

The CITRA Research-Practice Consensus-Workshop Model: Exploring a New Method of Research Translation in Aging

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Purpose: On the basis of the experience of an extensive community-based research partnership in New York City, we developed an innovative process for bridging the gap between aging-related research and practice, using a consensus-workshop model. **Design and Methods:** We adapted the traditional scientific consensus-workshop model to include translation of the research into nontechnical language and the involvement of practitioners in the process. We then applied the model to the specific issue of falls prevention among community-dwelling older adults. **Results:** The dialogue and interaction among researchers and practitioners provided new insights beyond a traditional research review. Practitioners offered astute guidance for future research based on their day-to-day field experience. **Implications:** The recommendations that emerged from the workshop demonstrated the value of close interaction between the aging-related research and practice communities. The consensus-conference model has significant potential to establish a bridge between the worlds of research and practice in a variety of settings.

Key Words: Falls prevention, Participatory research, Practice-based evidence, Research–practice relationship, Translational research

Over the past decade, there has been increasing momentum to bridge the gap between empirical research on human problems and practical programs to address them. One major approach attempts to include practitioners in the research process through various *partnership* arrangements. Community-based participatory research—research that is located in the community at least as much as it is located in the university—has become increasingly popular (Israel et al., 2003; Minkler & Wallerstein, 2002). In recent years, such approaches have been employed in gerontology to improve the physical health of older adults (Estabrooks, Fox, Doerksen, Bradshaw, & King, 2005); to enhance screening programs for problems among older adults (Kiger, 2003) and their caregivers (Kaye, Turner, Butler, Downey, & Cotton, 2003); and to develop new methods of training the elder care workforce (Cotter, Welleford, Vesley-Massey, & Thurston, 2003).

A second approach aims to strengthen *evidence-based practice*. Fundamental to the concept of evidence-based practice is the assumption that assistance to vulnerable or infirm individuals will be improved by practitioner application of scientific findings. Beginning with the field of medicine, the evidence-based practice movement has grown to encompass mental health, social work, education, and other areas of research and practice (Antes, 1998; Brownson, Baker, Leet, & Gillespie, 2002; Dunifon, Duttweiler, Pillemer, Tobias, & Trochim, 2004).

Despite the promise of these approaches for improving both research and services, a number of challenges arise in executing them. On the academic side, barriers to researcher–practitioner collaboration include an academic culture that does not value involvement with

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the practice community, researchers who have little training in community outreach, and the expense attached to collaborative activities. Obstacles to practitioner use of research include lack of time to follow research, difficulty interpreting complex statistical analyses, and belief that research may be irrelevant. Studies have shown that practitioners from diverse fields do not routinely use research findings; indeed, there remains a degree of indifference, and even occasional hostility, between the worlds of research and practice (Gillan & Schvaneveldt, 1999; Levy-Leboyer, 1988; Weisz, Donenberg, Han, & Weiss, 1995).

The field of gerontology has been spared some of this conflict, in part because it has involved both researchers and service providers since its inception. However, the connection between research and practice in gerontology still leaves much to be desired (Pillemer, Czaja, Schulz, & Stahl, 2003). To date, there have been limited efforts to develop effective strategies that help practitioners understand and apply research findings in their day-to-day work. Further, very few methods for providing practitioner input to researchers have been documented.

In this article, we describe a process for bridging the gap between research-based knowledge and practice-based insight through the use of a consensus-workshop model. This model was developed in the context of an Edward R. Roybal Center funded by the National Institute on Aging, the Cornell Institute for Translational Research on Aging (CITRA). CITRA's central mission is to develop more productive dialogue between the research and practice communities. The consensus workshop brings research to practitioners in a setting in which they can engage and critique academic research priorities, study design, and existing empirical findings, and it provides a forum for practice-based suggestions for new research directions.

The CITRA Research-Practice Consensus-Workshop Model

Goals

The consensus workshop is designed to achieve several specific goals. First, it addresses the need for meaningful dialogue and equal-status contact between researchers and practitioners. Second, scientists' agendas frequently do not reflect the real-world concerns of eventual end users of research (Stokes, 1997). A major aim of the consensus-workshop model is thus to identify discrepancies between interventions recommended by research and the actual experience of gerontological practitioners. Our assumption is that practitioners can shed light on why some programs do not achieve expected results, and they can provide important contextual information useful for the design of future intervention-research projects.

Third, an overemphasis on efficacy findings constitutes a barrier to practical applications. Glasgow and colleagues (Glasgow, McKay, Piette, and Reynolds, 2001; Glasgow, Vogt, & Boles, 1999) have clearly articulated this issue, noting that a single-minded emphasis on the efficacy of interventions fails to address how pro-

grams work in actual settings where people are served. In particular, efficacy studies tend to rely on non-representative participants and settings (Glasgow et al., 1999). As Glasgow's RE-AIM model suggests, when transferred to real-world settings, efficacious interventions may have limited *reach*, that is, result in low rates of participation from eligible individuals; limited *adoption* by organizations; ineffective *implementation*; and low *maintenance* of effects over time (Glasgow et al., 2001).

These issues are typically not addressed in consensus workshops. We explicitly designed the CITRA consensus-workshop model to obtain practitioners' viewpoints on efficacy research. In an initial step, we presented efficacy research to a group of practitioners in a consensus-workshop setting. The workshop participants then created an agenda for further efficacy and effectiveness research that could increase the likelihood of greater adoption, implementation, and maintenance at the program-development level.

Model Overview

To achieve these goals, we modified an existing model popular in the scientific community. Many government agencies and scientific organizations organize consensus conferences or workshops (Black et al., 1999; Ferguson, 1993; Goven, 2003). These events take several different forms, but they involve a similar sequence of steps. Generally, a topic is selected that is both an important problem and one on which there is scientific evidence. A group of scientific experts on the topic is appointed and charged with the preparation of a preliminary report that summarizes available research findings. Meetings of the scientific panel are held, involving presentations and discussion of the report, and a final consensus document is produced.

Although such conferences are often successful in influencing the direction of a field of research, they focus on synthesizing empirical findings without significant input from frontline practitioners. Thus, the consensus findings may fail to reflect the practice wisdom of those who are involved in providing services on a day-to-day basis and thereby risk reduced effectiveness in addressing human problems. To address this weakness, we adapted the standard consensus-conference model by integrating practitioners throughout the process. As in conventional consensus conferences, we prepared a systematic review of the recent scientific literature on a particular question of interest. However, in an additional step, we rendered research findings in less technical language and presented the findings to practitioners, who then joined with researchers in a dialogue about the current research and future research priorities. Here we first describe the consensus-workshop process and then provide an example using the topic of falls prevention.

Steps in the Model

The major steps in the CITRA consensus-workshop model are as follows: (a) selecting a topic, (b) selecting a panel of expert researchers and expert practitioners,

(c) producing an up-to-date, nontechnical translation of the literature, (d) convening a larger group of researchers and practitioners that arrives at an initial consensus statement of research and practice recommendations, (e) convening a follow-up meeting to create a final consensus document, and (f) developing a dissemination plan.

Selecting the Topic.—A representative advisory group of aging-related service providers and advocates is charged with topic selection. Over the course of several meetings, this group selects topics based on criteria the group itself established, the most important of which are that (a) the topic is relevant to the day-to-day challenges of aging-related service practitioners and (b) sufficient research is available on the topic for a review. The set of topics is prioritized by the advisory committee. Perceived needs in the aging community drive the selection of topics. In the case of CITRA, at the beginning of the partnership we conducted a concept mapping study with over 300 providers and advocates, who identified and prioritized topics of importance to the aging community in New York City. These data assisted the advisory group in topic selection.

Selecting a Panel of Experts.—Three scientific experts and three practice experts on the topic are selected. The research experts provide guidance in selecting the literature for the project and review drafts of the research summary. The practice experts review drafts of the document to ensure that the language is clear and understandable to nonscientists. It is important to note that the practice experts are viewed as equal partners with the researchers throughout the process of the research review and consensus workshop. Practice experts have extensive experience working in the specific area and can be recruited from agencies that serve older adults.

Producing a Nontechnical Research Review.—After the topic is selected, one or more individuals review the available scientific literature and prepare a written research review that summarizes the relevant research in nontechnical language. It is important to note that the consensus-workshop model does not require the preparation of an original meta-analysis or data synthesis; indeed, it is assumed that such an effort will be beyond the resource capabilities of most sponsoring organizations.

Instead, the nontechnical research summary is based on the most recent literature reviews in the published literature and studies that have appeared since the literature reviews were published. This method is appropriate, given that the primary goal of the workshop is not to create a new synthesis of the scientific literature, but rather to create a reasonably thorough summary document that can serve as the springboard for dialogue.

Convening the Workshop.—The consensus workshop is held to discuss the written research review. It is not expected that specific clinical or practice guidelines

will emerge, as is the case in the traditional consensus model; rather, the group seeks to achieve consensus on recommendations for ways to make research more relevant to practice environments. An important concern, therefore, is the composition of the workshop. It is necessary that selection of participants be determined jointly by both researcher and practitioner organizers. Participants include researchers, practitioners, and advocates with special expertise or interest in the area. Individuals selected from the practice community generally hold executive positions in service agencies (and thus have the ability to evaluate or implement program ideas that may emerge from the consensus workshop). Experience suggests that a group size of not more than 30 captures relevant expertise while allowing for contributions from all participants. The workshop lasts approximately 3 hours, and it is tape-recorded and transcribed.

Follow-Up Roundtable.—Because consensus may be difficult in a single meeting, the workshop transcript is used to produce a list of practitioner insights and suggestions and a list of potential recommendations to be discussed further at the follow-up roundtable. After approximately two weeks, participants gather again in the roundtable to concentrate on refining and narrowing the list of recommendations and the ways in which the recommendations may be disseminated. Following the roundtable, the document is revised once more. The final document is then made available to practitioners and researchers in the community.

Generating Dissemination Ideas.—As a final step, workshop participants engage in a discussion of what findings are suitable for dissemination and ways they should be disseminated.

Example of the Model in Use: Falls Prevention Among Community-Dwelling Older Adults

Selecting the Topic

CITRA's community advisory committee was charged with topic selection. The original members of the committee were selected from the membership of the New York City Council of Senior Centers and Services, an association that represents senior centers, case management agencies, and related service organizations. Following community-based participatory-research principles, the membership decided to expand the community advisory committee, so that it has come to include advocates, governmental officials, and other service agencies. The group proposed falls prevention among community-dwelling older adults as a topic for a consensus workshop. Falls prevention was recognized as an issue that affects many older adults and one on which there is considerable scientific information. Further, falls have potentially devastating consequences for the health, well-being, and independence of older adults and are a problem that practitioners frequently encounter in their work.

Table 1. Summary of Major Findings on Falls Prevention

Intervention	Characteristics	Effectiveness	Qualifications
Exercise programs	Programs that include muscle strengthening, balance training, and walking	Consistently demonstrates effectiveness in preventing falls	Require careful evaluation to prevent potential adverse effects; benefits of increased activity may be offset by increased risk of injury.
Home hazard assessment and modification	For older adults with a known risk of falling	Consistently demonstrates preventive effects in reducing falls	Interventions that do not include actual modification of the home (e.g., providing financial assistance for modifications), however, are not clearly effective. In addition, the inconvenience to the homeowner during modifications, cost of repairs, and the stigma around appearing to be frail should also be considered.
Nutritional supplementation	A combination of vitamin D and calcium supplementation	Has demonstrated effectiveness in preventing falls among elders	
Educational programs	Programs used in isolation	Have failed to demonstrate effectiveness, although education is a vital component in multifactorial interventions	
Multifactorial interventions	Interventions that address several problems at once	Appear to work best at preventing falls (with the possible exception of cognitively impaired individuals)	Although a larger number of components seem to have an additive benefit, having more components also requires more financial resources, staffing, and organization.

Selecting a Panel of Experts

CITRA staff identified and solicited the assistance of three falls-prevention researchers who represented the areas of physical therapy, design and home modification for aging in place, and hip-fracture prevention. CITRA's advisory committee suggested three potential practitioners to serve as experts to the workshop. They included a social worker employed by an organization caring for 450 home-dwelling clients and who had served that agency in the roles of staff nurse, nursing supervisor, and associate director; a physical therapist providing direct care in the home and with responsibility for reviewing all falls among her home care agency's clients; and a bilingual social worker with 20 years of case management experience for community-dwelling older adults.

Producing a Nontechnical Research Review

Following criteria typically used in scientific research reviews, we gave emphasis to reviewing fall-prevention interventions that had been tested by using randomized controlled designs. CITRA staff summarized the major findings of existing research on falls prevention among community-dwelling older adults in nontechnical language and provided the report to the practitioners prior to the consensus workshop. It is not possible to

provide the full research summary here (a complete report can be accessed at <http://www.citra.org>). The major findings conveyed to the practice members of the consensus workshop are summarized in Table 1 and cover the following areas: (a) exercise programs; (b) home hazard assessment and modification; (c) nutritional supplementation; (d) educational programs; and (e) multifactorial interventions. As we already noted, the review focused on findings from randomized controlled trials, but CITRA staff made it clear to the group that these efficacy findings were to be seen as the springboard for group discussion of additional research required to make these findings relevant to community program development.

Convening the Workshop

The workshop group included 18 practitioners and policy advocates and 7 researchers. Following brief presentations by the 6 experts, workshop participants extensively discussed each recommendation derived from the research. In a sometimes-spirited dialogue, the practitioners posed questions about aspects of falls prevention not addressed by the scientific literature. In so doing, they provided guidance for researchers that was based on practice experience. In the final segment of the workshop, the group determined a set of approximately 15 major recommendations and then voted to

identify those recommendations having the highest priority. We summarize the highest priority items in the section below on Establishing an Agenda for Future Research.

Follow-Up Roundtable

CITRA staff recorded the consensus workshop for later transcription, and participants provided comments on the evolving document. Using the transcript and the evolving document, staff members prepared a list of insights, suggestions, and potential recommendations and distributed these in advance of a follow-up roundtable. The follow-up roundtable of approximately 15 individuals worked to refine and narrow the list of recommendations.

Generating Dissemination Ideas

Participants discussed ideas for disseminating the results of the consensus workshop. Recommendations included publication of the final report, posting the findings on the CITRA Web site, and seeking media coverage.

Establishing an Agenda for Future Research

Practitioner insight emphasized the relationship between research carried out in carefully controlled environments and its application in real-world settings. The following areas emerged as the future directions for research with the highest priority. These areas were deemed highly relevant by practitioners but perceived as missing from the scientific efficacy literature.

Movement Strategies and Location of Falls as Intervention Targets.—Practitioners suggested that researchers need to consider real-world housing features and living environments. In particular, they called for additional research attention to precisely *where* in the home falls are most likely to occur. Their practice experience suggested that falls are more likely to occur while individuals are transferring out of chairs and beds and on and off toilets, while climbing stairs, and at door sills. Thus, research should examine the specific challenges each of these particular microenvironments poses. For example, research testing specific instructions in safe techniques for transferring, climbing or descending stairs, and crossing door sills, as well as incorporating assistive devices when appropriate, is warranted.

In addition, practitioners concurred that older adults tend to revert back to old movement patterns after a fall. Practitioners emphasized the need to encourage older adults to learn and practice new movement strategies during recovery, and to practice these on a variety of different terrains, rather than in one room or in a physical therapy office. Practitioners recommended that researchers design studies that identify relationships between real-world home locations, movement patterns (for example, shuffling the feet), and falls.

Refinement of Falls Risk Assessment.—The research review showed that multifactorial interventions and home modifications are effective, and practitioners enthusiastically agreed with these findings. However, the practitioners were concerned that adequate assessment is fundamental to both of these interventions. They argued that the types of assessments available to them fail to emphasize the fit between the environment and the users of the environment. They asked for assessment instruments that are more detailed and sensitive to individual differences.

For example, a typical assessment tool might indicate that an elderly person has a visual impairment. Practitioners pointed out that there is a wide range of visual impairments, each requiring a different response. An elderly person who has difficulty detecting subtle differences in color may not be helped by a white or beige grab bar on a white wall. Thus, it is important to distinguish between types of visual impairment to arrive at a suitable intervention. A key recommendation for further research was development and testing of valid and reliable assessment instruments that take into consideration the day-to-day reality of the falls-prone individual.

Family Caregiver Cooperation.—In response to researcher dismay regarding lack of client compliance with intervention protocols, practitioners suggested that gaining family and caregiver cooperation can be the determining factor in gaining client compliance. Practitioners also indicated that case managers may serve as a vital link between researchers and elderly clients, because case managers are frequently charged with follow-up in a variety of ways with elderly adults after a fall, including making sure the older person goes to a doctor, calling the visiting nurse as appropriate, arranging for an environmental assessment, following up adherence to the assessment, and speaking to doctors about medications.

Exercise as Lifestyle Change.—Practitioners identified what they believe is a fatal flaw in exercise interventions: they come to an end. In their experience, maintaining an exercise regimen after the intervention period was very difficult for their clients. They recommended that exercise be presented as a lifestyle change, because treatment gains are not maintained over time. They further suggested that personalized exercise programs are more effective, not only because they can address specific physical needs, but also because a personalized program that is the right fit for the individual is more likely to be continued after the intervention is over.

Cultural Competency.—Practitioners highlighted cultural competency as an essential quality for both researchers and practitioners, and one that is largely missing from the research literature. They pointed out that various cultural groups often hold differing perspectives regarding independence and dependency and the roles of younger family members in regard to older family members. Practitioners exhorted researchers

to conduct studies that systematically test whether the effectiveness of falls-prevention interventions varies for different racial and ethnic groups, and the degree to which interventions can be adapted for greater effectiveness through compatibility with cultural norms and values.

Selected Outcomes

Clear positive outcomes of both a consensus-workshop process and the report emerging from it may be most evident at the local or regional level. As an immediate result, activities of individual participants and others in their organizations were affected by participation in the falls-prevention consensus conference. Selected examples include the following.

1. A participating researcher submitted a federal grant proposal to test a combined exercise and cognitive-behavioral therapy program in senior centers. His previous work involved such testing in clinical settings, and he was directly influenced to seek funding to test the program in agency environments.
2. The New York Department for the Aging (DFTA) incorporated findings from the workshop into its community training program on falls prevention.
3. A recommendation emerged that case managers be trained in medication side effects that may lead to falls, and that they carry a list of possible side effects with them to home visits.
4. Efforts were begun to use interagency councils that already meet regularly as forums for continuing discussions between the falls-prevention research and practice communities.

Limitations of the Model

Although implementation of the consensus-workshop model was relatively easy, several limitations and challenges warrant consideration. The first involves the resources necessary to conduct the workshop, including cost, technical expertise, and time. Fortunately, the financial cost of the consensus workshop is modest, largely consisting of personnel time required to prepare and revise the nontechnical research review, and the sponsorship of two meetings lasting a total of about 5 hours. It is, however, necessary to have access to an individual with the technical expertise necessary to evaluate the quality of scientific articles on the topic in question and to prepare the nontechnical review. In many communities, such expertise is available from local academic institutions, many of which have faculty engaged in community outreach. A greater challenge results from time constraints that make extensive participation by practitioners difficult. Whereas a scientific consensus conference may involve days or even weeks of involvement over an extended period of time, the demanding schedules of agency directors effectively limited their availability to two meetings and several hours of preparation and review time.

A second limitation was in constraining the research review to randomized controlled efficacy studies. We made this decision to allow for a clear contrast between traditional scientific work and practice insights. However, it became clear to us that it would also have been useful to include findings from effectiveness studies that represent other dimensions of the RE-AIM model, such as the adoption, implementation, and maintenance of programs in real-world settings. Future CITRA consensus workshops will seek this type of expanded literature review, although there seems to be a paucity of published effectiveness studies.

Third, and somewhat surprisingly, issues of cost effectiveness and economic feasibility of recommendations developed by the consensus workshop did not emerge to a significant degree in the discussions. These issues will be raised more explicitly in future workshops.

Implications and Conclusion

The consensus workshop model described in this article represents a method to promote the generation of practice-based evidence, whereby practitioners are exposed to scientific intervention findings and are encouraged to critique the findings on the basis of their experience. In so doing, they respond to efficacy findings in a unique way, returning new suggestions and insights to the intervention-research process. Further, the opportunity to engage in dialogue with researchers both demystifies the research process and allows for concrete recommendations for new studies and the modification of existing scientific approaches.

This model is likely to be useful in many settings in which structured dialogue between researchers and practitioners is deemed important. We provide two examples of situations in which the consensus workshop model may be helpful. First, community-based research partnerships are increasingly being employed in aging-related research (Minkler & Wallerstein, 2002). A key task at the beginning of partnership formation is developing consensus on the specific problems to be addressed, and the way research should be conducted. Even in partnership efforts, the research agenda may tend to rely on the researchers, who are perceived as having greater expertise. The consensus workshop model can be used to create a more equal-status partnership and to inform and engage practitioners in the research process.

Second, the consensus-workshop model can be an appropriate way to frame and organize policy discussions in aging. This use is not without precedent: For example, Denmark has originated a variant of the consensus model for use in the assessment of policy toward new technologies (Goven, 2003). Groups of nonexpert, ordinary citizens are provided with access to scientific information and engaged in meetings with research experts, whom they interview. A set of recommendations are then provided to the authorities charged with making the policy decision. Similarly, the CITRA consensus-workshop model could be used in localities seeking to make aging-related policy decisions informed by research (e.g., changes in programs or

benefits for older adults). The experience presented in this article suggests that further use and expansion of the consensus-workshop model can help bridge the gap between aging-related research and practice.

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