

National Center for
HEALTHY HOUSING



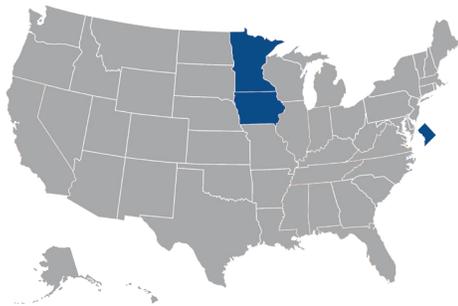
**LESSONS LEARNED FROM MINI-GRANTS TO SUPPORT
THE DEVELOPMENT OF A HEALTHY HOMES WORKFORCE**

May 2019

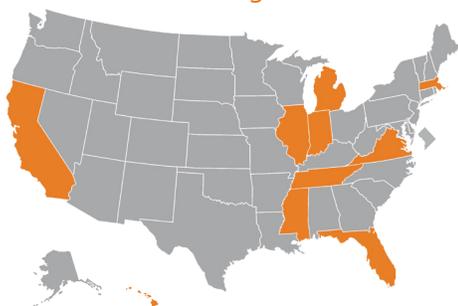
13 MINI-GRANTEES

NCHH's and W.K. Kellogg Foundation's \$90,000 investment in 13 mini-grants achieved an increase in the healthy homes workforce as well as fundamental changes in policy, partnerships, and program sustainability.

Three mini-grants were awarded in 2017 to the District of Columbia, Iowa, and Minnesota.



Ten mini-grants were awarded in 2018 to California, Florida, Hawaii, Indiana, Illinois, Massachusetts, Michigan, Mississippi, Tennessee, and Virginia.



OVERVIEW

Can small grants enable programs to substantially increase the number of workers trained in healthy homes issues? Can this lead to more fundamental changes in policy, partnerships, or program sustainability?

In the past, the National Center for Healthy Housing (NCHH) has used the mini-grant approach to encourage innovative local lead poisoning prevention and policy development initiatives. The mini-grant approach enabled organizations to pilot new programs by providing additional resources for operations, outreach to the wider community, and dedicated staff that could not be accommodated through their regular funding.

In 2017 and 2018, NCHH, with funding from the **W.K. Kellogg Foundation**, provided competitive mini-grants for 13 communities nationally to expand the range of models and best practices for building and sustaining the healthy homes workforce. NCHH defined the “healthy homes workforce” in broad terms: individuals who provided education, repairs, referrals, or policy support to assure homes were free of environmental health hazards that trigger adverse health outcomes. The competition was open to governments, educational institutions, public housing, nonprofit, and tribal communities.

Three 2017 pilot mini-grants of \$5,000 each focused on increasing the number of community health workers (CHWs) trained in healthy homes issues and the strategies to support those efforts. The **Childhood Asthma Leadership Coalition (CALC)**, **Linn County (Iowa) Public Health**, and the **Minnesota Community Health Worker Alliance** received the grants. The pilot helped NCHH to refine its expectations for the next round of mini-grants grants. (See Table 1 for a brief summary of all the grantee projects and Appendix 1 for a summary of the 2017 grantee activities.)

The 2018 mini-grants had more ambitious goals. NCHH chose projects that built new partnerships, engaged new providers of healthy homes services, and offered innovative strategies to deliver culturally sensitive training to CHWs, community paramedics, home assessors, energy auditors, pest management professionals (PMP), at-risk young adults, and others who engaged in home visits. NCHH awarded 10 mini-grants of \$7,500 each to organizations in California, Florida, Hawaii, Indiana, Illinois, Massachusetts, Michigan, Mississippi, Tennessee, and Virginia. Throughout the grant period, NCHH provided technical assistance. (See Table 1 for a brief summary of all the grantee projects and Appendix 2 for more detailed summaries of the 2018 grantees’ activities.)

THE 2018 GRANT COMPETITION

Twenty-nine organizations from 22 states competed for the 2018 mini-grant awards. NCHH posted **application materials** in late March. Applications were due in mid-April for a planned performance period from June 1 to October 31, 2018. A five-person team, including a representative from one of the 2017 mini-grantees, reviewed the applications according to multiple criteria including:

1. Demonstrated need (5 points)
2. Clarity of work plan (5 points)
3. Potential impact (5 points)
4. Relevance (5 points)
5. Bonus point: CHWs and/or Kellogg target community (1 point)

Individual ratings were summarized in an Excel spreadsheet and sorted into the top-scoring 20 and top-scoring 10 applications. Reviewers re-examined the top-scoring applicants to assure they represented a mix of geographic areas, organizational capacity, type of organization, and program purpose. NCHH announced the awards in late May. Figures 1 and 2 display the key characteristics of the grant awardees. (Appendix 3 contains examples of the tools used to rate applications and determine the final awards.)

To assure a mix of grantees with different levels of experience and community support for new healthy homes initiatives, applicants completed a capacity assessment that rated their organizational capacity through responses to the following 10 statements:

1. Decision makers are knowledgeable about why a healthy homes workforce, including CHWs, is needed.
2. The general public is knowledgeable about healthy homes services, including the need for a trained workforce.
3. We have established coalitions and partnerships that work on healthy homes services.
4. Our existing coalitions and partnerships are active and function effectively.
5. Health outcomes related to the home environment (e.g., asthma, injury, or lead positioning prevention) are priority areas in our state/community health improvement plan.
6. We have good community resources to help residents find and fix health-related problems in their homes (e.g., repair or replace faulty appliances, fall hazards).
7. We have good community resources to provide medical or other follow-up services for people affected by housing-related health hazards.
8. Healthy homes activities are well integrated into the wider service delivery system.
9. The healthy homes workforce is well trained and knowledgeable.
10. Community health workers are a well-established and active part of our healthy homes workforce.

Total possible capacity scores ranged from almost no capacity (10 points) to extremely strong capacity (50 points). The mean and median capacity scores of the 10 selected grantees were 31.5 and 33.5, respectively; but scores ranged from a low of 19 to a high of 43. Grantees with higher capacity ratings had pre-existing partnerships with statewide or local coalitions or health systems or were organizations with long-standing ties to the community they served.

Ongoing technical assistance relationships provided through **NCHH** and other national organizations, such as the **American Lung Association** and the **Green & Healthy Homes Initiative (GHHI)**, may have contributed to the higher scores of some of the successful grantees.¹

¹ NCHH has long-standing relationships with programs in Illinois, Indiana, Massachusetts, and Michigan, where four of the grantees were located. The American Lung Association – Hawaii chapter managed the Hawaiian grant. Four of the grantees (Chattanooga, Indiana Healthy Homes Alliance/Improving Kids Environment, Magnolia Medical Foundation, and Revitalize Community Development Corporation) included as partners GHHI-funded organizations. Others, such as Genesee Health Systems and the Metropolitan Tenants Organization, worked in a designated GHHI city. Grantees also benefitted from the curricula and training infrastructure provided through the **National Healthy Homes Training Center and Network** and the **Association of Asthma Educators**.

KEY CHARACTERISTICS OF 2018 GRANT AWARDEES

Figure 1. Number of top-scoring applicants by geographic region

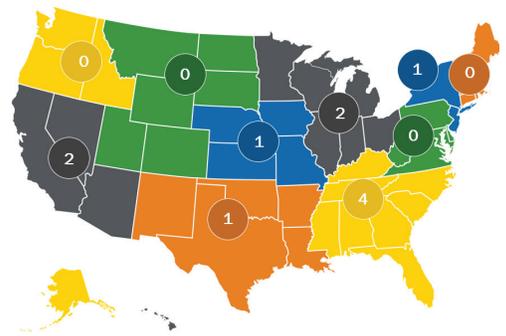
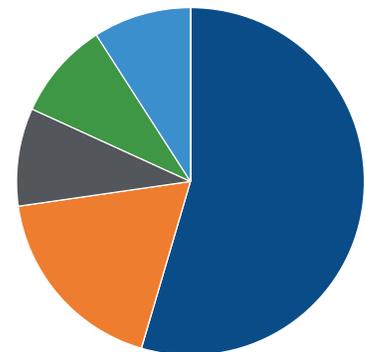


Figure 2. Type of organization of top-scoring applicants



55% Local, regional, or state nonprofit

18% Local government agency

9% Tenant- or community-based organization

9% Educational institution

9% Housing coalition, nonprofit housing development corporation

0% Healthcare provider, clinic, or health system

0% Other

Activities Supported by the 2018 Mini-Grants

Coalition-building meetings (1 grantee)

Informational workshops to discuss various CHW issues (8 grantees)

Provision of training for the healthy homes workforce (2 grantees)

Translation of materials into other languages (9 grantees)

Integration of CHWs into services provided through other programs (4 grantees)

Activities to develop systems or policy changes (3 grantees)

Other activities (2 grantees)

OVERVIEW OF GRANTEE ACCOMPLISHMENTS

The workforce development mini-grants broadly expanded the number of trained workers and understanding of healthy homes issues for multiple organizations in multiple communities. As a condition of their awards, 2018 grantees agreed to track a series of specific outcome measures for their projects. (The 2017 grantees reported on a more limited set of outcomes.) From a menu of 33 possible benchmarks, grantees identified specific performance measures appropriate to their programs. Monthly calls with the grantees enabled NCHH to follow progress toward these benchmarks, as well as provide additional technical assistance. This approach enabled NCHH to characterize the most common grantee accomplishments.

Workforce training.

Collectively, the 2017 and 2018 mini-grantees held 29 training events with a total of 440 participants. CHWs constituted 58% of all training participants. On average, attendees received over eight hours of training, with a minimum number of three and a maximum of 17 hours over multiple days. Four grantees (American Lung Association – Hawaii, Genesee Health System, Indiana Healthy Homes Alliance/Improving Kids Environment,

and the Metropolitan Tenants Organization) trained more individuals than they had initially projected.

On average, the post-test scores of the participants increased by 24% over the pre-test scores. All the grantees reported that the attendees found the training useful and increased their confidence in their ability to discuss healthy homes issues with their clients.

Grantees also reported a diverse



Hawaii CHW training

Photo provided by American Lung Association – Hawaii

Cumulative Effects of Mini-Grants

- *440 staff trained in 29 training events.*
- *21 new organizations engaged in healthy homes activities.*
- *Six commitments or memoranda of understanding to integrate healthy homes issues into organizations' home visiting services.*
- *Three publications or certifications of best practices.*

group of training participants as a result of their efforts to engage more communities and organizations and serve new populations, such as home assessors and low-income youth.

NCHH was interested in learning whether the training provided actually resulted in increased use of the information post-training, given that the grant only lasted five months. Grantees found this a challenge to track either because those trained did not respond to follow-up surveys, or because the trainings occurred so late in the fall that follow-up activities could not be assessed in time for the final reports. However, they did document 87 home visits post-training, 47% of which involved a CHW.

Coalition building.

Grantees reported a total of 29 presentations made at organizing events or meetings, with 335 people in attendance. This resulted in 21 new partnerships or coalition partners. Networking at these events also led to new options for partnerships.

Policy change.

Grantees documented their participation in 48 additional policy workshops or events and made presentations at 11 of these. These efforts resulted in six action plans for future activities and eight cases where organizations made formal commitments with other organizations, including memoranda of understanding. Grantees also reported more engagement in community needs assessment planning and partnerships in other new grant-funded activities.

The goal of the project is to make the case for continuation of the use of CHWs to screen for self-reported lung disease and/or vulnerable populations in home assessments and offer additional education and resources that would result in behavior change on behalf of the residents. These outcomes will be conveyed to the program managers of the state's CDC grant, which is in year five. The state will need to make the final decision on inclusion of healthy homes as part of Year Five deliverables.

Community education.

Recruitment efforts for training also had an impact on the general public's awareness of healthy homes issues. Grantees reported that 1,772 individuals attended their community events. Examples of this impact include Genesee Health Systems, where a working group convened to reach a consensus on messaging, and the Health Council of East Central Florida, where community leaders convened a coalition to discuss community health issues. Five grantees reported coverage of their activities by journalists or news outlets; most grantees noted that they did not use social media to publicize community events or recruitment. QualityPro, which undertook a social media campaign to publicize their public health certification for pest management professionals, was a significant exception, reporting 34 Facebook and Twitter posts reaching 5,962 users, and a total of 183,744 views when all social media, advertisements, and press releases were considered. Another measure of the grantees' impact on the community was the number of additional requests for information and/or



To increase employers' understanding, IHHA-IKE published *Utilizing Community Health Workers to Combat Asthma: A Guide to Using Your Indiana Workforce*.

IN THEIR OWN WORDS

Most of the trainees had not even heard of healthy homes, let alone had any knowledge of its principles and practices.

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IHHA/IKE final report

Magnolia Medical Foundation (MMF) signed two memoranda of understanding (MOUs) with Federally Qualified Health Centers (FQHCs) to add healthy homes services to their CHWs' current scope of services. A third MOU is in progress. MMF has made presentations to eight community health centers serving low-income rural and urban populations.

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Magnolia Medical Foundation
final report

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American Lung Association –
Hawaii final report

IN THEIR OWN WORDS

Revitalize Community Development Corporation's mini-grant increased its credibility as a partner in other endeavors. In the fall of 2018, Baystate Health was awarded a \$750,000 18-month grant from the Commonwealth of Massachusetts' Health Policy Commission to complete 150 home assessments and interventions. Revitalize Community Development Corporation secured a formal agreement to serve as the lead housing organization to collaborate with CHWs from eight healthcare organizations throughout western Massachusetts (e.g., the Public Health Institute of Western Massachusetts, Baystate Health's Pulmonary Rehabilitation Department, in addition to Trinity Health of New England [Mercy Medical Center], Springfield Partners for Community Action, and the local accountable care organizations).

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Revitalize Community
Development Corporation
final report

training: Grantees reported over 200 requests during the performance period, and many observed that the requests continued after the grant period ended.

Integration of healthy homes services into the home visiting practices of other organizations.

Many of the policy agreements noted earlier pertained to integrating healthy homes messages into the activities of other service providers. Grantees reported that 17 organizations began this integration, with practices ranging from integrated training to coordinated referrals and common resource manuals.

Language- and culturally accessible materials.

Grantees translated materials into two languages: Spanish and Vietnamese. The Environmental Health Coalition reported that post-training, participants conducted 10 home visits in Spanish and Vietnamese using these materials. Another accessibility innovation was to include American Sign Language interpreters at the Genesee Health System presentations. The American Lung Association – Hawaii successfully recruited participants from Native Hawaiian health centers. Their long-term goal is to address the needs of native language speakers.

Equally importantly, many grantees reported that their training had a lasting impact because their messages were tailored to community practices. For example, the American Lung Association – Hawaii and the Environmental Health Coalition focused their training on how green cleaning practices were consistent with ancestral or cultural traditions.

Dissemination of best practices.

Although all the grantees engaged in educational and outreach efforts, three – the Childhood Asthma Leadership Coalition, Minnesota Community Health Workers Alliance, and QualityPro – assessed and disseminated best practices in publications to a broad audience.

Childhood Asthma Leadership Coalition. The Childhood Asthma Leadership Coalition reviewed best practices for using CHWs in asthma home visits. Their report discussed how the Medicaid preventative services rule change made it easier to receive reimbursement for CHW and other non-licensed care provider services in home and community settings. It also reviewed other options for funding through Medicaid (e.g., Medicaid Managed Care, Medicaid Health Homes, and state plan amendments and waivers), hospitals and health plans, foundations and community-based organizations, and state or local governments. Examples from successful programs in Boston, MA; Chicago, IL; Seattle/King County, WA; and New York State highlighted the range of services that CHWs could provide, including assessments and trigger



Community Health Workers: Delivering Home-Based Asthma Services technical studies brief can be accessed at the NCHH and Childhood Asthma Leadership Coalition websites.

reduction activities, resident education, care coordination, and social services referrals. The report also identified strategies to advance the role of CHWs, including those to promote Medicaid funding, standards for certification and training, and public-/private-sector leverages. Both NCHH and the Childhood Asthma Leadership Coalition publicized the technical studies brief through press releases, listservs, and social media posts.

Minnesota Community Health Workers Alliance. The Minnesota Community Health Workers Alliance conducted a roundtable and workshop to educate community leadership on the benefits of using CHWs in home visits where health issues such as asthma and lead poisoning were involved. The workshop included formal presentations by nationally known speakers:

- Dr. Jim Stout, MD, Medical Director, and Bradley Kramer, Program Manager, King County Asthma Program, Seattle, WA;
- Joan Cleary, then-Executive Director, Minnesota CHW Alliance; and
- Dr. David Jacobs, Chief Scientist, NCHH.

They focused on successful models for CHW engagement, an overview of Minnesota CHW practice and training requirements, and an overview of local, state, national, and international developments in the field of healthy homes. Roundtable participants shared experiences and models for teaming across partner organizations, how to differentiate the roles of CHWs from other public health professionals, and strategies for payment by healthcare organizations. To maximize the impact of the event, the [proceedings](#) were published on the organization's website.

QualityPro. QualityPro's grant supported a different strategy for disseminating pest practices. QualityPro was founded in 2004 when the National Pest Management Association (NPMA) addressed the need to improve the level of professionalism of the pest management industry by creating a credentialing organization to set standards and recognize companies that met those standards. Over 70% of the work performed by U.S. pest control companies is now handled by QualityPro-accredited companies. Through its new public health credential, QualityPro will address pest management professionals' need for resources to address public health pests like mice, rats, cockroaches, and bed bugs. This credential will enable these professionals to prove their knowledge of public health pests, set standards for the services targeting these pests must include, and give communities an easy way to identify and select professional pest management companies. Mini-grant funding helped offset the substantial costs associated with developing and launching the new industry certification. Using mini-grant funds, QualityPro:

- Designed a marketable certification mark;
- Facilitated a task force and three work groups made up 31 people from 22 different organizations to write standards and exam questions for rodent and mosquito services;
- Worked with two consultants to draft a core study guide, a rodent specialty study guide, and a mosquito specialty study guide;
- Designed and distributed 177 promotional flyers at PestWorld 2018;
- Presented the program to more than 40 industry leaders at two QualityPro board of directors' meetings; and
- Trained 20 pest management professionals during a presentation at PestWorld 2018.



SOLUTIONS

Certifications and Registries.

As part of their ongoing efforts, grantees have advocated for and publicized models for CHW certification, training requirements, and registries. The National Academy of State Health Policy's (NASHP) *State Community Health Workers Models Map* provides detailed summaries of each state's requirements, funding, and activities. This includes an overview of how states have increased CHW roles in lead poisoning and asthma prevention.

Indiana Healthy Homes Alliance developed marketing material to reflect that the training was open to all health professionals in order to increase recruitment. IHHA/IKE also developed training material specifically for employers that detailed the importance of using CHWs to facilitate home visits. Making these changes led IHHA/ IKE to receive additional registrants, and potential partnerships.

American Lung Association reached out to partner organizations to recruit training participants. ALA – Hawaii found that many partner organizations had a great interest in the healthy homes project, which led to more training registrants.

The Health Council of East Central Florida partnered with local health organizations to provide referrals for home-visits to CHWs, this action assisted HCECF to reach more clients.

CHALLENGES, SOLUTIONS, AND LESSONS

An advantage of the mini-grant approach is that it enables NCHH to look comprehensively at the challenges organizations at different capacity levels face, as well as their solutions to overcome those challenges as they expand the healthy homes workforce and policy. Many grantees identified issues related to training, but their comments also included insight about how to scale up activities, build ongoing partnerships, and sustain programs after the mini-grant funding ended.

Challenges and Solutions Related to Training Recruitment and Delivery.

Identifying the correct audience.

Grantees had mixed experiences with targeting, especially when their states did not license or have registries of CHWs or when local healthcare organizations did not understand the value of this training.

Understanding the pre-existing knowledge base of the trainees.

Since many of the grantees did not employ the individuals they planned to train, they lacked information on what the target audience already knew or needed to know in order to perform their roles effectively.

Being seen as a credible and authoritative source of information.

Many of the grantees hired experienced trainers and used curricula designed by national subject matter experts, such as the **National Healthy Homes Training Center and Network**, the Green & Healthy Homes Initiative, the American Lung Association, and the Association of Asthma Educators. However, the grantees themselves had to negotiate complicated political and social dynamics when sponsoring these events. For example, the Genesee Health System team faced challenges in getting “buy-in” from the community. After many confusing messages and follow-up activities during Flint's recent crisis over lead in drinking water, Flint lead-in-water crisis, residents were distrustful of information regarding water quality, including point-of-use filters. As the provision of bottled water and free filters was ending for Flint residents, the grantee saw the need for ongoing support and education for filter use and environmental hazard reduction. Using a “train the trainer” model, the grantee chose to train community leaders and trusted CHWs to be the “community experts.”

Making the training affordable.

Many of the grantees recruited broadly from their surrounding communities.



Hands-on demonstration of water filters.

Photo provided by the Genesee Health System.

Participants' travel costs, especially those that required a multiple-day stay (such as Revitalize Community Development Corporation's three-day training for home assessors), meant the grantees needed additional funds to support their training offerings.

Making the training convenient.

Organizations targeted for recruitment may have balked at devoting one to two consecutive days of staff time for training given heavy demands on their staff for other activities. In addition, trainings offered in summer months frequently had lower attendance than expected because of conflicts with vacation schedules. Finally, the timing of healthy homes-related educational events and training may also have conflicted with other community issues. For example, the Environmental Health Coalition reported some community organizations were reluctant to participate in education and training because they needed to focus on critical local elections.

Conforming to the requirements of accredited curricula.

Use of a standardized curriculum from nationally recognized sources made it easier to obtain continuing education



Home assessor training and site visit

Photos provided by Revitalize Community Development Corporation

SOLUTIONS

Grantees experimented with ways to accommodate student schedules and make training affordable.

- Genesee Health System divided its training day into two sessions: one that provided time for general education and one that offered more intensive information to individuals who might make site visits;
- Environmental Health Coalition offered its training in the evenings and provided a meal. Trainings occurred in neighborhood settings so that travel time was not a burden.
- American Lung Association delivered follow-up training via webinars to the eight main islands. Recordings from these webinars continue to be available to CHWs, public health professionals, and broader audiences.
- Indiana Healthy Homes Alliance/Improving Kids Environment used a mixed approach: a one-day in-person training followed by a pair of two-hour live webinars on two consecutive weeks, concluding with a one-day in-person training. Participants liked the format because of its flexibility and timing (three choices of time and date for each webinar and two locations for the in-person trainings.)
- Revitalize CDC obtained additional support from the Massachusetts Association of Community Development Corporations (MACDC) Mel King Institute to cover participants' lunches. Other grantees provided meals, transportation vouchers, or other incentives.

SOLUTIONS

Grantees Built Capacity to Use Technology for Outreach and Evaluation.

Metropolitan Tenants Organization found that participants had a lower evaluation completion rate when asked to complete the evaluations online. Although the organization returned to the practice of in-class evaluations, it developed a SurveyMonkey database for analysis.

American Lung Association – Hawaii and Magnolia Medical Foundation used infographics to communicate the impact of their programs (See Appendix 4).

QualityPro developed an extensive social media campaign and a video to publicize their pest management professionals' certification program.

unit (CEU) credits for participants. But this standardization also came with a tradeoff, because the grantees could not tailor their training to the specific messages they thought were most important.

Costs of consultants and trainers.

Some grantees hired consultants to develop materials, conduct evaluations, or offer the training. Travel and fees often accounted for one third to one half of the grant funds for the trainings.

Access to the internet and social media.

Most grantees relied on traditional means of communication, which included flyers and newsletters as a mode of outreach. Most provided paper-and-pencil evaluation at the end of a training session to assess changes in knowledge and attitudes. Recruitment based on electronic media requires local access to the internet. Some grantees reported limited capacity or a rudimentary knowledge of how to format electronic recruitment materials.

Challenges and Solutions Related to Partnerships and Ongoing Integration of Services.

Alternative organizational priorities.

The field of healthy homes is still evolving. Healthcare, housing, and community-based organizations are dedicated to their core missions and may need time to develop a common perspective. Without a clear understanding of the scope of practice, some of the organizations believed that if they did not employ CHWs, their employees did not need the healthy homes training.

Need for common tools.

Coordination between healthcare organizations already encounters many obstacles, such as lack of staff, lack of referral mechanisms, and concerns about improper disclosure of health information. Adding additional players to this mix, such as community-based organizations or housing developers,

increases the need for common referral forms and protocols. Grantees supported community infrastructure by developing referral protocols, educational materials, and green cleaning kits.

Lack of dedicated staff for coordination.

Without grants or funding to support coordination with potential partner organizations, healthy homes issues are likely to remain a low priority. Many of the grantees used their funds to support part-time staff to conduct this coordination.

SOLUTIONS

Grantees Provided Tools to Support Partnerships.

IHHA/IKE changed its advertising and messaging to leadership to emphasize that anyone who made home visits served as a CHW and needed this information. As target organizations began to understand this connection, training enrollment increased.

Magnolia Medical Foundation secured memoranda of understanding with Federally Qualified Health Centers to use CHWs in specific healthy homes projects. Once the MOU was established, MMF provided informational flyers and health kits for the organizations' use.

Revitalize Community Development Corporation now has a trained group of home assessors with a common assessment form to supply services to a variety of local programs.

Securing commitments from partner organizations.

The mini-grants lasted for five-months; partnerships to achieve a lasting impact on practices take far longer to achieve. Despite the short time frame, grantees managed to secure 14 MOUs or other commitments to extend healthy homes activities into partner practices. Of particular importance, the commitments often reflected new initiatives between healthy homes advocates and healthcare providers. Federally Qualified Health Centers serve as especially important partners, since they serve the at-risk populations in the neighborhoods with the most deteriorated housing and poorest health outcomes. Among the partners that grantees established MOUs or other commitments with were five FQHCs, three additional clinics and health systems, three educational institutions, two nonprofit organizations, and one utility. Grantees also established new organizational relationships with health systems, nonprofits, and local and state governmental organizations that will continue to demonstrate the impact of grantee work. For example, IHHA/IKE reported seven organizations now using healthy homes training, and QualityPro saw 86 organizations express interest in using their new certification.

Challenges and Solutions Related to Sustainability.

Lack of governmental commitments.

Although the mini-grantees made progress in forming partnerships with local governmental and nonprofit organizations, none of them secured new commitments from local or state government as a whole to make this a priority for future funding.

SOLUTIONS

Grantees Built an Evidence Base to Support Program Expansion.

Seminole County, Florida, already had a community paramedicine program that allowed paramedics to conduct follow-up visits and provide education to individuals being discharged to their homes after having been seen by emergency services. The paramedicine program did not have a focus on healthy homes and had not engaged CHWs as part of the visiting team. Through the mini-grant, the Health Council of East Central Florida was able to train 10 CHWs and offer ride-alongs with a community paramedic.

Neither the community paramedicine program nor the organizations that employed the CHWs had the infrastructure to tie assessments of repair needs to available home repair services. HCECF addressed this by incorporating housing repair program information into the resource guides used by a variety of county health and social services providers and developing new referral strategies.

The mini-grant outcomes demonstrated the value of paramedic/CHW relationship to the local health department. It hired a paramedic dedicated to this effort for the next year. Additional funds from the Florida Hospital Community Health Improvement Council will continue the program for the next 13 months.

Grantee Activities Support Sustainability.

American Lung Association-Hawaii, Genesee Health Systems, Revitalize Community Development Corp., and green|spaces Chattanooga have successfully achieved new grant funding during the mini-grant performance for projects such as training, partnership development, and expanded repair services.

HCECF received a year-long grant from the Florida Asthma Coalition to create a pediatric asthma community paramedicine program. This program will focus on Osceola County and brings with it the opportunity to train more CHWs in the future.

IHHA/IKE's long-term purpose for its grant was to develop a cadre of CHWs trained in healthy homes issues in anticipation of Medicaid reimbursement for home visits by CHWs.

Green|spaces Chattanooga, LifeSpring Health Systems, and a municipal energy provider partnered on a successful \$50,000 grant proposal to pilot a healthy home program through the Green & Healthy Homes Initiative. The team's ultimate goal is to provide the proof-of-concept to establish a pay-for-success program to invest in health and energy improvements to 550 homes in Chattanooga. It also signed an agreement with the University of Tennessee at Chattanooga's Master of Public Health program to provide educational and research opportunities for students and faculty.

Need to rely on grant funding.

Mini-grant funding has often served as an adjunct to other grant funding. Continuation of mini-grantees' efforts will depend on successful grant initiatives. Although many of these applications were in process at the time of the mini-grants, the award added credibility to the effort. Organizations that advocate for use of Medicaid funding to support CHW home visits offer a promising approach to decreasing reliance on grants.

CONCLUSIONS

NCHH's and W.K. Kellogg Foundation's \$90,000 investment in mini-grants has demonstrated that an increase in the healthy homes workforce as well as fundamental changes in policy, partnerships, and sustainability can be achieved through a thoughtful engagement of a variety of programs. Grantees both increased the number of workers nationally and expanded the composition of the workforce by engaging new professions, such as energy auditors, home assessors, community paramedics, and pest management specialists. Small grants enabled communities to leverage other sources of funding, cover operating expenses that could not be covered by other funding, and systematically reach new partners. Over a five-month period, grantees strengthened community infrastructure for service delivery and referrals. As a result, they are poised to expand their programs' impact on their communities in the next year.

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- Develop ready-made solutions and remove barriers associated with defining and funding the scope of services associated with healthy homes services.*
- Create sustainable and readily accessible data systems to demonstrate the need for and impact of healthy homes services.*
 - Build a credible and reliable healthy homes workforce to provide healthy homes services.*
- Manage a coordinated portfolio of policy, research, and capacity-building activities to complement and amplify the work of other stakeholders to increase our collective impact on increasing the healthcare sector's investment in healthy homes services.*

The contents of this document are solely the responsibility of the authors and do not necessarily represent the official views of the W.K. Kellogg Foundation.

May 2019



Table 1.
2017 and 2018 Grantees by location, type of organization, and grant activities



		Coalition-building meetings	Informational workshops to discuss CHW issues	Provision of training for the healthy homes workforce	Translation of materials into other languages	Integration of CHWs into other programs' services	Activities to develop systems or policy changes	Other activities
<p>Childhood Asthma Leadership Coalition (2017)</p> <p>Washington, DC</p>	<p>TYPE OF ORGANIZATION: National nonprofit coalition co-led by the George Washington University and Families USA. Located at the George Washington University Milken Institute School of Public Health.</p> <p>GRANT PURPOSE AND ACTIVITIES: Produced a technical study, <i>Community Health Workers: Delivering Home-Based Asthma Services</i>. The technical study summarized available evidence on CHWs and their effectiveness in delivering home-based asthma services to serve as a tool for advocates working to advance the role of CHWs. This has been posted on the NCHH and CALC websites.</p>							X
<p>Linn County Public Health (2017)</p> <p>Linn County, IA</p>	<p>TYPE OF ORGANIZATION: Local health department.</p> <p>GRANT PURPOSE AND ACTIVITIES: Organized and hosted two community trainings for CHWs using the <i>Healthy Home Assessment for Community Health Workers</i> curriculum. The trainings supported home-based asthma and lead poisoning prevention/follow-up services. The 23 participants came from multiple healthy homes service providers, such as community health workers, nurses, social service agencies, the social determinant of health subcommittee members, and housing agencies. The grantee has pledged to continue the training efforts in the next two years.</p>	X	X		X	X		
<p>Minnesota Community Health Workers Alliance (2017)</p> <p>Minneapolis, MN</p>	<p>TYPE OF ORGANIZATION: Statewide coalition.</p> <p>GRANT PURPOSE AND ACTIVITIES: Offered an informational workshop and roundtable to familiarize healthy housing providers with CHWs' roles, spotlight successful models, and explore opportunities for CHW integration in their programs. It also offered one training event for 12 CHWs. Minnesota has standardized competency-based curriculum and Medicaid payment for diagnostic-related education and self-management services provided by CHW certificate holders. However, very few healthy housing providers have integrated CHWs into their teams. The <i>proceedings of the roundtable</i> appear on the organization's website.</p>		X					
<p>American Lung Association Hawaii (2018)</p> <p>Honolulu, HI</p>	<p>TYPE OF ORGANIZATION: State nonprofit.</p> <p>GRANT PURPOSE AND ACTIVITIES: Provided CHW training to support recognition and reduction of home-based asthma triggers and how to complete an in-home indoor air quality (IAQ) assessment. Targeted populations included Native Hawaiians and low socioeconomic populations. Training consisted of one in-person session (seven hours) and two follow-up webinars (one hour each). Eighteen people completed the in-person training, 16 of whom were CHWs. Thirteen people participated in or viewed recordings of the two webinars, four of whom were CHWs. Participants were given Asthma Akamai kits provided by the Hawaii State Department of Health (HDOH), green cleaning demonstration kits and recipes, home assessment guides, and electronic copies of childhood and adult asthma control tests in use by the HDOH. Attendance exceeded the grantee's expectations.</p>		X		X			



**Table 1. (continued)
2017 and 2018 Grantees by location, type
of organization, and grant activities**



		Coalition-building meetings	Informational workshops to discuss CHW issues	Provision of training for the healthy homes workforce	Translation of materials into other languages	Integration of CHWs into other programs' services	Activities to develop systems or policy changes	Other activities
<p>Environmental Health Coalition (2018) National City, CA</p>	<p>TYPE OF ORGANIZATION: Local nonprofit.</p> <p>GRANT PURPOSE AND ACTIVITIES: Provided CHW training to 14 CHWs on healthy homes. Ten post-training home visits used information from the training. Participants received a healthy homes kit that included recipes and materials for a nontoxic cleaning solution and household items such as mold-free shower curtains. The grant project also translated three sets of home visiting materials into Spanish and Vietnamese. These will continue to be used for training and outreach.</p>			X	X			
<p>Genesee Health System (2018) Flint, MI</p>	<p>TYPE OF ORGANIZATION: Health system, in partnership with universities and community groups.</p> <p>GRANT PURPOSE AND ACTIVITIES: Trained CHWs and others in the safe use of drinking water faucet filters so that they could instruct clients on their proper use. A pilot of the technical training was given to a group of community partners and residents to make sure that the training was understandable and applicable to the community. Genesee Health System conducted two trainings attended by 150 people, 135 of whom were CHWs. Each five-hour training had two parts: The first was open to the community and focused on how to use filters correctly; the second served as a train-the-trainer session to instruct CHWs and other participants how to communicate this information effectively in future home visits. Each training offered interpretation in American Sign Language. Attendance exceeded the grantee's expectations.</p>		X		X			
<p>green spaces Chattanooga (2018) Chattanooga, TN</p>	<p>TYPE OF ORGANIZATION: Local nonprofit, with national nonprofit as a consultant.</p> <p>GRANT PURPOSE AND ACTIVITIES: Provided healthy housing workforce development training to three different audiences. One July 2018 training served six energy efficiency professionals who conduct in-home inspections. Another July 2018 had 12 attendees from a health clinic, health educational programs, and an insurance provider. These workers also received additional asthma-specific training. The final training in September 2018 had 10 participants and trainers from a pre-existing grantee at-risk youth workforce development program. Post-training, the energy providers conducted 25 home visits that incorporated information based on the training. The group of home health workers and students conducted 43 home visits.</p>		X	X	X	X	X	
<p>Indiana Healthy Homes Alliance and Improving Kids' Environment (IHHA/IKE) (2018) Indianapolis, IN</p>	<p>TYPE OF ORGANIZATION: Housing coalition and nonprofit housing development corporation.</p> <p>GRANT PURPOSE AND ACTIVITIES: The Indiana state Medicaid program and other payers are in the process of implementing reimbursement for CHW visits. Since the state had no asthma or healthy homes training programs for CHWs at the time of the grant application, the IHHA/IKE CHW training in asthma and healthy homes issues was designed to meet the expected demand for CHW services. The training used evidence-based curricula from the National Healthy Homes Training Center and Network and the Association for Asthma Educators (AAE). Six in-person healthy homes trainings were held during June, August, and September 2018, followed by two webinars on asthma, and concluding with an in-person training on asthma. Twenty-three participants completed the asthma training course, and 21 participants completed the healthy homes course. Each trainee also received a healthy homes kit that included a flashlight, humidity/temperature reader, and lead paint test swabs, as well as resource materials on asthma and healthy homes developed by IHHA and IKE. Attendance exceeded the grantee's expectations. An additional training is planned for February 2019 using the remaining grant funding.</p>				X			

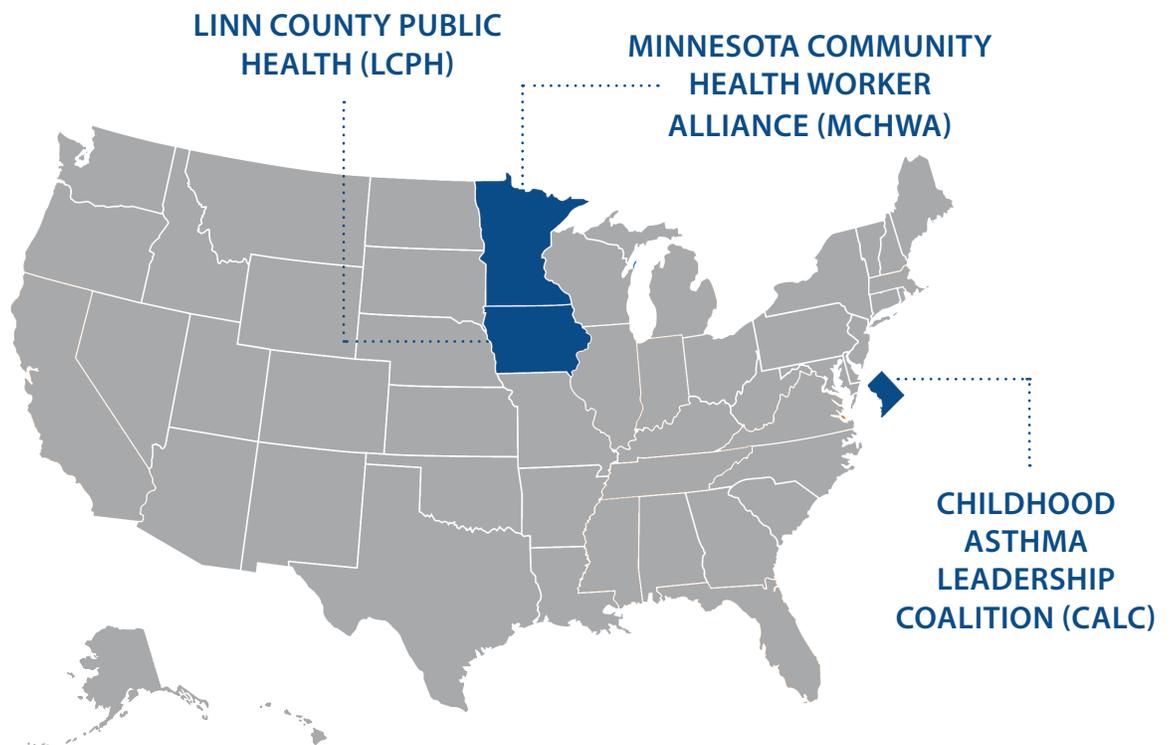


Table 1. (continued)
2017 and 2018 Grantees by location, type of organization, and grant activities



		Coalition-building meetings	Informational workshops to discuss CHW issues	Provision of training for the healthy homes workforce	Translation of materials into other languages	Integration of CHWs into other programs' services	Activities to develop systems or policy changes	Other activities
<p>Magnolia Medical Foundation (2018)</p> <p>Jackson, MS</p>	<p>TYPE OF ORGANIZATION: Local nonprofit</p> <p>GRANT PURPOSE AND ACTIVITIES: Conducted educational and exploratory discussions with Federally Qualified Healthcare Centers (FQHCs) in Mississippi to determine the need to incorporate healthy homes services into their CHWs' scope of services for rural and urban communities. Through four Lunch and Learn sessions for FQHCs and community health organizations, leadership learned more about the benefits of using CHWs, as well as some of the healthy homes issues that their communities face. MMF's goal was also to provide training and general education for CHWs to use when working in the community. The project conducted an additional session for Master of Public Health students. The sessions focused on the important messages, how healthy homes services can fit into the clinical workflow, and the importance of establishing memoranda of understanding (MOUs) with community partners to provide these services.</p>		X		X	X		
<p>Metropolitan Tenants Organization (2018)</p> <p>Chicago, IL</p>	<p>TYPE OF ORGANIZATION: Local nonprofit, with national nonprofit as a consultant.</p> <p>GRANT PURPOSE AND ACTIVITIES: Trained 74 persons, including 34 provisional or certified CHWs, at four <i>Healthy Homes Practitioner</i> training sessions. Trainings were held at colleges and at health- and housing-related organizations. Participants came from 16 communities across Chicago and five suburban Cook County neighborhoods. Attendance exceeded the grantee's expectations.</p>		X		X			
<p>QualityPro (of the Foundation for Professional Pest Management) (2018)</p> <p>Fairfax, VA</p>	<p>TYPE OF ORGANIZATION: National nonprofit organization administered by the Foundation for Professional Pest Management.</p> <p>GRANT PURPOSE AND ACTIVITIES: Facilitated development of a science-based, commercially viable and effective public health certification for the pest management industry. These certifications will equip pest management professionals with standards they can apply to their future services. QualityPro leveraged mini-grant funding with other funding sources to create marketable certification symbols, convene a taskforce team to write standards and exam certification questions for rodent and mosquito services, work with consultants to draft a core study guide for both exams, and present at and train 20 individuals at the PestWorld 2018 conference. The exams will be released in 2019.</p>		X		X		X	X
<p>Revitalize Community Development Corporation (2018)</p> <p>Springfield, MA</p>	<p>TYPE OF ORGANIZATION: Local nonprofit housing developer.</p> <p>GRANT PURPOSE AND ACTIVITIES: Trained 15 home assessment professionals to conduct basic healthy homes assessments and resident interviews, develop strategies for assessing the health-related hazards in homes, and prepare action plans. Revitalize CDC offered a three-day <i>Healthy Homes: Assessments and Interventions</i> training.</p>	X	X			X	X	

**APPENDIX 1.
DESCRIPTION OF THE 2017 HEALTHY HOMES
WORKFORCE DEVELOPMENT PROJECTS**



Linn County Public Health (LCPH), Linn County, IA.

Linn County Public Health (LCPH), Linn County, Iowa, delivered training for CHWS, nurses, social workers, housing and code enforcement officers, aging offices, and home visiting and university program staff.

- a. LCPH used the training as an opportunity to solidify referral arrangements with local partners and to increase outreach to 171 agencies through emails, invitations, and posts on LCLP’s and the **Hawkeye Community Action Agency’s (HACAP)** website.
- b. Twenty-three staff from a variety of organizations attended the three sessions of the Healthy Homes for Community Health Workers training, based on the curriculum developed for the **National Healthy Homes Training Center and Network**:
 - **Mount Mercy University**;
 - **The Heritage Agency on Aging**;
 - **City of Cedar Rapids Housing Services**;
 - **Linn County Family Visitation Center**;
 - **Cedar Rapids Community School District**;
 - Linn County Public Health;
 - **Linn County Home Health**;
 - **Squaw Creek Baptist Church**;
 - **Waypoint Services**;
 - **Eastern Iowa Health Center**;
 - **AmeriCorps**; and
 - **City of Hiawatha Code Enforcement**.
- c. Participants in each session rated the impact of the training on their future work practices, using a scale of 1 (low likelihood) to 4 (high likelihood).

Question	November 7, 2017	November 8, 2017	May 24, 2018
Recommend this training to other professionals	3.8	3.7	4.0
Advocate for healthy homes resources	4.0	3.8	3.8
Change business practices to incorporate healthy homes concepts	3.8	3.7	3.3

- d. Specific outcomes from this mini-grant:
 - Mount Mercy University requested LCPH staff train nursing students on healthy homes issues and visual assessment as part of their community health rotations. This will strengthen new nurses’ abilities to identify and address healthy homes issues in their practice.
 - LCPH continued to identify the policy issues that are a barrier to incorporating healthy homes assessment, referrals, and repair services. These included the absence of a countywide public nuisance code for enforcement, few resources to fund CHWs and low-cost interventions, lack of a statewide definition of the role for CHWs, and a web-based community referral system for follow-up services that does not include services for housing conditions in the home. LCPH has concluded that a housing code with minimum health and safety standards should receive priority for its efforts in the near future.

Childhood Asthma Leadership Coalition (CALC), Washington, DC.

The George Washington University (GWU)'s **Childhood Asthma Leadership Coalition (CALC)** produced a short technical study on the role of community health workers (CHWs) in the delivery of home-based asthma services. The George Washington University leads the Childhood Asthma Leadership Coalition. GWU and **First Focus**, a nonprofit children's advocacy organization, convened CALC in 2012 to unite cross-sector partners to improve policies that impact children with asthma. CALC aims to improve access to care and to accelerate prevention and health system redesign in order to improve the diagnosis, treatment, and long-term management of childhood asthma through targeted state and federal policy. **Community Health Workers: Delivering Home-Based Asthma Services** shows how the inclusion of CHWs can reduce costs and improve health outcomes for home-based asthma services. It highlights the range of services CHWs can provide, such as home assessments, trigger-reduction education, referrals for environmental and social services, and self-management education. Case studies from successful asthma home visiting programs that have used CHWs illustrate the partners, funding strategies, health outcomes, and return on investment associated with these innovative programs. The brief describes innovative programs in the states of New York and Minnesota as well as in the municipalities of Seattle/King County (Washington), Chicago (Illinois), and Boston (Massachusetts). NCHH posted the brief on its website and through listservs on **September 20, 2018**. CALC also linked NCHH's announcement to its listserv, with several thousand members receiving the new information.

Minnesota Community Health Worker Alliance (MCHWA), Bloomington, MN.

The Minnesota Community Health Worker Alliance is a statewide nonprofit committed to equitable and optimal health outcomes for all communities. Its mission is to build systems and community capacity for better health through the integration of culturally responsive CHW strategies in healthcare, public health, behavioral health, oral health, and social services systems.

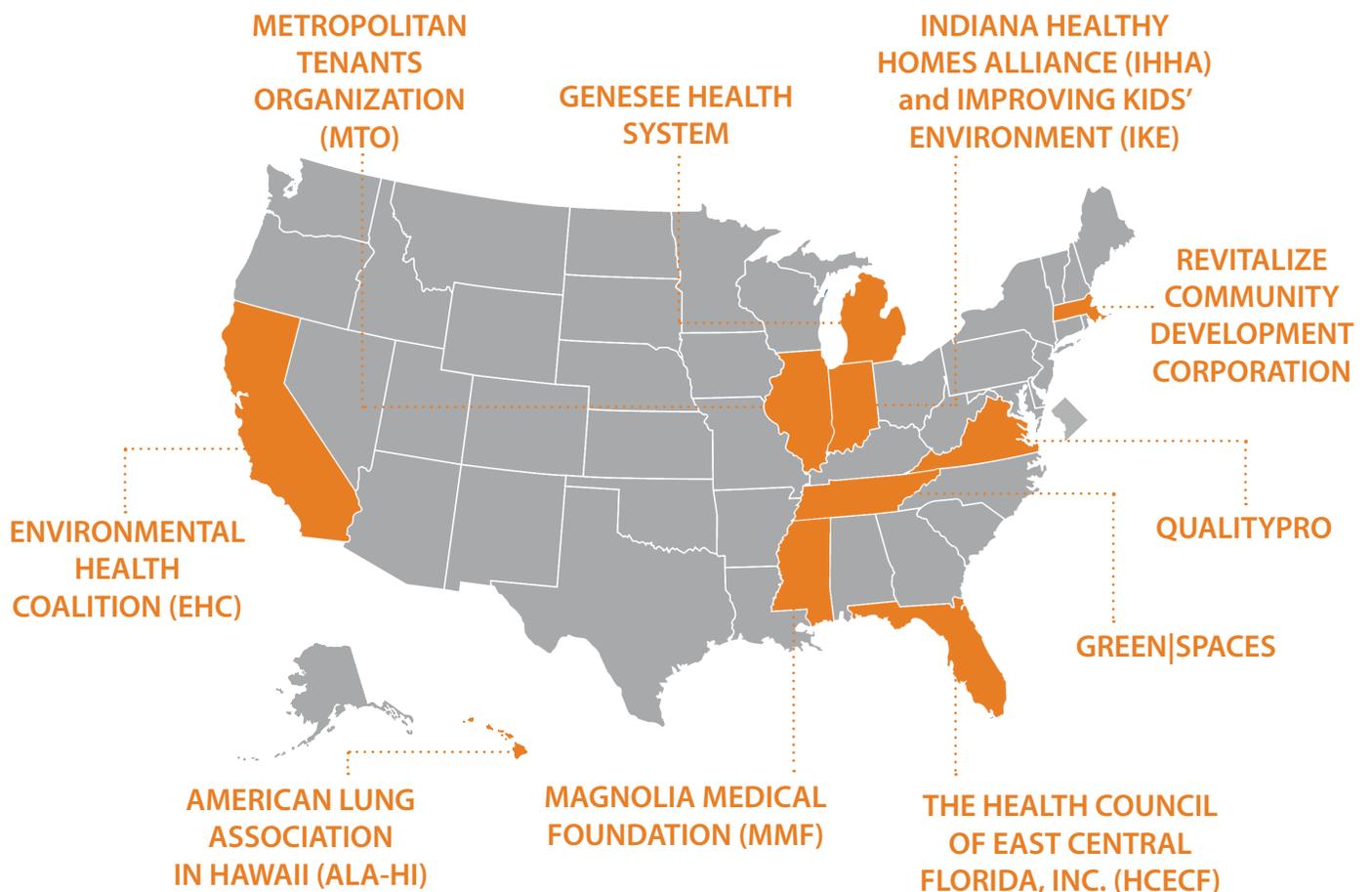
- a. Seven CHWs, a racially and ethnically diverse mix of participants that included members of the Bosnian, Hmong, Latino, and Somali communities, attended the February 22, 2018, session of the *Healthy Homes for Community Health Workers* training, using the National Healthy Homes Training Center and Network's curriculum.
- b. Seven different community organizations participated in the training:
 - HealthPartners, St. Paul;
 - Hennepin County Human Services, Minneapolis;
 - Intercultural Mutual Assistance Association, Rochester;
 - Livio Health, St. Paul;
 - Lutheran Social Services, Minneapolis;
 - Rice County Public Health, Northfield; and
 - Sustainable Resources Center, Minneapolis.
- c. In partnership with ALA of Minnesota and the Minnesota Department of Health (MDH), MCHWA organized an invitational workshop and roundtable for healthy housing on February 28, 2018. Informational presentations by the King County Asthma Program, the MCHWA, and NCHH were followed by roundtable discussion on the opportunities and challenges for integrating CHWs into healthy homes teams. MCHWA posted the proceedings from the workshop on its website.
- d. Thirty organizations received invitations to participate, and 11 attended. They represented:
 - A Breath of Hope Lung Foundation, Minnetonka;
 - ALA of Minnesota, St. Paul;
 - Dakota County Public Health Department, West St. Paul;
 - Hawthorne Neighborhood Council, Minneapolis;

APPENDIX 1. Description of the 2017 Healthy Homes Workforce Development Projects

- Minneapolis Health Department, Minneapolis;
 - Minnesota Department of Health Asthma Program;
 - Minnesota Department of Health Healthy Homes Program;
 - Rice County Public Health, Northfield (via teleconference);
 - St. Paul-Ramsey Public Health Department, St. Paul;
 - Sustainable Resources Center, Minneapolis; and
 - Twin Cities Habitat for Humanity, St. Paul.
- e. Key takeaway messages from the participants included:
- Continue to promote CHW healthy homes training
 - Explore new funding methods through weatherization
 - Pilot CHW program
 - Collaborate
 - Bring information back to Minnesota Department of Health programs, think about new ways to partner, and reconnect with the Minnesota Department of Commerce on weatherization
 - Find out if our hospital partner will use CHWs (“care guides”) to assess homes and conduct safety checks for our partnership focused on aging in place
 - Share the healthy homes benefits and impacts of CHWs with my agency’s leadership

APPENDIX 2. DESCRIPTION OF THE 2018 HEALTHY HOMES WORKFORCE DEVELOPMENT PROJECTS

**Note: All quotes from mini-grantee final reports.*



AMERICAN LUNG ASSOCIATION IN HAWAII (ALA-HI)

Location: Honolulu, Hawaii.

Type of organization: State nonprofit.

Service area for the project: The islands of Oahu, Lanai, and Hawaii, and the 11 ZIP codes between them.

Project goals/objectives: The project aimed to train and provide materials to community health workers (CHWs) who conduct home visits to support their ability to recognize and reduce home-based asthma triggers and complete an in-home indoor air quality (IAQ) assessment. Targeted populations included Native Hawaiians and low socioeconomic populations. This builds on a 2016 pilot project that used a similar model.

Main activities funded by the mini-grant: Training consisted of one in-person session (seven hours) and two follow-up webinars (one hour each). Participants received Asthma Akamai kits provided by the **Hawaii Department of Health (HDOH)**, green cleaning demonstration kits and recipes, home assessment guides, and electronic copies of childhood and adult asthma control tests in use by the HDOH. A pre- and post-test was administered to participants at the training.

Number of individuals trained: Eighteen people completed the in-person training, 16 of whom were CHWs. Thirteen people participated in or viewed recordings of the two webinars, four of whom were CHWs.

Changes in scores from pre- to post-test: The average knowledge score increased from 4.4 pre-test to 5.5 post-test on a six-point scale. Post-test scores showed an improvement in knowledge of the definition of asthma, asthma triggers, indoor pollutants, pets in the home, safety assessments, and actions to reduce dust in the home. The vast majority (78%) participants also reported their overall confidence increased, as well as their confidence to discuss with residents topics such as asthma symptoms, triggers, indoor air pollutants and their relationship to lung disease, how to perform a home assessment, in-home remediation strategies, and what to do in case of a breathing emergency. Before the training, 22% of participants completely agreed that home assessment was an important tool for managing IAQ concerns. After the training, 61% agreed with that statement, and 94% agreed or completely agreed that IAQ assessments should always include a safety assessment.

Number and kinds of organizations reached for recruitment, community-based education: The training participants came from six organizations conducting home visits. Outreach for the training was targeted at federally qualified health centers and Native Hawaiian health services.

Description of use of paid, free, or social media used to publicize the project: None.

MOUs or other agreements that will sustain the effort after the grant is completed: Additional partnership opportunities are in development with the following organizations:

- **Ke Ola Mamo**, a Native Hawaiian Health Care System: scheduling underway for a 2019 CHW webinar.
- **Kapi'olani Community College**: webinars for CHW students anticipated for spring 2019.
- **Hawai'i Public Health Institute**: plans to share future events and opportunities with contacts on Oahu and neighbor islands.
- In addition, Hawaii is currently in year five of a CDC National Asthma Control grant; the results from this grant will be conveyed to the state for potential impact on program goals or deliverables.

Challenges encountered and how they were resolved:

- *Recruitment for training:* ALA-HI initially struggled with getting enough participants in the in-person training but resolved this issue by reaching out to both previous partners and new organizations, ultimately surpassing their attendance goal of 10 participants.
- *Attendance at webinars:* CHW attendance was low for the two follow-up webinars. This has been partially addressed by keeping recordings of the webinars available for future viewing.

APPENDIX 2. Description of the 2018 Healthy Homes Workforce Development Projects

- **Feedback on CHW activities post-training:** ALA-HI has not been able to obtain consistent follow-up information from CHWs, including outcome reports and a survey of changes in practices. By the end of November 2018, only 28% of trainees have taken the survey, and no outcome reports have been received. ALA-HI continues to contact participants.
- **Legal and administrative restrictions on CHW home visits:** Five trained CHWs belonged to an organization that only learned they would not be able to conduct the assessments after the training was completed. The organization needed prior approval from the State of Hawaii. This did not affect the educational value of the training for those five CHWs, but did make them unable to provide the complete recommended services. This may provide an opportunity for partnership with the state in future.

Lessons learned: The implementation of the grant demonstrated the high need among CHWs in Hawaii for this kind of training, continuing on from ALA-HI's pilot program in 2016. Despite some initial issues with acquiring registrations, 16 CHWs attended training, exceeding the target of 10, and gave positive reactions to the usefulness and effectiveness of the training. Lessons included:

- **Recognize the needs for services in the community:** Through this grant, ALA-HI has built new relationships with both individual CHWs and partner organizations.
- **Build broad partnerships:** New or existing partnerships encouraged throughout this grant include those with federally qualified health centers, educators, and state programs. The grant also highlighted other potential ideas for partnership, including:
 - Working with community health organizations to identify home visit clients with lung disease, as some CHWs reported that their organizations did not have this information available.
 - Working with the state to ensure that all prior approvals for CHWs facing state requirements are completed in advance of a training.
- **Understand and address the unique conditions that affect the CHW workforce:** CHWs changed positions frequently, necessitating vigorous upkeep of contact information, and generally did not keep regular office hours, making contacting them difficult. Future projects will want to account for these challenges, and may potentially include some type of incentive for timely reporting from trainees.

The process of recruiting participants and working with new and ongoing partners confirmed our belief that this information is needed and desired by CHWs: We learned that CHWs truly want to know this information and see its benefit for their clients. Similarly, there is a recognized need for training opportunities for CHWs in Hawaii, and CHWs were very enthusiastic about the opportunity to learn.

ENVIRONMENTAL HEALTH COALITION (EHC)

Location: National City, California.

Type of organization: Local nonprofit.

Service area for the project: City Heights neighborhood in San Diego.

Project goals/objectives: The goal of the project was to train 30 community health workers (CHWs) on healthy homes with translation into four languages and to track the home visits made afterwards.

Main activities funded by the mini-grant: The grant period included preparation and promotion for the 2.5-hour training, held in October 2018, as well as follow-up emails with participants about the home visits they conducted. By the end of the performance period, 10 home visits were reported. Participants were given a healthy homes kit, as well, which included recipes and materials for a nontoxic cleaning solution, as well as household items such as mold-free shower curtains. A second training is planned for January 2019, outside of the grant period.

APPENDIX 2. Description of the 2018 Healthy Homes Workforce Development Projects

but using the same materials and presentation. The grant project also translated three sets of nine pages of home visiting materials into Spanish and Vietnamese. These will continue to be used for training and outreach.

Number of individuals trained: Fourteen CHWs were trained. Training was provided in English with simultaneous interpretation into Spanish and Vietnamese; 10 of the CHWs were trained in a non-English language.

Changes in scores from pre- to post-test: The pre- and post-test had five questions. The combined number of correct answers on the pre-tests was 37 out of a possible 70, or 52.8%; the combined number of correct answers on the post-tests was 54 out of a possible 65, or 84%. One post-test was not returned.

Participants were also asked how comfortable they felt speaking to clients and neighbors about healthy homes on a scale of one to 10, with one being the least comfortable and 10 the most. On the pre-test, four answers were rated between one and four, and 10 were above seven. On the post-tests, all answers were above seven, with nine people answering either nine or 10.

Number and kinds of organizations reached for recruitment, community-based education: Eighteen organizations were reached for recruitment for the training, including organizations working with immigrant populations, tenant and employee rights organizations, family health centers and healthcare, leadership development groups, and other healthy housing organizations. This led EHC to form partnerships with two new groups.

Description of use of paid, free, or social media used to publicize the project: No traditional or social media was used for outreach. Recruitment was conducted through electronic and paper flyers distributed to partner groups, at three leadership programs, and through door-to-door outreach.

MOUs or other agreements that will sustain the effort after the grant is completed: Thirty CHWs working with **La Maestra Community Health Centers** will be trained in January 2019. This private training was requested by La Maestra during the planning period under this grant.

Challenges encountered and how they were resolved:

- **Recruitment for training:** The greatest challenge was low registration for the training event. The initial goal was to offer training in Karen and Somali as well as Spanish and Vietnamese; but due to trouble reaching those populations, those languages were not included in the final training. The project goal was to train 30 CHWs. While only 14 attended the training, the planned private training for La Maestra will include an additional 30 CHWs.
- **Conflict with partner organizations' priorities:** The plan had been for one partner organization to help specifically with reaching the Somali population, but that partner was unable to help as expected due to the close proximity of the training to the election.
- **Physical access to the training site:** Another challenge on the day of the training was some confusion at the training site. The training had been scheduled after hours to accommodate CHWs' schedules. Under the training site's elevator security protocols, elevator access was restricted after hours. An EHC volunteer was able to assist attendees in getting onto the elevator and to the training room, but there was a delay in realizing and implementing this solution.

Lessons learned:

- **Be mindful of scheduling conflicts:** The training session was delayed from the initial goal of September to October 2018 due to scheduling conflicts. Consequently, this brought the date closer to the November election, and this proved to be a challenge during recruitment. Many of the partner organizations were very busy with civic engagement work in the run-up to the election and therefore not able to spend much time recruiting for the training. This timing issue also may have affected CHW decisions not to attend the training. At least one member at a recruiting event specifically cited the election activities as a reason they did not have time for the training.
- **Building partnerships takes time:** While the attendance for the training was lower than planned, the scheduled training in January and new partnerships formed during the process demonstrate continued

APPENDIX 2. Description of the 2018 Healthy Homes Workforce Development Projects

need for this information. In addition, difficulties in reaching the Karen- and Somali-speaking populations show the need for additional work to target this audience and build lasting partnerships with those working in these communities.

Regardless of the challenges, EHC found the training to be a success, as demonstrated in the pre- and post-test results and the participant comments. EHC reported that “comments on the post-survey were incredibly positive with many attendees expressing gratitude” and anticipates a successful training in January as well.

GENESEE HEALTH SYSTEM

Location: Flint, Michigan.

Type of organization: Health system, in partnership with universities and community groups.

Service area for the project: Flint, Michigan.

Project goals/objectives: Train community health workers (CHWs) and others in the safe use of drinking water faucet filters so that they will be able to instruct their clients on how to use them.

Main activities funded by the mini-grant: A pilot of the technical training was given to a group of community partners and residents to ensure that the training was understandable and applicable to the community. Based on this feedback, the training was revised for the official sessions in the fall.

Genesee Health conducted trainings in August and October 2018. Each five-hour training day had two parts: The first was open to the community and focused on how to use filters correctly, how to communicate about filter use, and information about other environmental hazards; the second served as a train-the-trainer session to instruct CHWs and other participants how to communicate this information effectively. The two-part approach ensured a wider impact in the community by enabling both CHWs and community residents to benefit from the training. Each training offered interpretation in American Sign Language. One bilingual CHW was trained. Two CHWs received extra training to equip them to provide filter use training independently.

While the grantee was not able to track CHW home visits independently, it estimated that each CHW visited six homes per week. Even accounting for duplications, the high number of CHWs trained suggests that a high number of Flint residents could benefit from the CHWs' increased knowledge and capacity with the filters and other environmental hazards.

The grantee also began convening a working group to review publications, discuss, and come to a consensus on messages and protocols for water sampling and flushing. This effort is separate from the training but is another way in which community groups work more closely together to communicate clear messages in the wake of the water crisis.

Number of individuals trained: Between two trainings, 150 people were trained, 135 of whom were CHWs.

Changes in scores from pre- to post-test: Ninety-six percent of participants reported that they learned something new, and 98% found the training useful for their home visits.

Number and kinds of organizations reached for recruitment, community-based education: The grantee relied on a number of partnerships. The **Community Foundation for Greater Flint** instigated the grant process and connected Genesee Health with other environmental hazard experts. **Wayne State University** and the **University of Michigan** provided the technical training about filter usage. Flint Neighborhoods United provided feedback on the training content and format and served as the most direct connection to resident needs. Finally,

The diverse planning group offered input and development that would be impossible to re-create with only one organization. The satisfaction that the team was able to implement an idea that was discussed in a community meeting months before the grant availed itself was amazing. The entire project was thoughtful and community driven, making it a success in the minds of the planning team.

APPENDIX 2. Description of the 2018 Healthy Homes Workforce Development Projects

the **Greater Flint Health Coalition** shared information about the training with networks and professionals in Flint, ensuring that the audience of CHWs knew about and attended the training.

Description of use of paid, free, or social media used to publicize the project: Groups shared flyers electronically and posted about the trainings on social media. One local news station also reported about the first training.

MOUs or other agreements that will sustain the effort after the grant is completed: A group of students at the University of Michigan, one of the partner organizations in the project, has applied for a grant to create video trainings in American Sign Language and Spanish. These videos will be created with community input in a fashion similar to the initial training script. While not a formal MOU, the grantee also noted community groups now had access to the remaining filters and cartridges from a discontinued Michigan Department of Environmental Quality program that attempted to deliver them to every household. The grantee anticipates that the newly trained CHWs will assist in providing those resources to families who had not previously been able to access them.

Challenges encountered and how they were resolved: Because the trainings were designed to combine a few elements (technical filter use, communication protocols, and environmental hazards outside lead), the grantee found that attendees at the first session were confused about why the training followed that format. The administrators assessed this feedback and adjusted the second training to be clearer about the importance of all the elements. The grantee noted that this flexible approach to the curriculum helped to assure attendees received information that most helped their understanding and retention.

Our community is traumatized, distrustful, and cautious. Despite our attempts to be grounded in community need, it is impossible to gain the trust and credibility of the entire community. This was mitigated with our purpose of providing accurate information and allowing each resident to make their own decisions on what was best for their family.

Lessons learned:

- *Respect community concerns:* The grantee and partners anticipated challenges in convincing community members that the training and resources would be useful and responsive to their needs. Given the history of distrust associated with the lead in drinking water crisis in Flint, project leaders knew that remaining sensitive to community concerns and listening to residents about their needs would be critical. Piloting the training to a small group of residents and incorporating their feedback, as well as the ongoing partnerships with community groups, was a way to ensure that the training would be appropriate for the audience.
- *Find trusted community members to communicate messages:* The train-the-trainer model empowered the community by using trusted community members as sources of information.

GREEN|SPACES

Location: Chattanooga, Tennessee.

Type of organization: Local nonprofit, with a national nonprofit as a consultant.

Service area for the project: Chattanooga, Tennessee.

Project goals/objectives: Provide healthy housing workforce development training to three different audiences.

Main activities funded by the mini-grant: Three trainings were held. The first, in July 2018, had six energy efficiency professionals who conduct in-home inspections. The second, also in July 2018, had 12 attendees from a health clinic, health educational programs, and an insurance provider. The final training, held in September 2018, had 10 participants and trainers from a pre-existing grantee at-risk youth workforce development program in attendance.

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The grantee also had attendees report back after the trainings about how they had used the information in site visits. The energy providers conducted 25 home visits and reported that they saw the training had provided information they could incorporate in their feedback to clients. The second group of home health workers and students conducted 43 home visits and also received additional asthma-specific training. While the third group does not conduct home visits, they all committed to using the information in their own homes and with their contacts.

Number of individuals trained: Between the three trainings, 28 people across three different sectors were trained.

Changes in scores from pre- to post-test: The first group improved from an average score of 80% to 96% on the pre- and post-test. The second group improved from 81.83% to 94%. The third group did not take a pre-test but scored an average of 98% on the post-test.

Number and kinds of organizations reached for recruitment, community-based education: Multiple organizations were used for recruitment at the trainings. Attendees represented the following organizations: the parent organization, the **Tennessee Valley Authority**, a municipal utility program, advanced public health education, a healthcare clinic, and an insurance program.

In addition, the **Green & Healthy Homes Initiative**, in a consulting role, provided the training materials and administered the majority of the training.

Description of use of paid, free, or social media used to publicize the project: There was no need for paid, free, or social media during the grant period since trainees were recruited from partner organizations. The training was intended to build capacity for a future holistic healthy homes program to treat asthma.

MOUs or other agreements that will sustain the effort after the grant is completed:

- The organization and the **University of Tennessee at Chattanooga's Master of Public Health** program entered an affiliation agreement that will provide research opportunities for students and faculty in the healthy homes work that green|spaces continues to coordinate.
- **LifeSpring**, a community health clinic that performs in-home visits, **EPB** (Chattanooga's municipally owned utility), and the Tennessee Valley Authority have partnered with green|spaces to pilot a pay-for-success program where both LifeSpring's community health workers and EPB's energy auditors will coordinate on developing a scope of work to address home health issues.

Challenges encountered and how they were resolved:

- **Lack of community capacity:** Since **TennCare's** managed care organizations do not provide funding, there are no current programs for in-home health evaluation and intervention. This training helped to provide the organizational capacity necessary to build such a program. Because of the relationships built during the healthy home training provided by this grant, green|spaces, LifeSpring, and EPB partnered on a successful \$50,000 grant proposal to pilot a healthy home program through the Green & Healthy Homes Initiative. The team's ultimate goal is to provide the proof-of-concept to establish a pay-for-success program to invest in health and energy improvements for 550 homes in Chattanooga.

Lessons learned:

- **Partnerships:** The key to the success of this program were the partnerships built with key organizations such as EPB, LifeSpring, and the University of Tennessee Chattanooga to ensure that the workshops would be well attended by employees that are going to homes. This ensured that both the training goals were met and that green|spaces could track the number of home visits trainees made after the training was complete.

Hector Moreno, the trainer from Green & Healthy Homes with decades of experience, remarked that [the third training] was one of the best trainings he had ever done.

INDIANA HEALTHY HOMES ALLIANCE (IHHA) and IMPROVING KIDS' ENVIRONMENT (IKE)

Location: Indianapolis, Indiana.

Type of organization: Housing coalition and nonprofit housing development corporation.

Service area for the project: Marion County and Lake County, Indiana.

Project goals/objectives: To address the expected demand for community health workers (CHWs) trained in asthma and healthy homes issues that could be reimbursable by the state Medicaid program and other payers. Since the state had no asthma or healthy homes training programs for CHWs at the time of the grant application, the IHHA/IKE project filled this need by using evidence-based curricula on both topics from the **National Healthy Homes Training Center and Network** and the **Association for Asthma Educators (AAE)**.

Main activities funded by the mini-grant: The grant period included preparation and promotion for the trainings. Six in-person healthy homes trainings were held during June, August, and September 2018, followed by two webinars on asthma, and concluded with an in-person training on asthma. Each trainee also received a healthy homes kit that included a flashlight, humidity/temperature reader, and lead paint test swabs, as well as resource materials on asthma and healthy homes developed by IHHA and IKE.

Most of the trainees had not even heard of healthy homes, let alone had any knowledge of its principles and practices.

Number of individuals trained: Twenty-three participants completed the asthma training course and passed the exam to receive a certificate of completion, and 21 participants completed the healthy homes course and received a certificate of completion. During the grant period, an additional 34 staff members from **CareSource** and **Community Hospital East** were trained in related issues but did not receive the certifications that were funded by the grant.

Changes in scores from pre- to post-test: The pre-score average was 30%; the post score average was 80%. While the number of participants who had completed the follow-up survey was small, 42% of those surveyed reported using the asthma-related information from the training “occasionally” or more in their jobs, and 84% reported using the healthy homes-related information. Twenty-five percent reported that they had seen behavioral changes among their clients as a result.

Number and kinds of organizations reached for recruitment, community-based education: Fifteen organizations were reached for recruitment for the training, including the **Indiana State Department of Health**, environmental councils, regional conferences, networking meetings, nonprofit health organizations, and hospitals.

Description of use of paid, free, or social media used to publicize the project: No social media promotion was used for outreach. Recruitment was conducted through electronic and hard copies of flyers distributed to partner groups, conferences, hospitals, and health organizations. Training materials were available in English and Spanish.

MOUs or other agreements that will sustain the effort after the grant is completed:

- The **Indiana Department of Child Services**, Community Hospital East, **Community Wellness Partners**, **HealthVisions Midwest**, **Marram Health Center**, CareSource, and **ASPIN** now incorporate healthy homes-related training into their home visiting programs.
- An additional training is scheduled for February 2019.

Challenges encountered and how they were resolved:

- *Recruitment for training:* The greatest challenge was low registration for the trainings because the CHW responsibilities are not well defined in Indiana. IHHA/IKE speculated that individuals who might do the work expected of a CHW might not consider their activities as fitting this category, and thus not register for the training. IHHA/IKE later changed its marketing approach and opened the training to all positions, not only CHWs. Moreover, employers may have not been educated about the benefits of CHW use or

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the reimbursement through Medicaid. IHHA/IKE plans to conduct a second round of training in 2019 and hopes to have better attendance as the public and employers become more informed. IHHA/IKE has also developed a flyer to promote the training specifically to employers that explains that benefits of using CHWs as part of the home visitation role.

- **Time needed for training:** IHHA/IKE found that offering three choices of time and date for each webinar and two locations for the in-person trainings meant that CHWs did not have to lose multiple, sequential days of work in order to complete their training.
- **Training structure:** IHHA found it challenging to keep training costs low and offer a certificate of completion, because the use of established curricula came with restrictions on changes to content and approach. This resulted in additional expenses and longer training times. IHHA/IKE concluded they need to use a hybrid of two curricula to create a training that is most useful to their audience, as well as their own certificate to offer to those who complete the training.

Lessons learned:

- **Be mindful of scheduling conflicts:** IHHA/IKE learned it is best to offer the training at two different dates, giving attendees more flexibility to schedule to attend the training.
- **Training materials:** IHHA/IKE plans to edit the training curricula to include a dual curriculum, and IHHA will create its own certificate.

Despite the challenges, IHHA found the training to be a success and anticipates a second successful training in 2019.

MAGNOLIA MEDICAL FOUNDATION (MMF)

Location: Jackson, Mississippi.

Type of organization: Local nonprofit.

Service area for the project: The Mississippi Delta region and urban Mississippi.

Project goals/objectives: MMF conducted educational activities and exploratory research with Federally Qualified Health Centers (FQHCs) in Mississippi to determine needs to incorporate healthy homes services into community health workers' (CHWs) scope of services for rural and urban communities in Mississippi. Through "Lunch and Learn" sessions for FQHCs and community health organizations, agency leadership learned more about the benefits of using CHWs, as well as some of the healthy homes issues that their communities face. MMF's goal was also to provide training and general education for CHWs to use when working in the community.

Main activities funded by the mini-grant: MMF provided Lunch and Learn sessions for CHWs representing four FQHC administrators and one community-based program. The project also conducted an additional session for MPH students enrolled in an environmental health course. The sessions educated CHWs and healthcare professionals about the importance of healthy homes, how healthy homes services can fit into their clinic flow, and the importance of establishing memoranda of understanding (MOUs) with community partners to provide these services in the home.

Number of individuals trained: Thirty-five CHWs, healthcare professionals, and healthcare administrators participated in the Lunch and Learn sessions. Seventeen Master of Public Health (MPH) students participated in an additional educational session to provide background on healthy homes, how to develop and implement a program, and how to build relationships with affected communities.

Changes in scores from pre- to post-test: No pre/post assessments were conducted; however, 100% of participants evaluated after the presentations agreed or strongly agreed that they gained new knowledge and insights about healthy homes, and 100% of participants agreed or strongly agreed that healthy homes services should be included in community health center services.

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Number and kinds of organizations reached for recruitment, community-based education: MMF staff conducted outreach through meetings with the administration of three FQHCs and one community-based organization that employed CHWs. These meetings helped identify target populations in each health center that could benefit from a healthy homes project, such as children and youth, seniors, and mothers. Each organization then promoted the Lunch and Learn session and had those employees who worked in social services, such as CHWs and social workers, attend.

Description of use of paid, free, or social media used to publicize the project: MMF did not utilize social media to promote the Lunch and Learn sessions. It produced two materials for dissemination at meetings: an infographic for administrators on programmatic impact and a postcard to increase awareness of the importance of healthy housing. MMF designed the postcards to be culturally relevant and to address low literacy levels. It provided 75 copies of the postcard to each FQHC with which it has executed a MOU, as well as antibacterial hand wipes and 300 dust towels. CHWs from these organizations will provide the cards to clients as they do home visits. MMF will continue to provide the postcards to other organizations as MOUs are signed.

MOUs or other agreements that will sustain the effort after the grant is completed: By the end of the grant period, two MOUs were signed, and an additional MOU has been presented to the administration of its organization.

Challenges encountered and how they were resolved:

- **Need for capacity building:** Many organizations were interested in healthy homes projects but concluded they currently did not have the capacity to undertake the work. The organizations identified several key barriers: (1) how to get into the home, (2) how to bring up with conversation with clients, (3) where to find resources, and (4) where to report issues in the home. MMF plans to continue relationships with these organizations to provide additional support and resources.
- **Final Lunch and Learn:** The final Lunch and Learn with administrators from the FQHCs and community-based organizations where MMF planned to disseminate materials and finalize all MOUs had to be cancelled due to difficulties coordinating with administrators' schedules. MMF decided to schedule follow-up one-on-one meetings to disseminate materials and finalize MOUs.
- **Follow-up surveys:** MMF did not receive a return of all of their evaluation surveys. The organization concluded it was easier to receive feedback by setting up follow-up meetings after the Lunch and Learn sessions.

Lessons learned:

- MMF learned that the most valuable tool that it was able to leverage was the strong relationships it has built in Mississippi, as well as its reputation as an organization.
- The project has built momentum. Having a variety of participants in the Lunch and Learn sessions helped to identify areas of deficiencies and how organizations could incorporate healthy homes work into staff roles.

METROPOLITAN TENANTS ORGANIZATION (MTO)

Location: Chicago, Illinois.

Type of organization: Local nonprofit.

Service area for the project: Chicago, Illinois.

Project goals/objectives: The primary goal of the *Healthy Homes Practitioner* trainings was to equip and educate community health workers (CHW) with the tools to assist the community to identify and address home based health hazards, use preventative exposure methods, and gain access to support services to remediate unhealthy living

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conditions. Another goal of the project was to increase the number of CHWs working in healthcare and hospital organizations that were familiar with healthy homes concepts.

Main activities funded by the mini-grant: MTO held four *Healthy Homes Practitioner* trainings from August through October 2018. Trainings occurred at colleges, health, and housing-related organizations.

Number of individuals trained: Seventy-six healthcare professionals completed the training, and 34 of those trainees were certified health workers or currently enrolled in CHW programs. Participants came from 16 communities across Chicago and five suburban Cook County neighborhoods. The number trained exceeded the projects' expectations.

Changes in scores from pre- to post-test: The pre-test average score was 80; attendees averaged 89% on the post-test evaluation. In addition, 89% of trainees indicated that their level of knowledge of the healthy homes principles had improved greatly at the conclusion of the training.

Number and kinds of organizations reached for recruitment, community-based education: MTO held four public events with 80 attendees. The organization recruited from its current healthcare partners, which included a hospital and a hospital center. Recruitment also occurred through local health systems, four public meetings, housing expos, community fairs, and health fairs. Collectively, the recruitment and outreach efforts resulted in an estimated 200 requests for information.

Description of use of paid, free, or social media used to publicize the project: Social media was used for outreach. MTO estimated that it reached 300 interested parties via this mechanism. It also recruited through flyers and brochures promoting the trainings.

MOUs or other agreements that will sustain the effort after the grant is completed: Although no formal agreements were signed, MTO established three new organizational relationships with the **City Colleges of Chicago**, **Housing Opportunities for Women**, and **ACCESS Community Health Network**, which has over 35 clinics in the Chicagoland area.

Challenges encountered and how they were resolved:

- **Scheduling:** Initially, there was an issue with coordinating the trainings to coincide with the hospitals and health facilities workers' schedules. MTO planned to hold trainings during the summer months but found it difficult to coordinate agency approvals and accommodate workers' summer schedules. MTO resolved the scheduling conflicts by moving two of the trainings planned for the summer to the fall.

Lessons learned:

- **Evaluation:** Initially, MTO did not receive the number of completed evaluations via direct responses to a follow-up SurveyMonkey poll that it had expected. It increased the number of completed evaluations by incorporating the pre- and post- test into the curriculum, agenda, and training time. By adding the evaluation to the training materials, MTO also began a new process for summarizing evaluation data by entering attendees' responses into a SurveyMonkey database at the close of the training. This database can be used for future trainings.

Attending this training has better equipped me to educate patients on having healthy homes.

"I'm now trained on more knowledge than I once knew. I now know the triggers of asthma in the home.

QUALITYPRO

Location: Fairfax, Virginia.

Type of organization: National nonprofit organization administered by the Foundation for Professional Pest Management.

APPENDIX 2. Description of the 2018 Healthy Homes Workforce Development Projects

Service area for the project: United States and Canada.

Project goals/objectives: QualityPro sought to produce a science-based, commercially viable, and effective public health certification for the pest management industry that would result in healthier homes nationwide. As a result of these certifications, pest management professionals would be equipped with standards they can use to plan their clients' pest management services. Firms that apply for certifications enable their employees to access a standardized national exam and study guide.

Main activities funded by the mini-grant: QualityPro leveraged mini-grant funding with other funding sources to creation of marketable certification symbols, convene a task force to write standards and exam certification questions for rodent and mosquito services, work with consultants to draft a core study guide for both exams, and present at and train 20 individuals at the **PestWorld 2018** conference. During this training, attendees learned how to pursue the public health credential, received some training on public health pests and a sample of test questions, and had the opportunity to have their questions answered. The exams will be released in 2019.

Number of individuals trained: Twenty pest management professionals completed the training during the presentation at PestWorld 2018.

Changes in scores from pre- to post-test: No pre- and post-tests were conducted.

Number and kinds of organizations reached for recruitment, community-based education: QualityPro presented at two of QualityPro's board of directors meetings, attended by over 40 industry leaders. It reached 32 pest management firms at the PestWorld 2018 conference. In addition, 22 different organizations were represented on the task forces.

Description of use of paid, free, or social media used to publicize the project: Social media was the primary method of outreach. QualityPro's social media campaign reached 26,285 unique people, and included 46 posts on Facebook and Twitter that received 7,749 impressions and 158 engagements. Recruitment was also conducted via promotional flyers to promote the certifications courses. The certification program was also featured in three magazines for ad placement, press releases, articles, and trade publications. At the conference, QualityPro showcased a **five-minute video** on the credential; this remains available on the QualityPro website.

MOUs or other agreements that will sustain the effort after the grant is completed: Though no formal agreements were signed, 32 companies completed a statement of interest form at the PestWorld 2018 conference. By the end of the grant, 86 U.S. and Canadian companies had submitted statements of interest in the certification. In the U.S., these expressions of interest came from companies in 26 states.

Challenges encountered and how they were resolved:

- *Scheduling:* QualityPro had difficulty scheduling and completing tasks during the summer months. The project lead and other key players either went on leave or left the company. QualityPro worked to continue meeting deadlines by hiring two consultants to carry forth the work.
- *Time constraints:* Writing the study guides and exam questions to cover wide-ranging topics took significant time. Since QualityPro facilitated a task force and three work groups with 31 people from 22 organizations to write standards and exam questions for rodent and mosquito services, coordination and completion of the assignments took more time than initially anticipated.

Lessons learned: To facilitate development of certification programs for industry-wide adoption, consider:

- *Assurance that the industry has identified the need:* The decision to initiate the certification began in 2016 at the **National Pest Management Association's** strategic planning summit. QualityPro's board of directors identified public health credentials as a priority, but the areas for certification were determined through extensive consultation with pest control companies.
- *Stakeholder buy-in:* In addition to creating a taskforce with representatives from multiple pest management companies, QualityPro met with the **Entomological Society of America** and the **American Mosquito Control Association**.

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- *Credible leadership, a chaired task force, and manageably sized work groups.* QualityPro identified work groups of six people and a task force of 11 as manageably sized. The task force kept the “big picture” in mind while delegating activities to work groups and consultants.
- *A public relations firm for program promotion.* Generating interest in a credential for an audience of busy professionals required skills, messages, and multiple contacts best suited to the activities professional marketers.
- *A realistic timeframe for activities.* Volunteers’ time constraints should be acknowledged and addressed when asked to participate on task forces and work groups. This may mean very specific assignments and deadlines, as well as meetings scheduled months in advance. Even the timing of a credential’s launch requires an understanding of the business cycle and interests of the intended audience. Since October began the relatively slow period for pest management professionals’ activities, QualityPro timed its announcement to coincide with the PestWorld annual meeting.
- *A dedicated staff person.* The development of a credential has many moving parts and many players. A dedicated staff person can assure that activities move according to plan.

REVITALIZE COMMUNITY DEVELOPMENT CORPORATION

Location: Massachusetts.

Type of organization: Local nonprofit.

Service area for the project: Boston, Cambridge, Dorchester, Fitchburg, Springfield, West Springfield, Worcester, Massachusetts; and New Britain, Connecticut.

Project goals/objectives: The primary goal of the *Healthy Homes: Assessment and Interventions* course was to help students learn new skills to conduct basic healthy homes assessments and resident interviews, develop strategies for assessing the health-related hazards in homes, and develop action plans.

Main activities funded by the mini-grant: Main activities included the *Healthy Homes: Assessment and Interventions* training, held from October 29-31, 2018, at the Fairfield Inn in Holyoke, Massachusetts. The purpose of the training was to help students learn the skills to conduct basic healthy homes assessments and develop a comprehensive action plan. Revitalize Community Development Corporation (Revitalize CDC) was awarded additional funding to continue the project and looks forward to expanding the program.

Number of individuals trained: Fifteen students were trained: nine females and six males.

Number and kinds of organizations reached for recruitment, community-based education: Outreach was conducted through collaboration with partner organizations, e-newsletters, meetings, promotion at advisory councils, medical centers, and medical schools, as well as website promotion. Revitalize CDC estimates that it reached 1,610 through these presentations and materials. In addition, three news outlets covered the Baystate Health grant that will fund the projects ongoing efforts.

Description of use of paid, free, or social media used to publicize the project: Social media was used for outreach. Recruitment was also conducted through electronic and hard copies of flyers distributed to partner groups.

MOUs or other agreements that will sustain the effort after the grant is completed: An agreement with the **Massachusetts Health Policy Commission** was signed with **Baystate Health**, which also includes additional partners. Revitalize CDC secured a formal agreement as the lead housing organization with the **Public Health Institute of Western Massachusetts**, Baystate Health’s Pulmonary Rehabilitation Department, in addition to **Trinity Health of New England (Mercy Medical Center)**, **Springfield Partners for Community Action**, and the local ACOs to work in collaboration with their community health workers throughout Western Massachusetts.

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Challenges encountered and how they were resolved:

- **Training:** There was a challenge in securing a home to conduct a site visit as a part of the training. Revitalize CDC was able to overcome this challenge by working with the **City of Springfield** to secure a foreclosed property.
- **Funding:** Revitalize CDC also found that they needed more funds to carry out the program. Revitalize CDC exceeded the \$7,500 and were able to resolve this challenge through securing additional sponsorships.

Lessons learned:

- **Training:** To be mindful of the costs. The expense to rent the training space, materials, costs of the trainer, and logging expenses quickly add up.
- **The importance of building partnerships:** Revitalize CDC notes the importance of creating impactful partnerships. These partnerships are able to assist in promoting the training, providing materials, and partnerships that can also help to carry forth the project at the close of the grant period.

THE HEALTH COUNCIL OF EAST CENTRAL FLORIDA, INC. (HCECF)

Location: Winter Park, Florida.

Type of organization: Local nonprofit.

Service area for the project: Seminole County, Florida.

Project goals/objectives: Train community health workers (CHWs) in healthy housing issues so that they can receive referrals from a pre-existing team of community paramedics. CHWs will then conduct home visits to address the healthy housing issues.

Main activities funded by the mini-grant: HCECF provided training and covered salaries and mileage for 10 CHWs to conduct home visits based on referrals from two community paramedics. Training involved an online course and ride-alongs with a community paramedic. Seven home visits were completed after the training, and three of these involved CHWs. HCECF created a referral form for the paramedics to give to the CHWs when a home health hazard was identified. CHWs also curated community resources to be able to conduct their own referrals to home repair organizations after home visits. During the grant period, HCECF held two community coalition meetings, engaging community leaders and organizations to discuss opportunities for collaboration.

Number of individuals trained: 10 CHWs were trained.

Changes in scores from pre- to post-test: The 10 trainees scored an average of 44% on the pre-test, increasing to 87% for the post-tests.

Number and kinds of organizations reached for recruitment, community-based education: Twenty-eight community leaders attended a July coalition meeting, and 22 attended an October meeting to discuss community health issues identified in the community health improvement plan, as well as the healthy housing grant program and other community surveys. Organizations represented included two area hospitals, public health workers, and community benefit organizations. The coalition added 12 additional members during the grant period.

Referrals for the CHWs were received from the community paramedics; **HealthLink**, a local county-funded health network; a community screening program at the **Florida Department of Health**; **Kassy Home Health**, a Medicare-qualified home care agency; **FirstLight Home Care**, a private-duty home care agency; and **Seminole County Community Services**.

Description of use of paid, free, or social media used to publicize the project: Social media was used to promote the program; a newspaper article was also placed with a reporter at the *Orlando Sentinel*.

MOUs or other agreements that will sustain the effort after the grant is completed:

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- The health department has now hired its own community paramedic to work with CHWs.
- Additional funds from the Florida Hospital Community Health Improvement Council have been secured to continue the program for the next 13 months. This next phase of the project will include an additional staff member's participation in tracking and coordinating all referrals, both to and from the CHWs.
- Beginning November 2018, HCECF has received a yearlong grant from the **Florida Asthma Coalition** to expand its community paramedicine program to children. A pediatric critical care community paramedic will conduct home visits for children with frequent hospital visits for asthma; the paramedic will provide education and home assessments and track whether hospital visits decrease following the intervention. This program will focus on Osceola County and brings with it the opportunity to train more CHWs in the future.
- The coalition that came together in July and October has agreed to continue quarterly meetings to improve their collective impact.
- HCECF will continue to maintain the updated community resource directory with information on home repair services as part of its resources and referrals references for the community.

Challenges encountered and how they were resolved: The following challenges were reported and dealt with during the grant period:

- **Low referral volume:** The initial plan was for two community paramedics to maintain a case load of 30 patients between them. In September 2018, one of the paramedics left unexpectedly due to health issues, and the remaining paramedic could cover no more than 15 patients at a time. This dropped the number of referrals to the CHWs under the expected amount. To compensate, partnerships were formed with the other organizations listed above to provide referrals to the CHWs from other sources.
- **Lack of home repair resources:** As CHWs were being trained, limitations in the amount of expertise and home repair services they could provide became clear. To ensure services would be able to be directed to the patients, CHWs created a resource directory of home repair services in the area to which they would direct referrals.

Lessons learned: Some of the lessons learned included:

- **Include ride-alongs with the CHW training:** The CHWs were able to shadow the community paramedics on a patient visit, which gave them some contextual experience with what the home visits are like and provided background for the referrals they would be receiving.
- **Prepare and distribute resources early:** Some of the resources created for the program were identified after the grant period had started. Specifically, the creations of the resource directory and the referral form were early changes made to the project plan.
- **Identify other referral partners:** While HCECF was able to adapt to the loss of one community paramedic, a lesson learned for future projects is to establish referral relationships with other organizations from the start of the program.
- **Opportunities for other partnerships:** The implementation of the grant illuminated other opportunities for complementary work. Specifically, the project highlighted a need for funding that would cover the home repairs that result from CHW referrals. It also highlighted the need for a community paramedic dedicated to working with CHWs.

**APPENDIX 3.
2018 MINI-GRANT SCORING RUBRIC AND
PRIORITIZATION SUMMARIES**

Criteria	0 Applicant does not address this aspect or does not meet the criteria at all.	1 Criteria addressed, but only weakly.	2 The applicant partially satisfies some criteria.	3 The applicant satisfies most of the criteria.	4 The applicant satisfies the criteria, but without distinguishing or exceptional factors.	5 The applicant strongly meets or exceeds the criteria and/or articulates some exceptional or distinguishing factors.
1. Need	<ul style="list-style-type: none"> No identification of gap in healthy homes services No attribution of gap to healthy homes workforce No description of how the project will fill this gap No statement of negative effects if project is not funded 	<ul style="list-style-type: none"> Minimal identification of gap in healthy homes services No or minimal attribution of gap to healthy homes workforce Description of how the project will fill this gap is missing or lacks details No or minimal statement of negative effects if project is not funded 	<ul style="list-style-type: none"> Identification of gap in healthy homes services present, but lacks detail Attribution of gap to healthy homes workforce present, but lacks detail Description of how the project will fill this gap included, but lacks detail Minimal statement of negative effects if project is not funded 	<ul style="list-style-type: none"> Detailed description of gap in healthy homes services Attribution of gap to healthy homes workforce present, but lacks detail General description of how the project will fill this gap Minimal statement of effects if project is not funded 	<ul style="list-style-type: none"> Detailed description of gap in healthy homes services Attribution of gap to healthy homes workforce with supporting data Detailed description of how the project will fill this gap General statement of negative effects if project is not funded 	<ul style="list-style-type: none"> Clear and persuasive identification of gap in healthy homes services with supporting data Clear and convincing attribution of gap to healthy homes workforce with supporting data Clear and detailed description of how the project will fill this gap Convincing statement of negative effects if project is not funded
2. Work plan	<ul style="list-style-type: none"> No statement of objective No plan for implementation No discussion of experience or expertise with similar projects No budget justification provided 	<ul style="list-style-type: none"> Objective missing or poorly stated Minimal plan for implementation Little experience or no expertise with similar projects Budget justification is missing or poor 	<ul style="list-style-type: none"> Statement of objective present Plan for implementation present, but lacks detail Little experience or no expertise with similar projects Budget justification is missing or poor 	<ul style="list-style-type: none"> Clearly stated objective, no timeframe for accomplishment Detailed plan for implementation Experience or expertise with at least one similar project Budget justification is present, but lacks detail 	<ul style="list-style-type: none"> Clearly stated objective and timeframe for accomplishment Sound and detailed plan for implementation Experience or expertise with at least one similar project Budget is well-justified and reasonable 	<ul style="list-style-type: none"> Clearly stated objective and timeframe for accomplishment Sound and detailed plan for implementation Significant experience or expertise with similar projects Budget is well-justified and reasonable This is a new or innovative planned event/activity (community has gone beyond its routine events/activities)
3. Impact	<ul style="list-style-type: none"> No information on importance of the issue within the community No description of how to measure impact No description of potential follow-up actions 	<ul style="list-style-type: none"> Minimal information on importance of the issue within the community Minimal description of how to measure impact Minimal description of potential follow-up actions 	<ul style="list-style-type: none"> Some information on importance of the issue within the community, no supporting data Description of how to measure impact present, specific measures not included Minimal description of potential follow-up actions 	<ul style="list-style-type: none"> Some information on importance of the issue within the community with supporting data Description of how to measure impact present, specific measures not included Plan for follow-up actions lacks detail 	<ul style="list-style-type: none"> Clear rationale demonstrating importance of the issue within the community with supporting data Description of how to measure impact present, specific measures included Detailed plan for follow-up actions 	<ul style="list-style-type: none"> Clear rationale demonstrating importance of the issue within the community Clear, specific, and persuasive impact measures included Multiple methods of measuring impact included Detailed plan for follow-up actions
4. Relevance	<ul style="list-style-type: none"> Relevance of project to developing healthy homes workforce not discussed Relevance to increasing access to healthy homes services not discussed Plans for future collaborative partnerships not discussed 	<ul style="list-style-type: none"> Project activities have little relevance to developing healthy homes workforce Project has little relevance to increasing access to healthy homes services Minimal information on plans for future collaborative partnerships 	<ul style="list-style-type: none"> Project activities have some relevance to developing healthy homes workforce, but lack details Project activities have some relevance to increasing access to healthy homes service, but lack details Minimal information on plans for future collaborative partnerships 	<ul style="list-style-type: none"> Project activities have some relevance to developing healthy homes workforce, but lack details Project activities state relevance to increasing access to healthy homes service, but lack details Some information on plans for future collaborative partnerships 	<ul style="list-style-type: none"> Primary focus of activities is to develop healthy homes workforce Detailed strategies to increase access to healthy homes services Clear goals for future collaborative partnerships 	<ul style="list-style-type: none"> Primary focus on developing healthy homes workforce with targets for increase stated Detailed strategies to increase access to healthy homes services Clear and convincing goals for future collaborative partnerships Project will support collaboration with a new partner
5. Bonus Point	<p>1</p> <p>Project has clear impact of bringing CHWs into the local workforce OR project occurs in a Kellogg target community (Michigan, Mississippi, New Mexico, or New Orleans)</p>					

Healthy Homes Workforce Development Mini-Grants

Selection Committee Meeting

May 24, 2018

National Center for
HEALTHY HOUSING

Today

Discuss

- Of the top 10 tier, do we have an appropriate mix of:
 - Geography
 - Organizations with different capacity
 - Types of organizations/focus of organizations
 - Focus of proposed work
- Are there any applicants in the top 10 that shouldn't be?
- Are there lower-ranked applicants that should be in the top 10?

National Center for
HEALTHY HOUSING

Overview of review process

29 applicants from 22 states

Applicants rated out of 21 points on criteria related to:

- Demonstrated need (5 points)
- Clarity of work plan (5 points)
- Potential impact (5 points)
- Relevance (5 points)
- Bonus point: CHWs and/or Kellogg target community (1 point)

Other criteria to consider in final selections:

- Appropriate mix of applicants (e.g., geographic mix, local community capacity, type of organization, focus area, etc.)

National Center for
HEALTHY HOUSING

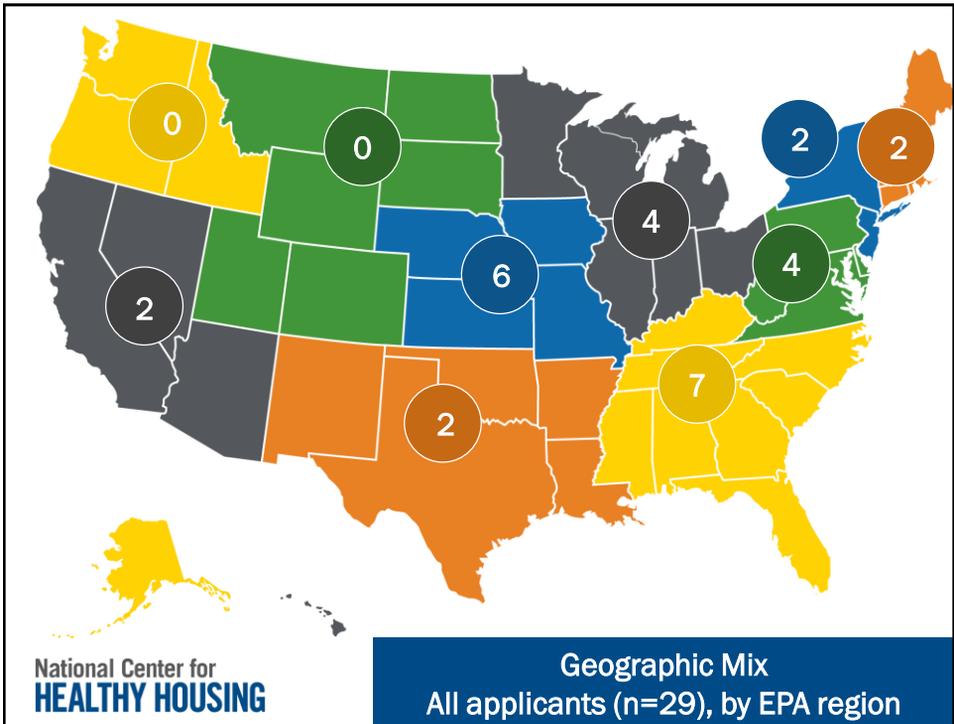
TOP 10

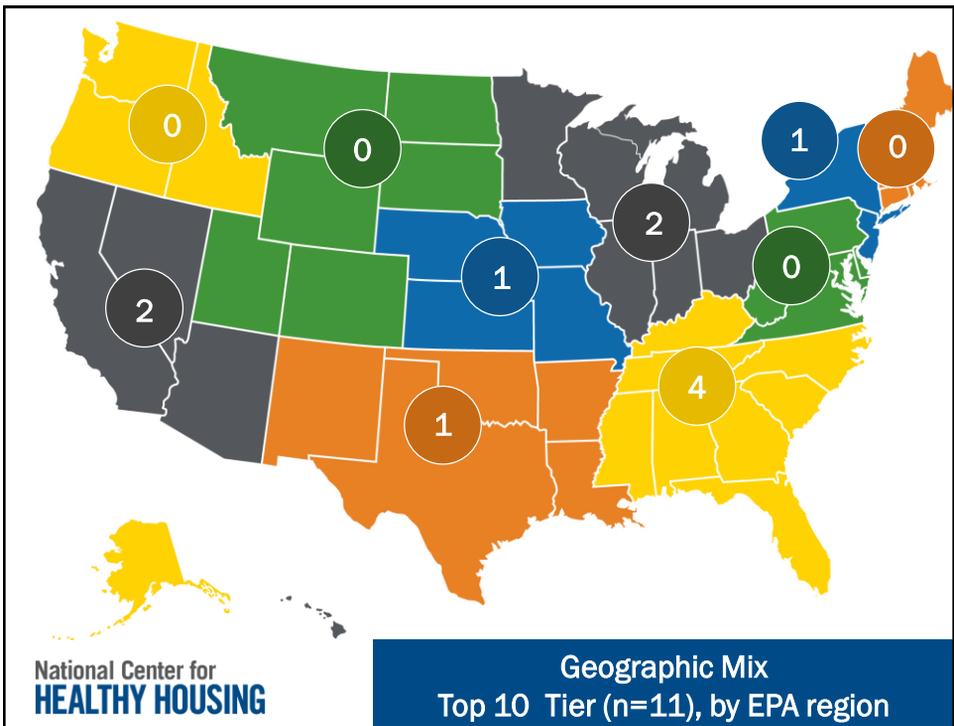
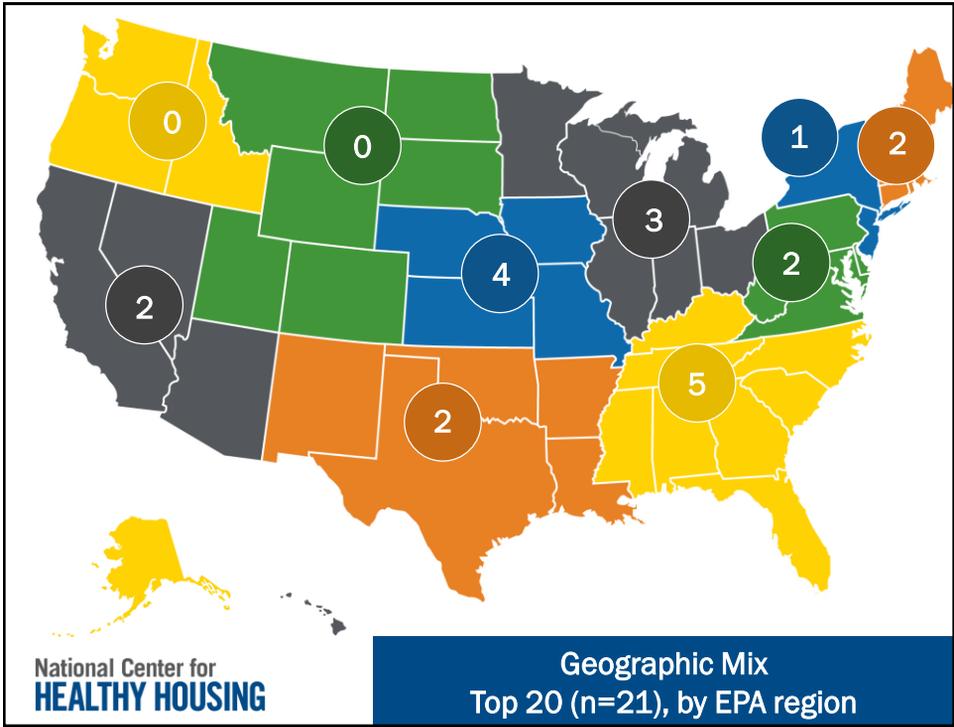
**11 applicants
with scores of
17.7 or higher**

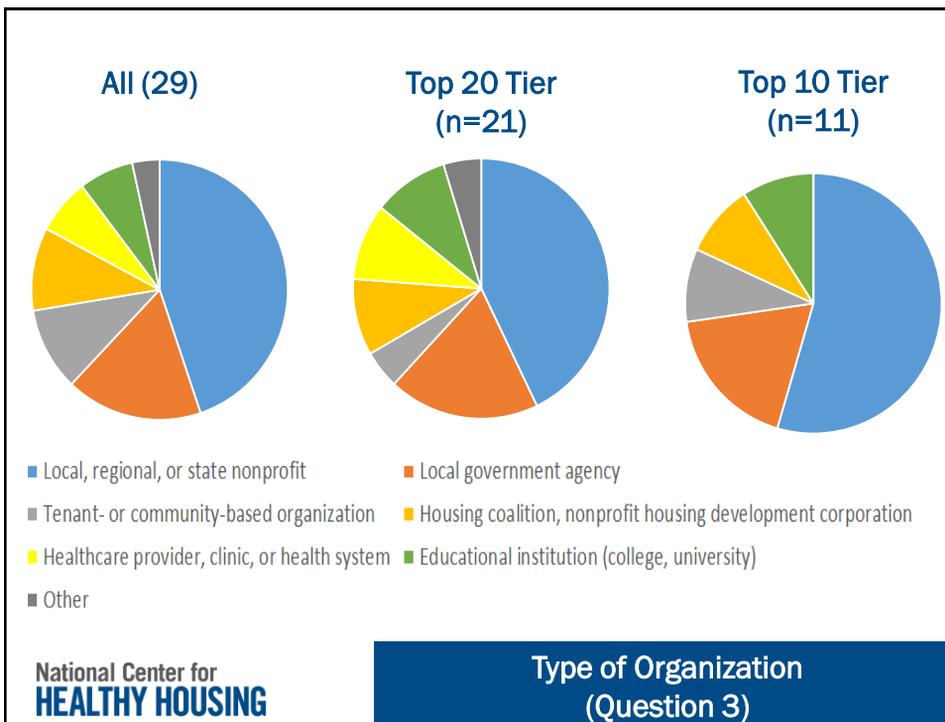
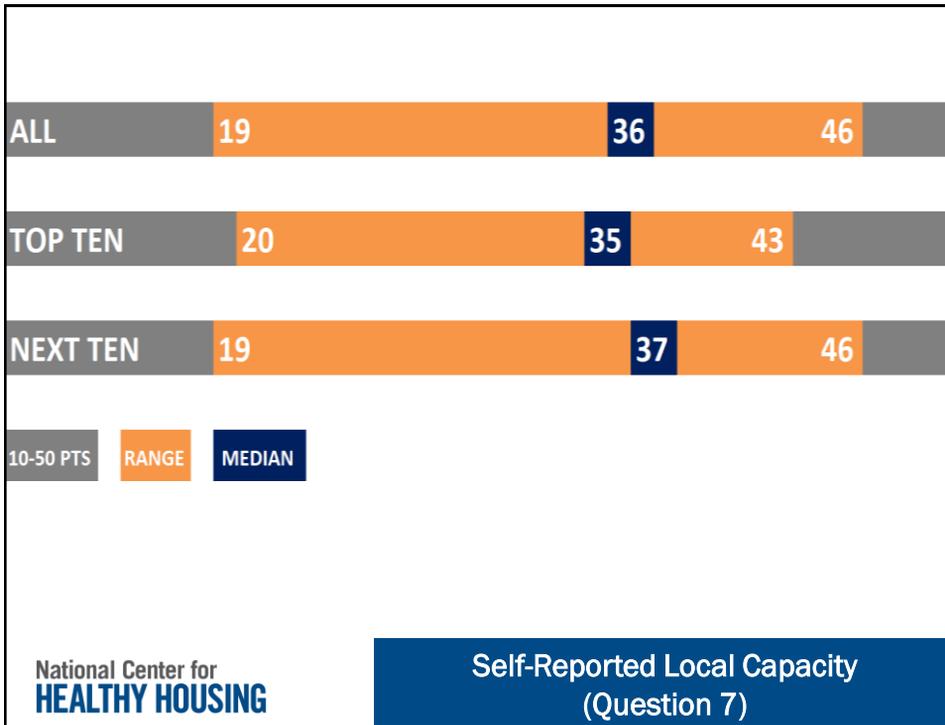
TOP 20

**21 applicants
with scores of
15.0 or higher**

National Center for
HEALTHY HOUSING







Today

Discuss

- Of the top 10 tier, do we have an appropriate mix of:
 - Geography
 - Organizations with different capacity
 - Types of organizations/focus of organizations
 - Focus of proposed work
- Are there any applicants in the top 10 tier that shouldn't be?
- Are there lower-ranked applicants that should be in the top 10?

National Center for
HEALTHY HOUSING

TOP 10

TOP 20

11 applicants with scores of 17.5 or higher

9 applicants with scores of 17.0 or higher

FINAL 10 AWARDS

National Center for
HEALTHY HOUSING

After today...

Finalists will be notified this week and MOU/contracts will be initiated

Unsuccessful applicants will be notified by May 30, 2018

- **Connected to tools and resources and potentially some light technical assistance**

National Center for
HEALTHY HOUSING

APPENDIX 4.
2018 GRANTEE INFOGRAPHICS

HEALTHY HOMES INITIATIVE

Magnolia Medical Foundation

What is the project?



Exploring avenues for integrating healthy homes services into the scope of work of Community Health Workers (CHWs) and other social services personnel at Federally Qualified Healthcare Centers.

Why are we doing it?

Because we believe that healthy homes create healthy families and healthy families create healthy communities.



4

lunch and learn sessions at:



3 FQHCs



1 Health Dept. Program

What have we done?



Who did we educate?



- ✓ 9 CHWs
- ✓ 8 Administrative staff
- ✓ 7 Social services providers
- ✓ 7 Healthcare professionals
- 3 Unidentified professions

What did we learn?

- ✓ Access to resources is critical
- ✓ Strategies to address housing are necessary
- ✓ Culturally appropriate messaging is needed
- ✓ Funding is needed to sustain programs



What is next?



Increasing awareness through information dissemination
Resources and referrals
Strategy development
Technical assistance

Support for this project was provided through a contract between the W.K. Kellogg Foundation and the National Center for Healthy Housing (NCHH). The contents of this document are solely the responsibility of the authors and do not necessarily represent the official views of the W.K. Kellogg Foundation or NCHH.



Hawaii Healthy Homes Training

Honolulu, July 2018

Summary of Pre/Post Training Evaluation Findings



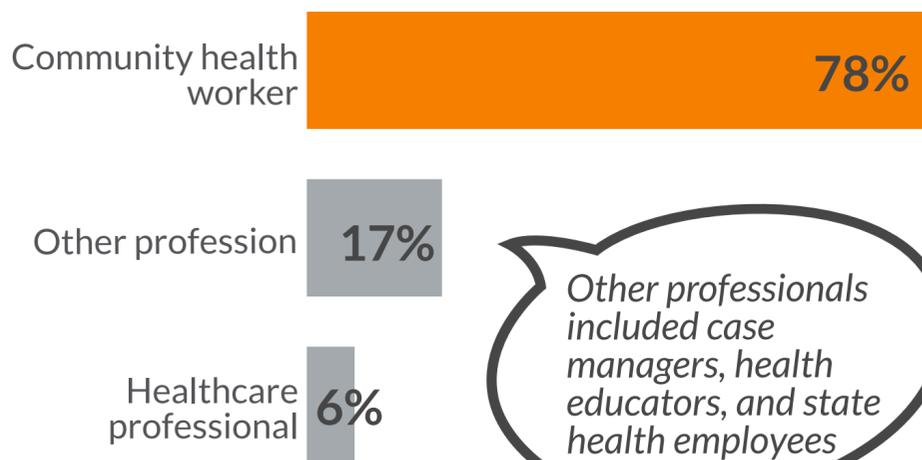
Participant Characteristics and Feedback

18 participants completed the healthy homes training in Honolulu.

42

Average age of training participants

Over three-quarters of participants were community health workers.



Other professionals included case managers, health educators, and state health employees

Participants came from many ZIP codes, with the greatest representation from **96792**.



4 participants from ZIP code: 96792

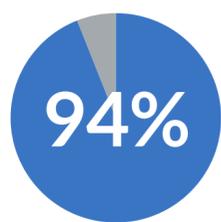


4 participants from ZIP code: 96707



11 remaining participants from ZIP codes: 96706, 96718, 96740, 96744, 96763, 96795, 96817, 96819, 96825

Percent of participants reporting the training was **effective** or **very effective** at teaching these concepts:

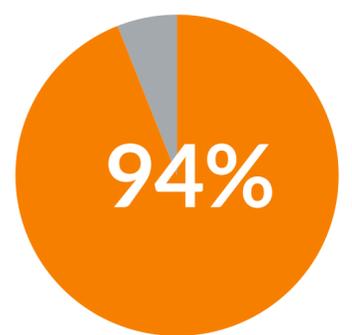


Indoor air quality pollutants



Asthma and chronic lung disease

Participants **agree** or **completely agree** they would recommend this training to others!



Participants provided positive and constructive feedback about the training and trainers.

Participants thought the training was informative.

I absolutely learned a lot and appreciate the bag of products to help with visualizing for our clients.

Great training and great teacher. I learned a lot of new things.

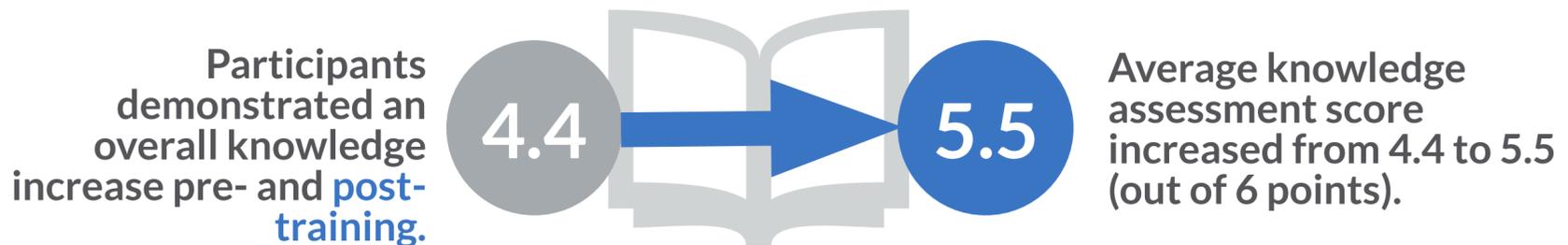
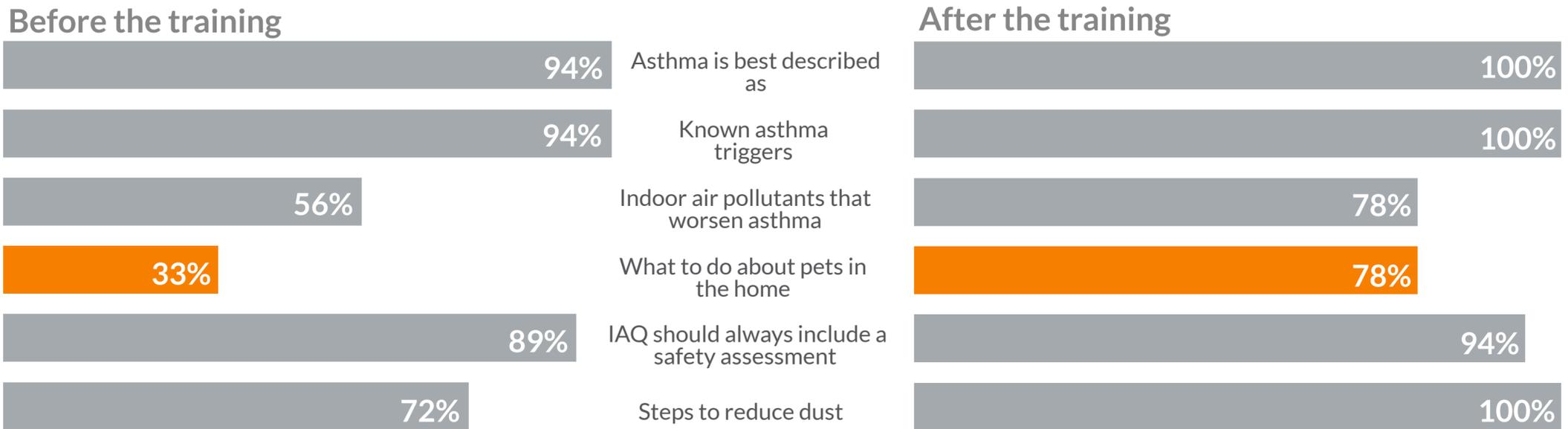
Participants would have liked more emphasis on case studies.

More time to discuss and analyze the case studies.

Would like to see more practical case studies.

Knowledge and Confidence Change

Participants answered a series of six knowledge questions before and after the training. The percent answering correctly increased for each question. Knowledge of **what to do about pets in the home that trigger asthma** improved the most.



After the training, participants rated their confidence on a scale of 1 - 10 for seven items and reflected back on their confidence prior to the training. Average **post-training confidence** improved for every item.

