Published in final edited form as:

Health Promot Pract. 2016 November ; 17(6): 836–844. doi:10.1177/1524839916655082.

State Tobacco Control Program Implementation Strategies for Smoke-Free Multiunit Housing

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Abstract

Multiunit housing residents are at risk of secondhand smoke exposure from adjoining units and common areas. We developed this case study to document state-level strategies undertaken to address this risk. We explored program documents to identify facilitators, barriers, and outcomes. Three states (Montana, Michigan, and Nebraska) provided detailed information on multiunit housing efforts in the study time frame. We conducted a qualitative analysis using inductive coding to develop themes. Several facilitators relating to existing infrastructure included traditional and nontraditional partnerships, leadership and champions, collecting and using data, efficient use of resources, and strategic plans. We also report external catalysts, barriers, and outcomes. Significant state leadership and effort were required to provide local-level technical assistance to engage traditional and nontraditional partners. Information needs were identified and varied by stakeholder type (i.e., health vs. housing). States recommend starting with public housing authorities, so they can become resources for affordable and subsidized housing. These lessons and resources can be used to inform smoke-free multiunit housing initiatives in other states and localities.

Keywords

tobacco control; secondhand smoke; smoke-free policy; multiunit housing; public housing; subsidized housing; smoke-free housing

INTRODUCTION

Exposure to secondhand smoke (SHS) from combustible tobacco products causes considerable disease and death among nonsmoking adults and children, resulting in approximately $5.6 billion annually in lost productivity in the United States (U.S. Department of Health and Human Services [USDHHS], 2006, 2014). Specifically, exposure to SHS is associated with increased risk of sudden infant death syndrome, respiratory infections, ear infections, and asthma attacks in infants and children and coronary heart disease, stroke, and lung cancer in adult nonsmokers (USDHHS, 2006, 2014). No risk-free level of SHS exposure exists, and policies prohibiting smoking in indoor places are effective

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in reducing these risks (USDHHS, 2006). Comprehensive smoke-free laws prohibiting smoking in indoor worksites, restaurants, and bars have proliferated over the past decade (Americans for Non-Smokers Rights, 2014; Centers for Disease Control and Prevention [CDC], 2012). However, homes remain a major source of SHS exposure for many people, particularly children (USDHHS, 2014; Wilson, Klein, Blumkin, Gottlieb, & Winickoff, 2011).

Individuals living in multiunit housing (MUH), such as apartments and condominiums, are particularly susceptible to SHS exposure, which can infiltrate their units from neighbors' units and common areas (King, Travers, Cummings, Mahoney, & Hyland, 2012; Licht, King, Travers, Rivard, & Hyland, 2012). One quarter of U.S. residents (80 million individuals) live in MUH (King, Babb, Tynan, & Gerzoff, 2013), many of whom are particularly vulnerable to the effects of SHS. Specifically, a large proportion of subsidized households have children (42%), are elderly (31%), and/or have disabilities (36%; U.S. Department of Housing and Urban Development [USDHUD], 2015b).

Given the considerable public health burden of SHS in MUH, efforts to implement smoke-free policies in this setting have become more prominent at the national and state levels. For example, the USDHUD has encouraged Public Housing Authorities, as well as owners and managers of multifamily housing rental assistance programs such as Section 8, to implement smoke-free policies in their properties (USDHUD, 2009, 2010, 2012). In 2015, USDHUD proposed a rule that would prohibit the use of lit tobacco products (cigarettes, cigars, and pipes) in all living units, indoor common areas, administrative offices, as well as all outdoor areas within 25 feet of housing and administrative buildings (USDHUD, 2015a). Additionally, the USDHHS has set a *Healthy People 2020* objective (TU 13.10) that states should pass policies to protect all residents in MUH (USDHHS, 2010), including private and subsidized housing.

BACKGROUND

The CDC published a five-tier public health impact pyramid as a conceptual framework demonstrating the value of interventions that change the context for individual behaviors (Frieden, 2010). The second tier represents systems-level interventions and policies that make the default choice the healthy choice. Such interventions have greater population impact than individual-level and clinical interventions and would require significant individual effort to obtain the same outcomes in the absence of the interventions (Frieden, 2010). When implemented with a lens toward health equity, such interventions can help reduce health disparities.

The 2009 American Recovery and Reinvestment Act supported state and local efforts to implement innovative public health strategies that could facilitate progress toward reducing health disparities. In 2010, the CDC allocated American Recovery and Reinvestment Act funds for states and communities through the Communities Putting Prevention to Work (CPPW) 2-year initiative. Though most funding went to communities, $120 million was awarded to states and territories (Bunnell et al., 2012; CDC, 2014b). Awardees self-selected from a range of potentially impactful (i.e., second-tier) strategies designed to make

environmental changes that make healthy living easier (Frieden, 2010). State tobacco control programs had flexibility in choosing their interventions and were required to evaluate and report their activities to CDC. In this study, we focus on the tobacco control programs (in Nebraska, Michigan, and Montana) that reported on the use of state CPPW funds to address smoke-free MUH.

The process of turning practice-based discovery into practice-based evidence is an important part of the evidence to action translation process (Green, Ottoson, García, Hiatt, & Roditis, 2014; Wilson, Brady, & Lesesne, 2011). A recent review noted that data on MUH policy implementation is limited (Snyder, Vick, & King, 2015). To date, no study has documented state-level strategies to address smoke-free MUH. The objective of this study was to describe facilitators, challenges, and outcomes from state-level smoke-free MUH strategies to help facilitate the evidence to action process (Green et al., 2014; Wilson, Brady, & Lesesne, 2011).

METHOD

We employed a qualitative approach to examine data collected during the CPPW project period (2010-2012). A qualitative approach was particularly appropriate for this study because using preexisting reports with different formats, methodologies, and level of details were not conducive to standardized or quantitative analysis. The evaluation team for this study included the authors, one of whom was the principal investigator of previous work on which this study was built (Lavinghouze, Snyder, & Rieker, 2014).

Data Sources

There were three phases of data collection. Phase 1 was a separate study designed to elicit success stories from state tobacco control programs implementing innovative strategies. Success stories describe program progress, achievements, and lessons learned, often highlighting individual stories that can engage potential participants, partners, and funders (CDC, 2007; Lavinghouze, Price, & Smith, 2007). Success stories were chosen because of funding constraints, as well as the difficulty of identifying improvements in long-term health outcomes over a 2-year program period. Purposive and criterion-based sampling methods were used to obtain a geographically diverse set of states (Guest, MacQueen, & Namey, 2011). Criteria to select states included whether the state had met at least 90% of progress on activities in work plan, whether they had received competitive CPPW funding, and geographic diversity. Individual, semistructured, in-depth telephone interviews with nine state program managers were conducted during April-June 2011. Additionally, four group discussions using an unstructured guide based on themes of CPPW progress, successes, and lessons learned (Table 1) were conducted with various groupings of the same nine participants. Recorded interviews and discussions were transcribed and entered into ATLAS.ti (Version 7; Scientific Software Development GmbH, Berlin, Germany) for analysis. These methods have been described elsewhere in detail (Lavinghouze et al., 2014).

In Phase 2, we obtained all final state CPPW evaluation reports submitted to CDC (Table 1) by September 2013. These reports detailed results from intervention strategies and evaluation topics that states chose from a menu of strategies; no particular format or

template was required of states, and thus reports were varied in detail and quality. A priori structural coding for Phases 1 and 2 included MUH as a code, as well as codes related to other intervention topics and populations of interest (Lavinghouze et al., 2014).

In Phase 3, for the eight states whose evaluation reports contained a priori MUH codes from Phase 2, we obtained monthly progress reports. These were collected by CDC project officers using a standardized form throughout the course of CPPW funding (2010-2012), and they were included to ensure that all implementation details that were collected by CDC were included.

Sample

The sample was systematically drawn from all documents with a priori MUH codes from Phases 1 and 2. We also used search terms (i.e., housing, MUH, multiunit housing, public housing, subsidized housing, smoke-free housing, smokefree housing, apartments, condominiums) to identify any potential content that was missed in the initial a priori coding. Of the 45 states with data from Phases 1 and/or 2, we identified 11 states that reported MUH work. Of the 11, 3 state evaluation reports focused on MUH work, while the remaining reports evaluated other efforts (Table 1). In this report, we present only the results from the three states (Nebraska, Michigan, and Montana) that provided detailed implementation strategies.

Coding and Analysis

All reports were entered into Atlas.ti Version 7 (Scientific Software Development GmbH, Berlin, Germany). We began with three structural codes: facilitators, challenges, and outcomes related to MUH work. We used an iterative, inductive coding approach to explore all instances of MUH work using applied thematic analysis to develop subcodes, memoing, and triangulation of data (Friese, 2012; Guest et al., 2011). Analysis was conducted by examining all codes, grouping them into code categories (i.e., “families”), and examining cooccurring codes (Friese, 2012; MacQueen, McLellan, Kay, & Milstein, 1998).

RESULTS

Most themes that emerged from the data were facilitators of MUH policy implementation. After examining the component model of infrastructure (CDC, 2014a; Lavinghouze et al., 2014), facilitators were organized by the core components of that model. These include networked partnerships, multilevel leadership, engaged data, managed resources, and responsive plans/planning. We discuss the additional themes, including external catalysts, challenges, and outcomes.

Networked Partnerships

Strategic collaborations are crucial at various levels and across agencies for initiatives to be successful and to support functioning infrastructure (CDC, 2014a; Lavinghouze et al., 2014). While statewide networks for training, technical assistance, and resources were critical, local health departments or local contractors (herein referred to as “LHDs”) were crucial to building a plethora of nontraditional partners. Using LHDs to approach local housing

officials increased sustainability by establishing relationships. They also engaged local media who continued to write stories that increased awareness and helped educate the public. Table 2 lists the wide variety of health and housing stakeholders that states engaged.

Multilevel Leadership and Champions

Leaders and champions should be identified and nurtured at all levels to support the infrastructure needed for successful initiatives (CDC, 2014a; Lavinghouze et al., 2014). States provided leadership, coordination, and resources for LHDs, while LHDs leveraged their partnerships to engage local stakeholders on MUH issues. All three states discussed the importance of external champions. One state had a champion from a nongovernmental organization who was already known to partners and stakeholders. Local work was supplemented by legal technical assistance from this champion and was cited as key to policy adoption. Another state cited a fire chief as a champion, who garnered public and decision maker attention, as well as earned media (i.e., reporters referred to his viewpoints in paper and online news stories). Another state developed an instructional video as part of a pilot out-reach project; a coauthor of a seminal report (Sargent, Shepard, & Glantz, 2004) on the effects of smoke-free policies starred in that video and presented it to community residents. All states discussed how public housing authorities can serve as champions if they are engaged first, prior to working with other affordable housing. The organization of public housing commissions with an executive director and board can enhance access and suitability for policy change, whereas identifying decision makers for market rate housing was cited as challenging.

Engaged Data

Data can be used in a manner that engages staff, partners, decision makers, and local programs to act. It is better if data are not merely collected and displayed but also used to promote public health goals. Therefore, training, technical assistance, and follow-through are necessary to ensure the proper utilization of data, sound infrastructure, and successful initiatives (CDC, 2014a; Lavinghouze et al., 2014). All states conducted policy assessments with housing officials, landlords, managers, or owners throughout the state. Surveys were conducted via mail, the Web, or phone using a census strategy. Sometimes they followed up with interviews or resources. Though all surveys assessed current policies, other topics varied, including experiences and/or compliance in implementing smoke-free policies; attitudes, beliefs, and behaviors; awareness and interest in resources; and motivations, perceived benefits, and barriers for instituting policies. One state completed partner/advocate interviews to help identify communities to target. Resources described (see “Managed Resources” section) were developed based on information learned in interviews and surveys, and often were tailored for individual communities by local professionals.

Additionally, states used data to defend their choice of strategy. By citing the percentage of citizens or populations at risk, or consumer demand for smoke-free MUH, they used data to show the need for intervention. Data that were used or requested varied by stakeholder type. For example, housing officials were most interested in data showing public demand for smoke-free housing, as well as cost savings and other economic benefits. In contrast, one state reported that the affordable housing community cares deeply about the constituency

they serve and are highly motivated and committed to helping tenants quit, rather than having to evict them for compliance issues. For these residents, provision of cessation resources was cited as critical. Providing data using positive, nonconfrontational approaches was important for all stakeholders. For example, landlords and tenants were alerted to and offered resources like smoke-free housing registries, cessation resources, model policies, and other legal resources rather than telling them what they should be doing.

Managed Resources

States leveraged existing resources: legal expertise, model policies to assist with policy development, development of statewide registries of smoke-free housing apartments/units, hotlines for complaints of violations of smoke-free laws, and quit lines. States produced or tailored many products such as websites, educational materials (e.g., fact sheets, videos, presentations, brochures), and implementation and cessation resources to help educate stakeholders on these initiatives. In some cases, they took resources developed for one group and tailored them to another (e.g., market-based vs. public housing officials). Specific resources that states developed on LHDs' requests were a cost–benefit white paper, non–property-specific tenant survey suitable for broad dissemination (e.g., clinics, health fairs, etc.), property owner surveys, and earned media samples and sample letters for mailings specific to the state. Some states used CDC's (2014c) Media Campaign Resource Center to find or provide developed materials. To address questions and complaints about MUH, the same compliance number and e-mail address for the statewide smoke-free air law were commonly used.

Additionally, all three states described intensive technical assistance: presenting to and working with property management and other housing officials (Table 2), attending and/or presenting at local seminars organized by LHDs and other meetings and conferences, facilitating contact between peer properties, individually consulting with decision makers, and providing legal technical assistance. Significant attention was paid to training, frequent conference calls/meetings to coordinate state and local media and outreach efforts, and promotion of teamwork and networking among LHDs.

Responsive Plans/Planning

Responsive plans are dynamic and evolve in response to contextual influences, such as changes in scientific evidence, priorities, funding levels, and external support. In addition, the planning process should be collaborative and include viewpoints from multiple stakeholders. This process fosters shared ownership and responsibility for the goals and objectives between the state program, partners, and local programs (CDC, 2014a; Lavinghouze et al., 2014).

States cited a variety of plans and ways they used plans. Results from policy assessments led to action plans for housing developments without policies, plans to assist housing authorities with enforcement of existing policies, plans with a tax board to incentivize smoke-free MUH in low-income housing, and strategic technical assistance and training plans for local public health professionals. One state assessed the work plans of those they funded to do this MUH work at the local level to develop a targeted technical assistance plan to conserve resources.

Additional Themes

External Catalysts—Several national or local contextual influences were cited as catalysts. All three states cited HUD memoranda on smoke-free public housing as critical in educating housing authorities and landlords on the legality and rationale of MUH policies (USDHUD, 2009, 2010, 2012). In one state, a series of smoking-attributable apartment fires resulted in significant earned media and public attention, providing a greater stage for the fire chief, who was advocating for a citywide ordinance on smoke-free housing. Partners capitalized on these events by suggesting a city resolution to educate landlords on the legality and benefits of smoke-free MUH policies

Challenges—Challenges included late implementation due to competing priorities or delayed funding, needing to expand partnerships to get messages out to the right communities, and implementing MUH policies during cold winter weather. Concerns about surveys were related to low response rates for landlord/housing authority surveys, having to send tenant surveys out via mail (at higher cost) rather than e-mail, and a lack of representativeness if only locations with policies returned assessments. Identifying the decision makers for market housing was often difficult. Attempting to educate a large number of MUH sites at one time was challenging; a proposed solution was to start with a select group of sites that had access to decision makers with an interest in policy development, so tracking progress would be easier and more productive.

Outcomes—All states reported progress during the funding period, though some were not able to analyze and report public health reach or impact in the 2-year reporting period. All states reported greater education on the issue by the partnerships that were formed. One state noted that rural health departments' capacity to provide technical assistance and understanding of policy, systems, and environmental changes were strengthened as a result of this effort. Two states reported progress on compliance in units with existing policies. All three states made progress with regard to smoke-free public housing, including six new tribal housing policies. One state calculated that over 21,000 additional people were covered by comprehensive policies in affordable housing and over 13,000 in public housing commissions.

DISCUSSION

There is a long history of examining the public health implications of poor housing on physical and/or mental health and feelings of security (Shaw, 2004). Poor housing conditions have been associated with infectious diseases; chronic diseases due to physical conditions, structural defects, toxic substances, volatile organic compounds, and lead; injury; poor childhood development and nutrition; and poor mental health (Krieger & Higgins, 2002). Though many of these hazards can be difficult to address, exposure to SHS in most environments can be addressed simply by passing and enforcing smoke-free policies (USDHHS, 2006, 2014). The proposed USDHUD ruling prohibiting the use of lit tobacco products in all public housing (USDHUD, 2015a), if finalized as proposed, will afford opportunities for states and localities to engage with public housing authorities in order to

ensure successful education and engagement of residents before and after policy implementation.

Findings from this qualitative study highlight several facilitators, barriers, and lessons learned for state-level implementation of smoke-free MUH policies. This study supports the importance of functioning program infrastructure in responding to funding opportunities (Lavinghouze et al., 2014). States were ready to take advantage of existing resources and relationships when additional funding was received.

Engaging a wide variety of traditional and nontraditional partners is critical to gather buy-in, and champions increased visibility and public support. Additionally, cultivating external, state-level, and local-level leadership can help publicize the issues to the housing stakeholders that need to pass these voluntary policies. States should expect to provide considerable and intensive technical assistance, while LHDs may be best equipped to identify and nurture relationships with housing stakeholders. Local staff had the capacity to work with housing stakeholders, and they looked to state and other experts for resources and technical assistance. It was critical to have ready communication, which varied by audience, stage of policy change, cultural needs, and funding.

Surveying housing stakeholders (e.g., landlords, managers, or owners) typically resulted in requests for resources, which began the education process with these groups. Due to the amount of work required to educate housing stakeholders, states may consider using or adapting resources already developed, including advertisements in CDC's (2014c) Media Campaign Resource Center, websites, surveys, and approaches used by these and other states such as Live Smoke Free in Minnesota (http://www.mnsmokefreehousing.org/), the Smokefree Environments Law Project (http://www.tcsg.org/sfelp/home.htm), or the Tobacco Control Legal Consortium (http://publichealthlawcenter.org/programs/tobacco-control-legal-consortium).

While most housing stakeholders were more interested in economic data on reduced renovation costs and fire losses, health stakeholders were interested in health-related information. The affordable housing community was particularly committed to helping tenants quit, rather than initiating eviction. This finding is consistent with previous findings that while affordable housing authorities found the business case compelling, the health and safety of staff and residents were important for cultivating policy change (Pizacani et al., 2011). Similarly, citing data on consumer satisfaction with such policies, particularly among nonsmokers and former smokers, is important (Drach, Pizacani, Rohde, & Schubert, 2010). Reminding health stakeholders of the importance of protecting youth from SHS and reinforcing smoke-free norms may also be useful (USDHHS, 2012).

Finally, starting with public housing authorities may be a good strategy to gain momentum across the state, and they can serve as champions and resources to affordable and market rate housing. However, evaluating compliance may also be useful. States in this study reported that engaging managers and residents while implementing policies in MUH facilitated enforcement. An assessment of implementation of the Boston Public Housing Authority's smoke-free policy demonstrated that about half of residents suggested that policies were not

being followed; low satisfaction with their housing was strongly related to lack of enforcement. Even though an extensive information campaign was successful in educating residents and local building managers on a pending public housing authority policy, lack of enforcement caused frustration and resentment among nonsmoking residents (Rokicki et al., 2015). Accordingly, enforcement represents an important component of policy development and implementation; any warnings and penalties should be combined with barrier-free access to cessation services. The Boston experience also suggests that residents may not be willing to file complaints against neighbors, suggesting an anonymous complaint line could be helpful (Rokicki et al., 2015).

This study is subject to limitations. First, our convenience sampling strategy may not represent all state programs' MUH activities during the funding period. Second, because of limited resources, we used evaluation reports and other existing data, which limited content; in-depth interviewing or implementation evaluation may have provided more detailed information than we were able to obtain. Finally, because this is a descriptive case study with a small sample size, we cannot determine generalizability to other states; however, we set out to build practice knowledge, not evaluate or generate best practices.

CONCLUSIONS

Research suggests that if all MUH units were smoke-free, $497 million annually could be saved in health care expenditures, renovation expenses, and fire losses (King, Peck, & Babb, 2013). To realize these economic and health savings, lessons from this study can be used by other states and localities to advance health equity by making progress on smoke-free MUH initiatives. By using the momentum from smoke-free policies in public indoor areas and USDHUD's (2015a) proposed smoke-free rule for public housing, states can enhance infrastructure to work on MUH in public, subsidized, and eventually in market-rate MUH. Additionally, these second-tier strategies may provide insight to others working on housing policies in other health arenas, particularly those that need grassroots support to educate and implement policy changes (Frieden, 2010). Using the resources cited above and lessons learned from other states, programs can tailor resources to their state and assist LHDs or contractors in developing the nontraditional partnerships needed to work with housing stakeholders who are concerned with the economic bottom line.

Acknowledgments

The authors acknowledge Kim Snyder, MPH, for preliminary analyses and Monica Eischen and Susan Brown for review of an earlier draft of this work. The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention. This work was supported, in part, through the American Recovery and Reinvestment Act funding (Pub. L 111-5)/Centers for Disease Control and Prevention, Communities Putting Prevention to Work Cooperative Agreement DP09-901 (supplement) under contract: Monitoring and Evaluation of the American Recovery and Reinvestment Act and Affordable Care Act awarded to ICF International.

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TABLE 1

Overview of Data Collection During the Three Phases of Qualitative Data Collection

Data Source	Phase 1: State Success Story Evaluation Call Study	Phase 2: CPPW Evaluation Reports[a]	Phase 3: Project Officer Monthly Reports
Description	In-depth interviews with individual states ($n = 9$); group phone discussions with various groupings of the states ($n = 4$)	Grantees were required to submit final evaluation reports of self-selected CPPW activities and self-selected evaluation topics 90 days after grant period; some states received no-cost extensions	CDC project officers collected monthly reporting required by ARRA on progress, facilitators, barriers, and other programmatic information
Data collection methods	60- to 90-minute telephone group discussions	Reports submitted electronically to CDC	Standardized reporting forms collected via phone calls
Number of reports	13 transcripts, individual interviews with 9 states, group discussions with various groupings of the states	45 state reports received from May 2012 to September 1, 2013	175 files from 8 states (Alaska, California, Colorado, Massachusetts, Michigan, Montana, Nebraska, Rhode Island) collected during 2010-2012
States reporting any MUH work[b]	3 (Kansas, Minnesota, Oregon)	8 (Alaska, California, Colorado, Massachusetts, Michigan, Montana, Nebraska, Rhode Island)	5 (California, Colorado, Michigan, Montana, Nebraska)
Final sample of states detailing MUH work		3 (Michigan, Montana, Nebraska)	3 (Michigan, Montana, Nebraska)

NOTE: CPPW = Communities Putting Prevention to Work; CDC = Centers for Disease Control and Prevention; ARRA = American Recovery and Reinvestment Act; MUH = multiunit housing.

[a] CPPW reports that focused exclusively on Quitline funding were excluded from this analysis.

[b] Final sample includes only those states where evidence of MUH work was found in transcripts or evaluation reports.

TABLE 2

Types of Organizations or Stakeholder Groups That Were Engaged

Health/welfare stakeholders
• Physicians
• Cancer, asthma, disabilities coalitions
• Local health departments (tobacco specialists) and local health boards
• Association of Churches, and faith groups
• Health insurers
• Universities: School of Public Health, Nursing
• Medical, health care, hospital, primary care, public health, environmental health, state nurses, and mental health associations
• Urban Indian centers and tribal health agencies
• AARP, Senior Citizen Association
• American Lung and Heart Associations, and American Cancer Society
• Healthy living groups
• Women's resource group
Housing stakeholders
• Public Housing Authorities
• Department of Commerce-Housing Division
• USDHUD Regional Director, and USDHUD Healthy Homes
• Development director (housing development)
• Tribal Housing Association
• Independent landlords, owners, and managers
• Habitat for Humanity
• Builders Industry Association
• Realtor groups
• Housing funding agencies
• Property associations
• Regional section of the National Association of Housing and Redevelopment Officials

NOTE: AARP = American Association of Retired Persons; USDHUD = U.S. Department of Housing and Urban Development.