert panel Q&A

10:30 a.m. **Break**

10:40 a.m. **Session 2: Q&A with Expert Panel**

Facilitator moderates to ensure small groups' questions answered fully

12 p.m. **Working Lunch**

Session 3: Draft Strategy Recommendations

Small-group members discuss and write their recommendations

1:30 p.m. **Break**

Facilitator prepares a list of all the groups' recommendations

1:45 p.m. **Session 4: Narrow Down Recommendations**

Facilitator calls on groups to clarify their ideas in response to questions from other groups, suggests similar items that could be combined

3 p.m. **Break**

3:10 p.m. **Session 5: Generate Voting Ballot**

Groups continue their discussion, with the goal of generating ballot language for use in online voting the next day

3:45 p.m. **Conclusion**

Participants are reminded to cast their online votes within 24 hours and to watch their e-mail for the opportunity to comment on the draft Symposium report

Session 1: Write Questions

Session description

Participants will work in small groups randomly assigned at registration. Each small group, meeting in separate areas, will discuss these briefing materials to identify additional information group members need to make an informed decision on recommending strategies for preventing older adult falls in Kansas.

Participants will do the following in their small groups:

- Have a broad discussion of the issue at hand, drawing heavily on the briefing materials.
- Ask each other questions about the briefing materials.
- Drawing on their own experiences and expertise, offer additional information to the group that was not covered in the briefing materials.
- Determine what they still need to know in order to make a good decision.
- Work together to write two questions to ask a panel of experts.

Session instructions

- Each group, please write two questions for the expert panel. We impose this limit because we have just 80 minutes and want to treat each group fairly.
- Please try to avoid multi-part questions.
- Write your questions on the provided Question Submission Form.
- Keep one copy for your group and give one copy to the conference facilitator.
- Appoint a representative to stand and ask your questions during Session 2: Q&A with Experts.

Why we're doing this

This is an additional step, beyond having individual participants read the briefing materials ahead of time, to ensure everyone is “on the same page” in terms of understanding background information about older adult falls, principles of effective prevention, and what needs to be accomplished at the Symposium.

How can I work ahead?

Write down some questions of your own you came up with as you read the briefing materials.

Session 3: Draft Action Recommendations

Session description

Small-group members will sit together for a working lunch. Small groups will have an in-depth discussion of the actions necessary to prevent older adult falls in Kansas, then draft three recommendations for the action plan.

Please deliberate in your small groups about which fall-prevention strategies should be included in the Kansas Older Adult Fall Prevention Plan. Your small group should consider the **compatibility** of potential strategies with local Kansas **contexts**, especially the context of small communities which may have limited **capacity** for implementation. Your group will need to consider whether **adaptation** of these strategies is necessary and desirable, while keeping in mind that **evidence-based strategies** are ideally implemented with **fidelity** to the original design. For definitions of these terms, refer back to the Fall Prevention Programs section.

How can I work ahead?

Write down which of the fall prevention programs from the briefing materials appealed to you, and why.

Session instructions

- Work together to generate three recommended strategies for the Prevention Plan
- When your group settles on the precise wording you want, fill out two copies of the Recommendation Submission Form.
- Take one copy of the Recommendation Submission Form to the facilitator, and keep one copy for your group.

Why we're doing this

We need the best ideas possible for using limited resources to prevent older adult falls in Kansas. Several small groups working separately can do more original thinking than would be possible in a large brainstorming session. Holding the initial discussion of recommendations in small groups also increases opportunities for each individual participant to have her or his input fully and fairly considered.

Session 4: Narrow Down Recommendations

Session description

Participants will gather for the first part of a two-part large-group discussion on the action plan recommendations. Up for discussion will be a paper handout containing all the recommendations generated by each group.

The conference facilitator will lead a discussion about the recommendations, calling on groups to clarify their ideas in response to questions from other groups. The facilitator will ask participants to suggest similar items that could be combined, and seek everyone's consensus on such combinations.

As this happens, the facilitator will re-type the recommendations on a laptop computer, displaying the work for all to see on a projector screen.

Session instructions

- Be prepared to clarify your small group's recommendations.
- Offer suggestions for combining recommendations where appropriate.

Why we're doing this

In this session consensus should begin to emerge when each small group sees the other small groups are thinking along similar lines. A shared understanding of the most important older adult fall prevention priorities should develop as groups clarify their recommendation, and as similar items are combined. Combining similar recommendations, where appropriate, keeps the voting ballot manageable.

During the discussion

You can use this space to take notes.
