



Development, Implementation, and Assessment of Health Equity Action Training (HEAT):
Implications for Local Health Departments

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Abstract

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Keywords

health equity; health disparities; workforce development; cultural competency

Cover Page Footnote

This project was funded by the Connecticut Association of Directors of Health and the Connecticut NIH EXPORT Center for Eliminating Health Disparities Among Latinos (grant # P20MD001765). This study was approved by the Hispanic Health Council Institutional Review Board on October 19, 2010.

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ABSTRACT

As inequities in health persistently plague our nation, rates of chronic disease continue to escalate, and increasing health care costs further debilitate our economy, the profession of public health is faced with monumental challenges. As a central community health institution, the local public health department plays an essential role in eliminating health inequities and preventing chronic disease. With the objective of preparing the local public health workforce to address the root factors associated with health, the Health Equity Action Training project trained 85 staff of the Hartford Department of Health & Human Services in the social determinants of health, social inequities, undoing racism, and cultural competency. Satisfaction results and pre/post assessments with a subsample of participants suggest that this training was effective at improving participants' health equity attitudes, knowledge, and skills. Implications for local health departments are discussed.

Keywords: health equity, health disparities, workforce development, cultural competency

INTRODUCTION

Background

Dramatic differences in health status and mortality rates for different population groups permeate U.S. society; people of color fare worse than whites, as do those with fewer economic resources compared to those with more affluence (Centers for Disease Control and Prevention, 2011). These differences, identified as “health inequities,” are systematic, avoidable, unfair, and unjust, and are the result of biased historical and current policies (Robert Wood Johnson Foundation, 2008; Whitehead, 1991). Health inequities are rooted in the social determinants of health (SDOH). Moreover, the U.S. is facing a health crisis as it spends more on health care than all other industrialized countries, yet remains far behind on many key health indicators (Braveman et al., 2011a; Organization for Economic Cooperation and Development, 2011). In order to eliminate health inequities and improve the population’s health, the conditions of daily life in which people are born, grow, live, work and age, must be improved (Commission on Social Determinants of Health, 2008; World Health Organization, 2012).

The nation’s public health system provides the infrastructure for conducting public health practice which can be defined as the strategic, organized and interdisciplinary application of knowledge, skills and competencies necessary to improve the population’s health (Association of Schools of Public Health, 1999; Iton, 2008). However, despite the strong base of evidence linking the population’s health to the SDOH, the nation’s public health system continues to be deeply rooted in the medical model that focuses primarily on individual disease conditions, health care services, and individual behavior (Iton, 2008; Marmot & Bell, 2011). In recent years, there has been an increasing emphasis on the need for public health to move away from this model to address the SDOH (Braveman et al., 2011b).

As a core component of the nation’s public health system, local public health departments play a unique and critical role in eliminating health inequities and preventing chronic disease. As the sole institution charged with statutory and fiduciary responsibility for the communities they serve, it is imperative that local health departments also move upstream to address the SDOH (Iton, 2008; Scutchfield & Howard, 2011). Unfortunately, the majority of the local public health workforce has little formal training in public health, and few local health departments are likely to have the capacity needed to address the root causes of health inequities (Scutchfield & Howard, 2011; Institute of Medicine, 2003). Consequently, there has been a call for enhanced training to better prepare the public health workforce to promote health equity (Robert Wood Johnson Foundation, 2008).

The Health Equity Action Training (HEAT) was developed to prepare the local public health workforce to more fully address the SDOH affecting its target community. Cognizant of the challenges of promoting institutional change while working within the constraints of the existing funding allocations and organizational structure of the local health department, HEAT was intended to be a transformational process after which employees would approach their job responsibilities with an added dimension. The Hartford Department of Health & Human Services (Department) partnered with the Hispanic Health Council (HHC) to develop the HEAT curriculum and train Department staff.

To date, there is a dearth in literature involving workforce development models on health equity for local public health departments. Recognizing this, the purpose of this paper is to provide an overview of HEAT, as well as some evidence of its impact. Lessons learned from the development and implementation of this project are included so that they can be replicated in other local health departments.

Project Overview

The Department is the second largest local health department in New England and serves Hartford, Connecticut, a city of approximately 124,000 residents. The Department reaches at-risk populations through a number of units, including Maternal and Child Health, Disease Prevention/Health Promotion, Elderly Services, and Environmental Health, and provides essential public health services including assessment, monitoring, and enforcement. HHC is a local, non-profit, community-based organization with a 35-year history of addressing the SDOH through training, policy advocacy, evidence-based direct service, and community-based research. HHC has shared a decades-long partnership with the Department, and a 17-year partnership with the University of Connecticut (UConn) and more recently, Yale University. Through the NIH Connecticut Center for Eliminating Health Disparities Among Latinos (CEHDL), a partnership of HHC, UConn/Yale, and Hartford Hospital, HHC piloted application of its SDOH-oriented Cross-Cultural & Diversity Inclusiveness Training to various clinical and community groups, which laid the foundation for HEAT.

The Department participated in a three-year Health Equity Alliance project whose purpose was to enhance the capacity of local health departments to create healthier communities through a focus on the social, political, economic and environmental conditions that affect health. The three components of the Health Equity Alliance project were workforce development, community engagement, and piloting use of the Health Equity Index, an online, interactive tool used for cultivating and displaying local data on the SDOH. HEAT was the workforce development component of the Hartford Health Equity Alliance project.

The HEAT objectives were to: 1) expose all health department staff to the Department's health equity initiatives; 2) promote understanding of the SDOH; 3) establish common language for health equity; and 4) engage staff in developing strategies to address health inequities through their current work. The twelve-hour, mandatory training consisted of three, four-hour modules, including Social & Health Equity, Undoing Racism, and Stereotyping & Bias. Each module utilized a participatory approach to learning and contained didactic content as well as experiential exercises. Training content was drawn from the Alameda County Public Health Department's "PH101 Dialogue Series" curriculum and the Hispanic Health Council's "Cross-Cultural & Diversity Inclusiveness Training" curriculum (Alameda County Department of Public Health, 2007).

Social & Health Equity

This module introduced the concept of health equity. Didactic content included the SDOH, health disparities, social inequities, health inequities, and social justice. Participatory exercises included an interactive simulation game on social inequality, and an activity that required participants to assess the determinants of health (e.g. biological, lifestyle choices, physical and social environment, and the political/socio-cultural environment), recognize the intersection of micro and macro levels of these determinants, and recognize the importance of addressing each of these determinant levels in order to effectively eliminate health inequities and reduce chronic disease (Brown et al., 2007). This module also utilized the "Place Matters" episode of the film *Unnatural Causes* and included a presentation of the Department's broader Health Equity Alliance project, which incorporated a demonstration of the Health Equity Index (California Newsreel, 2008).

Undoing Racism

This module was intended to provide a framework of systemic racism and a safe space for participants to process the effects of racism on health. Didactic content included the

definitions of institutional, interpersonal, and internalized racism. This module included two excerpted episodes of the film *Race: The Power of an Illusion* (California Newsreel, 2003). Emphasis was placed on debunking the perceived biological validity of race, the history of institutional racism in U.S. society, and its present-day implications. Participants discussed the relationship between racism and health inequities, and brainstormed ways to address racism through public health practice (Luluquisen & Schaff, 2007).

Stereotyping & Bias

This module emphasized the importance of cultural competence and was intended to provide participants with valuable knowledge, attitudes, and skills to work effectively with diverse populations. Didactic topics included blaming the victim, stereotyping, and different forms of oppression, including sexism, classism, heterosexism, etc. Interactive activities encouraged participants to critically assess the pervasive and damaging nature of stereotypes, as well as the importance of actively debunking them. Individual activities facilitated participants' self-awareness about their own preconceptions and prejudices. Participants were encouraged to think critically about public health problems, reflect on personal biases, and be proactive about increasing their cross-cultural knowledge and skills.

At the conclusion of the training, participants made specific, individual commitments to promote health equity through the course of their regular work or in their personal lives. Participants identified one goal related to improving health equity which they committed to achieving within the subsequent eight weeks. Participants completed an action plan by outlining their timeline, action steps, and needed resources. Participants placed a carbon copy of their action plan in a self-addressed envelope; these were mailed eight weeks post-training as a reminder of their commitment and an opportunity to consider next steps.

Table 1: HEAT Curriculum

Module	Length	Didactic Topics Covered	Activities
Social & Health Equity		<ul style="list-style-type: none"> • Social Determinants of Health • Health Disparities • Social Inequities • Health Inequities • Social Justice • Health Equity Alliance Project 	<ul style="list-style-type: none"> • Social Inequality Game • Unnatural Causes Episode 5 • “Place Matters” • Determinants of Health Exercise
Undoing Racism	4 hours	<ul style="list-style-type: none"> • Race • Institutional Racism • Interpersonal Racism • Internalized Racism 	<ul style="list-style-type: none"> • <i>Race: The Power of an Illusion</i>, Excerpted Episodes 1 & 3 (“The Difference Between Us” & “The House We Live In”) • Facilitated small and large group dialogues
Stereotyping & Bias	4 hours	<ul style="list-style-type: none"> • Blaming the Victim • Stereotyping • Oppression & “Isms” 	<ul style="list-style-type: none"> • Hypothetical Case Analysis • Stereotyping Brainstorm • Individualized Bias Exercise

The training was conducted in four two-hour sessions and one four-hour session. Participants were divided into six groups of 10-25 participants each; each group integrated staff from different divisions of the Department. In order to ensure a safe space where participants could freely discuss challenging topics, division managers and program supervisors were trained

separately from other participants. Training was co-facilitated by HHC trainers along with the Department staff that led the Health Equity Alliance project.

METHODS

Demographic and satisfaction surveys were administered (N=75). Additionally, participant suggestions for improving health equity as well as their HEAT training experience were collected and compiled throughout the training. A pre/post assessment of knowledge and attitudes addressed by HEAT was conducted in a subsample of participants (N=42). Pre/post assessments were administered to the five non-leadership groups in order to measure changes in self-reported participant knowledge and attitudes. Supervisory staff likely received additional workforce development training prior to and during the implementation of HEAT. Thus, in order to reduce the threat of history on this study's internal validity, this group was excluded from the pre/post assessment process. Participants were randomly assigned a unique identifier to assure anonymity in data collection. Participants completed the pre-test prior to the start of the training, and after the final training session, participants completed the post-test. Both the pre and post-tests were administered by the training facilitators. Items were measured using a five-point Likert scale (1=Strongly Disagree, 2=Disagree, 3= Not Sure, 4=Agree, 5=Strongly Agree). These data were entered and analyzed on SPSS Version 19. Chi-square tests for repeated categorical outcomes were conducted using McNemar's Test for assessing the statistical significance of 2x2 contingency tables testing the pre/post changes in question responses based on dichotomous categorical variables created by post-hoc merging of response option categories (agree/strongly agree vs. strongly disagree/disagree/not sure).

Sample

A total of 85 participants were trained: 72 answered the demographic questions, 72 took the pre-test, 43 took the post-test, 43 completed both the pre and post-assessments, and 75 completed the satisfaction survey. Supervisory staff were excluded from the pre/post assessment process and the demographic survey (N=10). One group of participants was not administered the post-test assessment (N=20) because of an unexpected programmatic conflict. Additionally, some participants did not complete each stage of the evaluation because of absence from the first or last training session when the assessments were conducted (N=12), and participants absent for the pre-test were not administered the posttest (N=2).

RESULTS

Participant Demographics

HEAT participants included employees of the Department. As illustrated in Table 2, approximately 24% of participants were male, while 76% were female. Participant ages ranged from 22-72, and the mean age was 44 years. Approximately 80% of participants identified as people of color, including Latino/Hispanic, African American/Black, and Asian, while approximately 20% identified as White. More than 90% of participants had at least a high school diploma or equivalent degree, including approximately half who had graduated from college.

Table 2. Participant Demographics

Demographic	N (%)*
Gender	
Male	17.0 (23.6%)
Female	55.0 (76.4%)
Age	
Mean (Standard Deviation)	44.4 (12.3)
Race/Ethnicity	
Latino/Hispanic	28.0 (40.0%)
Black/African American	25.0 (35.7%)
Asian	3.0 (4.3%)
White	14.0 (20.0%)
Education Level	
< High School Diploma or GED	5.0 (7.5%)
High School Graduate or GED	30.0 (44.8%)
Bachelor's Degree	20.0 (29.9%)
Graduate Degree	12.0 (17.9%)

*except for age which is reported as a continuous variable (N=67)

Participant Satisfaction

Satisfaction with HEAT was high. Overall, 75% of participants were satisfied, 19% were neutral, and 4% were dissatisfied (N=75). Participants (N=71) also found the training to be useful to their work: 70% rated the training as useful, 20% as neutral, and 4% as not useful. When asked what they appreciated most about the training, participants reported “the self-awareness, reflection, and knowledge gained of underlying causes,” “respect and honesty,” “activities that made us think,” and “sharing with different coworkers.” One person noted, “This training made me aware of racism that I didn’t really feel existed.” Furthermore, when asked to identify one thing that they will do as a result of this training, participants noted “take a greater understanding of health history and how racism impacts that history,” “speak up to bring inequality to light,” and “be more empathetic.” In terms of suggestions for improvements, participants recommended that the training not be mandatory, greater flexibility was needed in scheduling, there be increased time for discussion, and supervisors be included with front-line staff in the training cohorts. Participants also noted that they would like to have seen more local data, and have learned more about promoting social justice within Hartford. Generally, participants had a favorable view of the training and sought opportunities to continue this “conversation” on health equity (Table 3).

Table 3. Summary of Participant Satisfaction in Response to Survey Post Training (N=71-75)

What did you appreciate most about the training?	<ul style="list-style-type: none"> • Opportunity for self-awareness and reflection • Respect, honesty, and candid discussion • Enhanced knowledge about racism and health inequities • Provocative activities and discussions • Knowledgeable and confident facilitators
Identify one thing that you will do differently in your work as a result of this training?	<ul style="list-style-type: none"> • Be aware of personal biases. • Be understanding of other people’s experiences, tolerant, open-minded, and empathetic. • Educate others about health inequities • Become familiar with local resources to effectively refer the community • Advocate for social change to benefit those populations we serve

What would you have liked to have been done differently in the training?

- Training should be optional, and scheduling should be flexible
- Involve all management and integrate management with frontline staff in training cohorts
- Allow more time for discussion
- Include more data about Hartford, Connecticut
- Expand ways to enhance social justice within the local community

Pre/Post Knowledge and Attitudes Assessment with Subsample of Participants

The changes in response distributions for each question assessed with the pre/post-test suggest that the training improved the SDOH knowledge and attitudes among participants (Table 4). The proportion that agreed or strongly agreed to have clear understanding of a “health disparity” increased from 65.1% to 88.4%. The corresponding values for understanding the term “health inequity” were 48.7% and 87.2%, respectively, and for “social justice” 63.2% and 81.6%, respectively. The percentage that agreed or strongly agreed that there is a link between housing, transportation and wages and health increased from 71.5% at pre to 85.2% at post. The corresponding values for understanding the link between equitable empowerment and wealth distribution were 71.1% to 84.2%, respectively. In this instance a remarkable change happened in the strongly agree option (15.8% vs. 42.1%, respectively). Likewise, for the six discrimination/bias questions there were strong improvements in the strongly agree options although differences tended to be not significant when the ‘agree’ and ‘strongly agree’ response options were combined (Table 4). Interestingly the percentage who strongly agreed that they had the skills to educate themselves about the diverse groups they worked with increased from 23.8% to 38.1%.

Table 4. HEAT Participants Pre/Post Assessment Response Distributions

	<u>Strongly Disagree</u> N (%)	<u>Disagree</u> N (%)	<u>Not Sure</u> N (%)	<u>Agree</u> N (%)	<u>Strongly Agree</u> N (%)	<u>Pre vs. Post McNemar's Test p-value¹</u>
“I have a clear understanding of the meaning of the term health disparity.” (N=43)						
Pre	0 (0%)	2 (4.7%)	13 (30.2%)	21 (48.8%)	7 (16.3%)	.021
Post	3 (7%)	1 (2.3%)	1 (2.3%)	26 (60.5%)	12 (27.9%)	
“I have a clear understanding of the meaning of the term health inequity.” (N=39)						
Pre	0 (0%)	3 (7.7%)	17 (43.6%)	14 (35.9%)	5 (12.8%)	.001
Post	3 (7.7%)	1 (2.6%)	1 (2.6%)	23 (59.0%)	11 (28.2%)	
“I have a clear understanding of the meaning of the term social justice.” (N=38)						
Pre	1 (2.6%)	1 (2.6%)	12 (31.6%)	21 (55.3%)	3 (7.9%)	.039
Post	1 (2.6%)	0 (0%)	6 (15.8%)	19 (50.0%)	12 (31.6%)	
“The health of our society is determined by things like access to affordable housing, transportation, and an adequate living wage.” (N=42)						
Pre	2 (4.8%)	5 (11.9%)	5 (11.9%)	17 (40.5%)	13 (31.0%)	.146
Post	3 (7.1%)	1 (2.4%)	2 (4.8%)	17 (40.5%)	19 (45.2%)	
“The health of our society is determined by how well we give everyone the opportunity to achieve power and wealth regardless of race, class, gender, and other potential forms of difference.” (N=38)						
Pre	4 (10.5%)	3 (7.9%)	4 (10.5%)	21 (55.3%)	6 (15.8%)	.227
Post	1 (2.6%)	3 (7.9%)	2 (5.3%)	16 (42.1%)	16 (42.1%)	
“In our society, people are discriminated against on the basis of the kind of job they have, their financial status or educational level.” (N=37)						
Pre	4 (10.8%)	4 (10.8%)	2 (5.4%)	19 (51.4%)	8 (21.6%)	.039
Post	0 (0%)	2 (5.4%)	1 (2.7%)	15 (40.5%)	19 (51.4%)	
“In our society, people are discriminated against on the basis of their race.” (N=38)						
Pre	2 (5.3%)	4 (10.5%)	5 (13.2%)	20 (52.6%)	7 (18.4%)	.092
Post	4 (10.5%)	0 (0%)	0 (0%)	22 (57.9%)	12 (31.6%)	

“I am comfortable talking with others about discrimination or prejudice based on race.” (N=37)						
Pre	1 (2.7%)	2 (5.4%)	4 (10.8%)	23 (62.2%)	7 (18.9%)	.219
Post	0 (0%)	2 (5.4%)	1 (2.7%)	18 (48.6%)	16 (43.2%)	
“I am comfortable talking with others about discrimination or prejudice based on class or socio-economic status.” (N=36)						
Pre	1 (2.8%)	2 (5.6%)	6 (16.7%)	19 (52.8%)	8 (22.2%)	.289
Post	0 (0%)	1 (2.8%)	4 (11.1%)	16 (44.4%)	15 (41.7%)	
“In our society, I believe it is almost impossible to be free of biases and prejudices.” (N=41)						
Pre	2 (4.9%)	7 (17.1%)	6 (14.6%)	21 (51.2%)	5 (12.2%)	.424
Post	1 (2.4%)	4 (9.8%)	6 (14.6%)	21 (51.2%)	9 (22.0%)	
“I am aware of my own biases and prejudices.” (N=37)						
Pre	1 (2.7%)	0 (0%)	7 (18.9%)	22 (59.5%)	7 (18.9%)	.039
Post	0 (0%)	0 (0%)	1 (2.7%)	23 (62.2%)	13 (35.1%)	
“I have the skills needed to educate myself about the diverse groups I interact with through my work.” (N=42)						
Pre	0 (0%)	1 (2.4%)	4 (9.5%)	27 (64.3%)	10 (23.8%)	1.00
Post	2 (4.8%)	0 (0%)	3 (7.1%)	21 (50.0%)	16 (38.1%)	

¹ McNemar's pre/post-test grouping agree/strongly agree vs. rest of categories.

DISCUSSION

Overall, findings suggest that the Department's foundation of knowledge, attitudes, and skills related to health equity was strengthened by HEAT. Indeed the potential impact of this program was enhanced by conducting the trainings in partnership with a grassroots, community-based organization (HHC). The presence of HHC facilitators allowed Department the safety to discuss the critical, sometimes challenging, and often ignored systemic issues that lead to health inequities. In addition, the Department and HHC shared unique perspectives about public health practice and innovative strategies for achieving health equity that enhanced the overall training experience.

Despite some initial resistance to the training due to its perceived disruption of their work schedules and the added burden of mandatory training, at the conclusion of training most employees expressed appreciation of the opportunity to think critically, openly discuss difficult topics, and be challenged. Several trainees expressed that they previously had not had any reason to discuss challenging topics, as they were “easy to shove...under the rug.” Participants may have appreciated this training because of its applicability; as the satisfaction survey results suggest, they found it useful to their work. The link between high levels of satisfaction and perceived usefulness has been suggested by Holtzhauser, Nelson, Meyers, Margolis, and Klein (2001).

The Health Equity Alliance Project, of which HEAT was a component, laid a strong foundation on which the Department was able to strengthen its health equity work. The Department used the Health Equity Alliance project to ameliorate the framework of its agency planning and program development, and HEAT provided staff with a reference point to understand and support this transformative approach. During the year following the Health Equity Alliance Project, the Department has shed light on matters of health equity through various venues, including the dissemination of a number of publications, on if which was a community health needs assessment that specifically highlights health equity as a priority for not only the Department, but also for three local hospitals (City of Hartford Department of Health and Human Services, 2012). Additionally, the Department has submitted and secured grants focuses on teen pregnancy prevention and lead abatement, which have addressed health equity concerns and how social determinants play a role in the health outcomes of community members of all ages. The Department has also added a SDOH framework to rigorous processes of program

development that it has undertaken. The profound HEAT training experience that all staff shared laid the foundation for their buy-in.

Study Limitations

Our study had several methodological limitations that need to be recognized. Firstly, the evaluation procedures relied on the self-report of participants, and are subject to self-report bias. Secondly, we were only able to conduct the pre/post training knowledge and attitudes assessment with a subsample of 43 participants. Because of the anonymous method used to collect the baseline data it was not possible to conduct a non-response bias analysis of participants vs. non participants pre-post knowledge and attitudes survey. Thus, the pre/post assessment should be considered preliminary. Overall assessment procedures in this pilot study were complicated by logistical and programmatic challenges, which include the following: 1) participants absent at the start of the training due to excused work-related or personal conflicts did not complete the demographics survey or the pre-test; 2) participants with excused absences did not complete the post-test or satisfaction survey; and 3) only 60% of pre-test respondents also participated in the post-test due to unanticipated program constraints, which included the fact that one entire group of participants was not administered the post-test after the staff member responsible for data collection was unexpectedly absent, and unforeseen work-related emergencies that caused participants to miss the beginning or conclusion of the training.

CONCLUSION

Lessons learned from HEAT have implications for other local health departments wishing to expand their capacity to promote health equity. Perhaps most importantly, the success of the project depended upon the Department administration's support for the principles of health equity both in values and practice. In order to effectively address health equity in the broader community through a SDOH framework, the management of the Department needed to be open to reflecting internally on both its history and current practices, and to making changes in current practices. Administrators were open to feedback from staff and welcomed staff members' intrinsic and extrinsic suggestions; this in turn fostered trust among staff at different levels. The ability for the Department to successfully incorporate long-term changes that promote health equity is dependent upon support from both management and front-line staff.

Another factor critical to the project's success was that the training was mandatory for all non-executive staff so that everyone received a foundation of health equity concepts and was challenged to develop and apply innovative methods of promoting health equity. Considering this, it was also critical that the mandatory attendance requirement was applied universally to all employees in a consistent manner. Integrated groups of staff from different divisions worked well; the diversity of the groups contributed to the richness of the discussion and allowed for new relationships to form. Contracting trainers from outside of the Department provided staff the opportunity to speak openly about concerns about their work environment, while the collaboration between the outside trainers and internal leadership was essential to HEAT's effectiveness.

The greatest challenge of the HEAT project was identifying feasible next steps and strategies for their implementation, to continue the momentum to work towards health equity established during the training. Participants were eager to continue the discussion, yet without allocated time, resources, and dedicated leadership to continue this work, the opportunity was significantly weakened. Suggestions from staff for continued activities include continuing coalitions and community partnerships forged throughout the Health Equity Alliance project,

hosting regular staff film viewings and discussions on health equity, displaying health equity posters and messaging throughout the Department, and establishing a city-wide task force on health equity.

Finally, the U.S. Department of Health and Human Services has identified achieving health equity, eliminating disparities, and improving the health of all groups as an overarching goal of Healthy People 2020 (Department of Health and Human Services, 2012). In light of the prevailing economic impact of the recent economic crisis on low and middle income Americans, the timing is ripe for local health departments to incorporate health equity principles and practices into their work. Health equity training can offer departments a foundation of knowledge, attitudes, and skills from which to build this health equity work.

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