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Overview

Background

The Rush Center for Urban Health Equity (CUHE) under the Department of Preventive Medicine at Rush University Medical Center was established in 2010 through a $10 million grant from the National Institutes of Health. Under the NIH’s nation-wide initiative to alleviate health disparities, the Center is conducting rigorous behavioral intervention clinical trials by partnering with health professionals, researchers, community members, and the greater public to reduce health inequities in heart and lung diseases. The clinical trials will investigate heart failure, depression, metabolic syndrome, and pediatric asthma with co-morbid obesity with an emphasis on the role of stress in the disease process. By testing innovative interventions across the spectrum from children to the elderly, the Center aims to improve health outcomes and quality of life. The Center also seeks to empower underserved communities to become active participants in developing interventions through education and training. A goal of the center is to bring together researchers, behavioral scientists, primary care providers, medical specialists, and the community with a shared vision and passion to eliminate the health disparities that affect residents of America’s cities, in particular low-income persons of color. The Rush Center for Urban Health Equity seeks to partner with underserved communities and to develop, conduct, evaluate and sustain rigorous multi-level interventions to reduce disparities in cardiopulmonary diseases. The Rush Center for Urban Health Equity seeks to partner with underserved communities and to develop, conduct, evaluate and sustain rigorous multi-level interventions to reduce disparities in cardiopulmonary diseases.

This training manual has been created to aid in the training of Community Health Workers (CHWs). CHWs, also known as health outreach workers, health advisors, and promotores de salud have been a part of health promotion and disease prevention efforts in the US for many decades. The use of CHWs has increased in the last few years. In 2005, there were more than 121,200 CHWs in the United States; up from an estimated 86,000 in 2000.¹ CHWs work almost exclusively in community settings, acting as a bridge between residents and healthcare providers. The CHWs serve as liaisons between health service providers and the community. CHWs typically provide health education, information, assistance with services, and build individual and community capacity for health.¹ Research has shown positive associations between CHW interventions and improved community health, particularly in the areas of childhood immunization, some infectious diseases, and breastfeeding promotion.²-³

Successful CHWs have special qualities. They know their communities well. They are dedicated to improving the life of their community. They enjoy teaching others, feel
comfortable in front of a group, and know how to work with a group. In the United States, CHWs help to meet national Healthy People goals by conducting community-level activities and interventions that promote health and prevent diseases and disability. CHWs are trusted and respected members of the community. They provide an important service by establishing and improving relationships between these professionals and members of the community. As community health educators and role models, CHWs promote, encourage, and support positive, healthful self-management behaviors among their peers. They have the ability to strengthen their community’s understanding and acceptance of medical care.

The CHW model is limited by inconsistencies in CHW training. While many CHW curriculums can be found at local universities and agencies, no formal CHW curriculum or certification exist which results in tremendous variability in the existing CHW curriculums. Most focus on knowledge, but it is behaviors that CHWs typically target. Many curriculums use didactic teaching methods while CHWs typically work one-on-one or in small groups with their clients. The Rush Center for Urban Health Equity has developed specialized training curriculums in a number of disease areas including pediatric asthma, pediatric obesity, and heart failure. These all contain the same disease non-specific base—self-management skills (problem solving, social support, self-monitoring, environmental restructuring, and action planning). These skills are taught using popular education methods and then incorporated into target diseases. CHWs practice these skills in their own lives and in structured role plays. They are assessed on their skills during training, and then monitored when in the field to continually reinforce the self-management skills with their clients and in their own lives. The impact of CHWs under this rigorous training and maintenance protocol is currently under investigation.
Pedagogy

We recommend CHW trainings use Paulo Friere’s critical pedagogy or popular education model in order to provide a curriculum for people of varying literacy levels, languages, and cultures. Friere’s education model was designed with disenfranchised people of color with low literacy levels in mind. It differs from traditional education and medical education models because it places emphasis on high levels of participation, learning through people’s experience and the lack of distinction between the teacher and learner. The model and the modules in the curriculum utilize minimal lectures, brainstorming exercises, self-discover learning exercises, and role playing to facilitate learning.

The popular education model has been used in other CHW training programs. La Palabra es Salud, a comparative study of the effectiveness of popular education vs. traditional education models in CHW trainings found that “popular education can help participants develop a deeper sense of empowerment and community and more multifaceted skills and understandings, with no accompanying sacrifice in the acquisition of knowledge”. Project MATCH (Mexican American Trial for Community Health Workers), a clinical trial to test the effectiveness of a promotora-based intervention for Mexicans with diabetes, found similar results in their evaluation of skills acquisition among its CHWs.
Curriculum

The curriculum is intended to be delivered to groups. We recommend group sizes of 10-15 adults. We typically train more people than we intend to hire. One reason is because it provides trained back-up staff to replace CHWs that leave the project. The other reason is because this type of basic education is meaningful and useful even if it does not directly translate into employment. We typically do not announce who we will hire until after the training is completed. This helps with attendance and inspires full participation. All trainees who complete the training should receive certificates and instructions for how to report the training on their resumes.

We implemented the curriculum in multiple stages. The initial stage is intended to provide the basic CHW training on the target disease and intervention delivery. The second stage is to provide more in-depth training for the CHWs as they prepare to enter the field. We deliver the second stage training only to those we plan to send into the field. This includes training on home visitation and documentation. Third, observation of other CHWs in the field is recommended. Finally, CHWs require regular reviews of core topics and also new topics as they arise during delivery of the intervention.

<table>
<thead>
<tr>
<th>Stage 1</th>
<th>Stage 2</th>
<th>Stage 3</th>
<th>Stage 4</th>
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<tbody>
<tr>
<td>Initial basic training (this manual)</td>
<td>Additional in-depth training (optional)</td>
<td>In the field observation</td>
<td>Ongoing review and education</td>
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The CHW curriculum includes instruction in four main content areas: self-management skills, pediatric obesity, pediatric asthma, and heart failure. The self-management skills area should be covered for all CHWs. The other topic areas can be combined (for example pediatric asthma and obesity) or used alone. The home visitation section is an optional module for projects that use home visitation.
Section 1: Self-Management (Core Training)

The self-management section is the core training content to be used in combination with the other trainings in this manual. This section should be mandatory and should be referred back to throughout the manual in each specific disease content area. Self-management techniques are to be introduced prior to beginning the other training manuals provided. Self-management techniques will be emphasized and explored in more detail in the subsequent disease-specific trainings.

Section 2: Pediatric Asthma

Asthma, the most common chronic health condition in children, is a major cause of pediatric hospitalizations and missed school days. National Health Interview Survey data from 2001 reported lifetime asthma prevalence of 20% in African-American children, 26% in Puerto Rican children, 13% in White children, and 10% in Mexican children. Current asthma prevalence has been increasing among children at a rate of 1.4% per year from 2001-2010 and asthma disparities by race/ethnicity still persist. Pediatric asthma results in high emergency department and urgent care use. Asthma related school absenteeism, caregiver missed work, and activity limitations compromise the ability of children to learn and limit other areas of well being. For example, in 2008, 58.7% of children ages 5-17 with current asthma had at least one day of missed school in the past year, with 5.5% reporting some activity limitation due to asthma. This translates into significant individual and societal costs. In 1996, the total economic costs of asthma in school-age children was estimated at almost $2 billion.

Section 3: Pediatric Obesity

Pediatric obesity has reached epidemic proportions. From 2005-2008, 21% of African American children were obese, compared to 14% of White children, and 22% of Mexican children. Several meta-analyses have shown mild to moderate efficacy of physical activity and combined lifestyle interventions in the home context. To date, no known pediatric CHW intervention data have been reported although such testing is underway.

Section 4: Heart Failure

The current epidemic of acute decompensated heart failure is a major public health problem. Incidence of new cases has been stable but survival has improved, resulting
in increased prevalence, particularly among the disadvantaged.\textsuperscript{14} After discharge, 50\% of patients will be rehospitalized within 6 months.\textsuperscript{15} Currently there are more than 1 million heart failure hospitalizations annually,\textsuperscript{16} accounting for the single largest Medicare expenditure.\textsuperscript{17} Two key modifiable factors are associated with repeat hospitalizations, non-adherence to prescribed medications and non-adherence to salt restriction.\textsuperscript{18-19} Factors associated with non-adherence to drug and lifestyle recommendations include economic constraints, difficulties in navigating the health care system, inadequate patient knowledge at discharge, low motivation, and stress.\textsuperscript{20} A CHW intervention helps dissolve some of the challenges faced by heart failure patients.

\section*{Section 5: Home Visitation (optional)}

The most common roles of CHWs are to perform navigation services in the clinical settings, to conduct group sessions in clinical or community settings, or to perform home visitation. Home visitation offers unique insights into the lives of patients. The CHW can see the physical environment patients navigate daily. They can check what medicines or resources the patient actually has and see how they use them. They usually have the opportunity to meet family members and others living in or frequenting the home. Home visitation is also very helpful for patients with limited resources or mobility, or patients with caregiving responsibilities because the patient does not need to leave the home. Challenges to home visitation are that they are time consuming for the CHWs, they can involve threats to safety, and not everyone is willing to have an outsider in their home.

\section*{Evaluation}

Evaluation of CHW competencies at the completion of the training is essential to determine who is ready for the field. We recommend the standard assessment of CHWs knowledge through pre/post testing. We also describe how to assess the competency of CHWs to deliver knowledge and skills using skill demonstrations with asthma devices and role plays. The role plays gauge CHW skill at interacting with peers and delivering information. Each CHW will have to demonstrate proficiency with all project equipment and conduct a standardized role play for the instructors in order to determine if they have sufficient mastery of training content.
Continuing Education

Continuing education is a critical component for CHW programs. We have created continuing education sessions that address two domains: 1) CHW self discovery via goal setting, addressing barriers and successes, and CHW group social support; and 2) Topics brought forth by CHWs after their work in the field. We use local experts in our medical center to facilitate discussion of identified topics. Ongoing education is a work in progress and will be driven by CHW identified needs.
Layout of Training Manual

Each Section Contains
i. A Summary for that content area
ii. Diagram with main topics and length

Each Lesson will contain:
i. Lesson Objectives
ii. Time Required
iii. Unit Overview with lists of Activities
iv. Documents
v. Outline of the Content

Whenever possible, we included materials such as pre/post test questions, role plays, and handouts. Due to copyright restrictions, we could not include all materials. Feel free to contact the manuscript authors for more information and materials.
Who Should Lead the Training Modules

Multiple trainers may be used to cover the different content areas.

The self-management content requires no specific knowledge other than how to teach using popular education methods and self-discovery methods.

The asthma curriculum requires a solid foundation of asthma physiology, triggers, and medications. This manual does not contain sufficient information for someone without strong asthma knowledge to deliver the training. Our curriculum was delivered by a pediatrician but previous iterations have been delivered by a certified asthma educator with group education experience. If the training is delivered by a non-clinician, a clinician should be consulted for part of the training to asthma specific medical questions that arise. We contracted educators on smoking cessation and integrated pest management because these are specialized topics with well-developed curriculums.

The obesity curriculum requires a solid foundation in nutrition and health. In our center, this portion of the training was delivered by a pediatrician but that level of clinical expertise is not necessary. A nutritionist, nurse, or other educator familiar with nutrition and health could also deliver the curriculum.

The heart failure curriculum was delivered by a master-level project manager who was closely supported by a cardiologist and a PhD-level clinical psychologist.
How to Use this Manual

This manual is Adaptable. It has been created and used, but is a suggested template and guide for facilitator’s to follow. Presenters may choose to alter or adapt as they see fit including the length and activities provided in this manual.

The manual is arranged in sections. There are many different ways to deliver these sections. The order will depend on which content areas are delivered and the timing of the training. For example, some trainings are delivered in several full consecutive days. Others are delivered in smaller sessions and spread over several weeks. We make three primary recommendations:

1. All trainings should start with the self-management modules
2. At the end of each training day, trainees should make change plans for themselves about a content area and skill covered that day.
3. When training resumes, the first action should be to discuss change plans from the previous session. Change plans serve as the tool for gauging individual understanding of the content. General review of material from a previous day is helpful but when trainees try to teach or implement the material or skill on their own outside of the group, they realize new questions and challenges. These should be discussed and will create a robust forum for review.

Trainers and trainees should already have a firm grasp of the roles and expectations of Community Health Workers. Understanding how to build trust, work with participants, and facilitating home visits should be concepts to understand in conjunction with this manual.
The following icons are used throughout the manual to identify the teaching method(s) used. These are the recommended approaches and can be adapted to different teaching styles.

<table>
<thead>
<tr>
<th>Facilitator Presentation</th>
<th>Assessment</th>
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<tbody>
<tr>
<td>Brainstorm</td>
<td>Peer Teaching</td>
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<tr>
<td>Role Play</td>
<td>Review</td>
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<tr>
<td>Discussion</td>
<td>Activity</td>
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<tr>
<td>Practice Activity</td>
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**Working with your Group**

CHW trainers must be comfortable leading and educating groups. If your experience in group leadership is limited, here are some suggestions.

i. **Tips for leading your group:**
   a. Provide name tags and other necessary items to create a comfortable and cooperative environment
   b. Take adequate time to prepare for sessions
   c. Consult experts and/or outside resources for accurate information
   d. Get to know the members of your group and maintain a professional, encouraging tone.
   e. Encourage trainees to ask questions throughout the session.
   f. Keep the sessions flowing smoothly, so that everyone is interested, involved, and engaged.
   g. Be prepared to answer questions. Consult a reliable resource if the answer is unknown to you.
h. Use frequent checks for understanding throughout each session to ensure that group members understand the material.
i. Be observant. Watch for clues from group members who are falling behind or in need of a break.
j. Be flexible. Allow group members to explore content areas with self-discovery.
k. Constantly monitor how much the moderator is talking. If he or she is talking a lot, they are not facilitating optimally. Be sure to listen. Allow lots of space for the group to generate ideas.

ii. References on how to effectively lead a group include:
   - [http://www.toi.edu/Training%20Materials/leading_groups/Student%20Notes/C5How%20to%20Lead%20Group%20Discussion.pdf](http://www.toi.edu/Training%20Materials/leading_groups/Student%20Notes/C5How%20to%20Lead%20Group%20Discussion.pdf)
   - [http://www.mindtools.com/pages/article/RoleOfAFacilitator.htm](http://www.mindtools.com/pages/article/RoleOfAFacilitator.htm)

iii. Motivating Group Members
   a. Praise or reward group members’ efforts.
   b. Maintain a positive, encouraging environment.
   c. Strive to link the content to situations that group members can relate to.
   d. Accommodate for adequate settings, refreshments, and breaks to keep participants motivated and ready to learn.
   e. Encourage group members to share their opinions or ideas.
**Individual Change Plans:**

Change plan creation and implementation are recommended as the main tool for CHWs to use with their clients to achieve behavior change. Change planning can be very difficult to master. Therefore, CHW training should focus heavily on action planning beginning with the CHWs. Once they can successful create and achieve change plans for themselves, they can begin to teach the exercise to others. Each trainee should complete an individual change plan at the end of each training day. This change plan should include details on the specific intended action, when this will occur, how, potential barriers, and potential solutions to these barriers. Regardless of how the trainings and days are organized and structured, a change plan should always be a part of the day’s training. These individual change plans are to be discussed and shared at the beginning of the following training day.

Example of change plans that can be used:

PDFs of the change plans are in the Extra Documents link.
Acknowledgements

These manuals were the hard work of many people. The self-management curriculum was developed for a diabetes intervention by Drs. Steve Rothschild, Susan Swider, and Carmen Tumialán Lynas. The curriculum was then modified by Dr. Molly Martin for pediatric asthma in Spanish-speaking populations. The pediatric obesity curriculum was created by Dr. Martin and Lucretia Hoffman, MPH. The heart failure curriculum was designed by Dr. Lynda Powell, Dr. James Calvin, and Rebecca Liebman, MPH.

This manual was written mainly by Molly Martin, Rebecca Liebman, and Sheila Dugan. Lucretia Hoffman and Melanie Santarelli contributed greatly to formatting and organization of the manual, under the mentorship of Molly Martin and Sheila Dugan.

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