Promoting Children's Environmental Health Through Healthy Homes Training

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Introduction

Substandard housing conditions can lead to lead poisoning, asthma, falls, poisonings, rodent bites, burns, and other illnesses and injuries.[4,5] Also, resident practices can result in dangerous exposures to pesticide residues, cockroach allergens, volatile organic compounds, tobacco smoke, and combustion gases.[6,7,8]

Public health and housing practitioners seek training and information about healthy homes as they are compelled to be more efficient in their use of limited resources. However, resources directed toward health professionals often neglect the housing component while information for housing professionals tends to lack the public health perspective.[6,7]

In 2003, CDC launched the National Healthy Homes Training Center and Network (Training Center) through a cooperative agreement with the National Center for Healthy Housing (NCHH). NCHH designed the Training Center to provide public health professionals and others with the training and tools necessary for addressing housing deficiencies and hazards associated with unhealthy homes. In 2010, the EPA entered into a contract with NCHH to fund 26 trainings offered through Training Center partners. The courses reached over 700 trainees.

The Training Center's Courses

The Training Center brings together professionals with a variety of perspectives and experiences to learn about the root causes of health problems in a home and the seven principles of healthy housing that can help to resolve them.

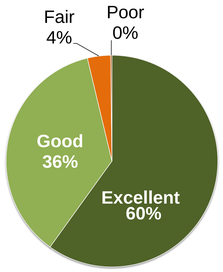

Figure 1. Overall Evaluation. Trainees' overall evaluation of courses for 2005-2011 (N=5,898).

Photo 1. Healthy Homes Training in Port Arthur, TX in May 2011, offered through EPA contract.

Methods

We tabulated students' responses to an evaluation survey given at the end of Essentials For Healthy Homes Practitioners training courses from 2005-2011. Separately, we compiled students' responses to an online follow-up survey 3-5 months after attending a training for the years 2006-2011. Approximately 20% of course attendees completed a follow-up survey. The surveys have changed several times, limiting the range of years for some responses. The current surveys are available at: http://www.nchh.org/ and http://www.healthyhomestraining.org/Evaluation/Follow-up/Essential_Survey_Jul11_2.htm, respectively. We are presenting a snapshot of the trainees' responses to questions about their occupation, the effectiveness of the course, their adherence to certain work practices, and barriers to integrating healthy homes concepts into their practice.

Results

Trainees' Occupation and Sector

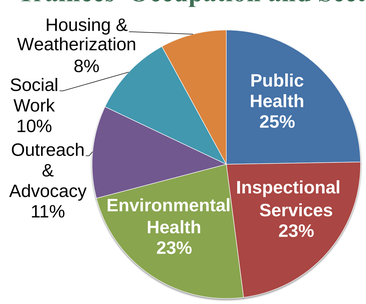

Figure 2. Occupational Fields. Trainees' occupational fields in 2005-2008 were most frequently public health, inspectional services and environmental health (N=1,771).

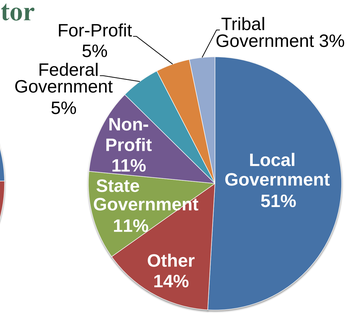

Figure 3. Employment Sector. Most trainees in 2005-2008 worked for local governments, with smaller but similar percentages for other, state government and non-profit sectors (N=1,771).

Trainees' Work Practices

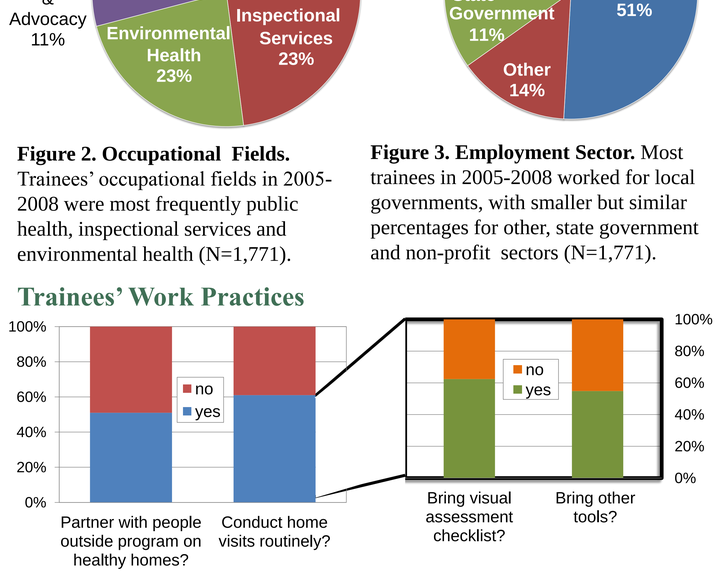

Figure 4a. Work Practices. About 51% of attendees partnered with people outside of their program to incorporate healthy homes practices, and 61% conducted home visits routinely (N=1,079).

Figure 4b. Work Practices Subset. Of the trainees who conducted home visits routinely, 62% brought a visual assessment checklist and 55% brought along other tools such as a moisture meter, IPM baits/traps, radon kits, lead sampling and/or CO alarm (N=714).

Perceived Benefits to Clients or Constituents

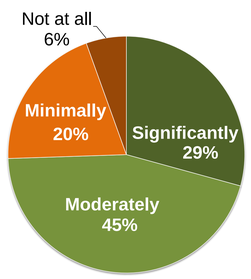

Figure 5. Perceived Benefits. Post-training 3-5 months, 29% of trainees perceived that their clients benefited significantly from the skills they gained at the training, while 6% did not perceive any benefit (N=909).

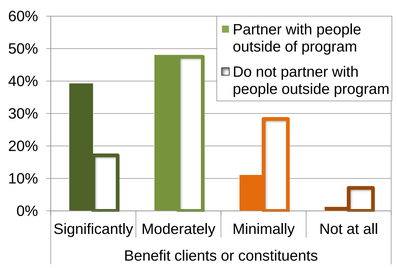

Figure 6. Perceived Benefits by Partnering. Attendees were more likely (χ^2=30.2, p<0.0001) to perceive that their clients benefited significantly from the training if the attendees partnered with people outside their program (N=376), compared to those who did not (N=339).

Results (continued)

Barriers to Healthy Homes Efforts

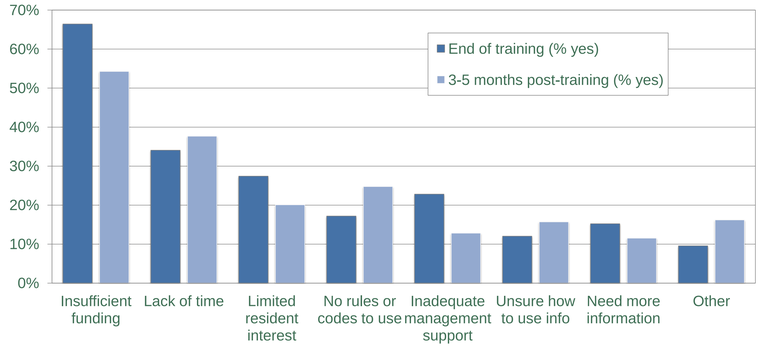

Figure 7. Experience Affects Barriers. Trainees identified different barriers to healthy homes at the end of training (N=3,904) and after 3-5 months in the field (N=1,006).

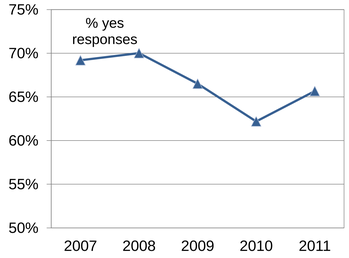

Figure 8. Insufficient Funding By Year. The most commonly-cited barrier dropped from 70% to 62% between 2008 and 2010 (χ^2=15.5, p<0.005)(N=3,904).

Photo 2. Training course attendees get hands-on practice on Integrated Pest Management (IPM) in Portland, OR.

Discussion

Over 10,000 professionals have taken the Training Center's courses since its inception, highlighting the multi-sector reach of healthy homes topics. Nearly 75% of students or attendees perceive there to be a moderate to significant benefit to their clients or constituents, reaffirming the utility of the training courses.

A slim majority of trainees follow best practices: 62% of attendees who routinely do house visits brought visual assessment forms, and 50% of attendees partnered with people outside their programs. Bringing a visual assessment is important for documenting thorough inspections of a home and for validating progress after improvements or education is completed. Because so many different programs address different aspects of healthy housing, it is important to work across programs to most effectively address problems. In line with this hypothesis, attendees who worked with people outside their program perceived a greater benefit to their clients.

After working in the field for 3-5 months, fewer attendees thought limited resident interest or management support was a barrier, both of which may reflect the wider effort to educate program managers and the public about healthy homes. From 2009-2011, attendees cited lack of funding as a barrier less frequently, perhaps as a result of $8 billion in weatherization funding from the American Recovery and Reinvestment Act, some of which could be spent on healthy homes interventions.