

Harry J. Heiman, MD, MPH¹; L. Lerissa Smith, MPH²;
Ebony Respress, MSPH³; Carey Roth Bayer, EdD, BSN, RN⁴

Health professional training programs increasingly recognize the importance of health policy training. Despite integration of this training into health professional education, there have been limited published studies about health policy training and few studies that meaningfully measure and evaluate learner outcomes. The Satcher Health Leadership Institute at Morehouse School of Medicine developed a multidisciplinary, post-doctoral, health policy fellowship program in 2009, uniquely focused at the intersections of health policy, health equity, and leadership development. The program curriculum was intentionally designed with desired learner outcomes, aligning training and learner experiences with these outcomes, and meaningfully capturing and measuring outcomes in program evaluation. We present our training approach as well as results from an alumni survey assessing learner outcomes one to five years post fellowship completion. To our knowledge, this is the first study that evaluates the longitudinal impact of health policy training on the career trajectories of program graduates. We believe this offers a number of opportunities for replication and translation across health professional training programs. *Ethn Dis.* 2019;29(Suppl 2): 405-412. doi:10.18865/ed.29.S2.405

Keywords: Health Policy; Health Equity; Health Professional Training; Leadership; Public Health; Health In All Policies

¹ Department of Health Policy and Behavioral Sciences, School of Public Health, Georgia State University, Atlanta, Georgia

² Department of Community Health and Preventive Medicine, Morehouse School of Medicine, Atlanta, Georgia

³ Division of Health Policy, Satcher Health Leadership Institute, Morehouse School of Medicine, Atlanta, Georgia

INTRODUCTION

Health professionals and health professional training programs increasingly recognize the importance of health policy and health policy training.¹⁻⁴ Recent policy debates about the Affordable Care Act and public health's recognition of the need to move upstream and embrace a broader health-in-all-policies approach,^{5,6} further highlight the impact of public policies on health professional practice and the opportunities to advance both health and health equity—“assurance of the conditions for optimal health for all people.”⁷ Relatively few studies have been published regarding health policy training. Our recent literature review found several approaches that incorporated health policy into training programs, but few that incorporated or reported meaningful outcome or impact evaluation.⁸ Most articles describe curricula or pilots of health policy training programs.

Health policy is primarily framed as health care policy, rather than adopting a broader health-in-all-policies framework that considers the health impacts of policies in non-health sectors, as described by the American Public Health Association, Centers for Disease Control and Prevention, and others.^{5,9,10} Population health dimensions of health policy and health disparities and/or the impact of policies on disadvantaged populations—including racial and ethnic minority, low-income, rural, and other populations experiencing social and institutional barriers to life and health opportunities—are included in only a small number of reports. Most are focused on the health care system, including health care finance, costs, and quality, and the health policy process. The few studies that include evaluation or assessment of learner outcomes are limited to short-term evaluations and learner self-assessments. We found no longitudinal reports assessing the impact of health

⁴ Departments of Community Health and Preventive Medicine/Medical Education; Center of Excellence for Sexual Health, Satcher Health Leadership Institute, Morehouse School of Medicine, Atlanta, Georgia

Address correspondence to Harry J. Heiman, MD, MPH; 140 Decatur Street, Suite 440 Atlanta, GA 30303; 404.413.1376; hheiman@gsu.edu

policy training on career trajectories or longer-term learner outcomes.

In 2009, the Satcher Health Leadership Institute (SHLI) at Morehouse School of Medicine (MSM) developed a multidisciplinary, post-doctoral, health policy training program uniquely focused at the intersections of health policy, health equity, and leadership development. Recognizing the need to develop the next generation of health leaders, the fellowship program's overarching goal

The program intentionally integrates health equity as well as leadership development, mentoring, and networking opportunities across the fellowship experience.

is to prepare health professionals to take leadership roles promoting policies and programs to reduce health disparities and advance health equity. Cohorts of four to six fellows with backgrounds in medicine, public health, psychology, public policy, and health law engage in an interactive 10-month curriculum^{11,12} that includes formal and informal instruction; policy leadership shadowing and experiential learning experiences with government, business, health care, public health, and community partners; monthly journal clubs; and

health policy leadership forums. All fellows also complete two eight-week practicum experiences with agency or community partners and a health policy research project. Practicum experiences with clearly defined deliverables were developed with agency and organizational partners, based on identifying a health policy and health equity-relevant project aligned with fellows' interests and career goals. Similarly, health policy research projects, resulting in the submission of a peer-reviewed manuscript, were developed based on independent or practicum-related research.

Recognizing that most health professional training is relatively focused and specialized, the fellowship's didactic content provides a broad foundation in the health system from social determinants of health to health care organization, finance, and quality. In addition, there are specific foci on both behavioral and sexual health, based on SHLI expertise and the importance of health disparities in these areas. Health policy training includes health care policy as well as health-in-all-policies. Leadership development includes both formal didactics and opportunities to learn with and from leaders across sites and sectors. The program intentionally integrates health equity as well as leadership development, mentoring, and networking opportunities across the fellowship experience. Integrating health equity means intentionally considering the impact of policies, programs, and approaches on disadvantaged populations that currently experience or are at increased risk for health disparities. This includes considering and valuing

the perspectives of all stakeholders, especially authentic community voices. In addition, the program leverages the multidisciplinary backgrounds of the fellows and faculty to create a robust learning community that crosses traditional disciplinary boundaries. External partnerships with a broad network of local, state, and federal agencies, including the Centers for Disease Control and Prevention, and community-based organizations and clinical sites provide opportunities to leverage content experts and sites for practicum projects. Issues addressed range from HIV and sex trafficking to behavioral health integration and equity in public education. The program is designed to serve as a catalyst for the careers of developing health leaders, preparing them to take leadership roles and providing them with a policy toolkit to inform and influence health policies to reduce disparities and advance health equity.

An alumni survey was conducted in 2015 to assess learner outcomes specifically aligned with these areas of greatest interest: leadership development; career advancement; health policy; and health equity. While process and end-of-fellowship evaluations are collected to support ongoing program improvement and assessment, the overarching objective of this study is to assess longitudinal program impact and capture and measure the outcomes and impact from fellowship alumni one to five years following program completion. Early program evaluation results demonstrate the need to align curricular elements and outcome measures with desired learner outcomes and the importance

of longitudinal follow up. This serves as a valuable model for the development and evaluation of training programs focused on health policy, health equity, and leadership development.

METHODS

Using Research Electronic Data Capture (REDCap), a secure web application for building and managing online surveys and databases, we developed a 141-item skip-pattern alumni survey targeting program graduates 1-5 years post-fellowship completion. We developed the survey based on the fellowship program logic model, which outlined desired program outcomes. The survey was vetted with a small group of fellowship alumni and colleagues from the Informing and Influencing Health Policy and Practice group at the MSM National Institute of Minority Health and Health Disparities-funded Transdisciplinary Collaborative Center to assess ease of survey use and ability to understand the tool content.

In addition to capturing demographic, educational, and work backgrounds of graduates, the survey was designed to elicit quantitative and qualitative measures of program impact across the domains of leadership development, career advancement, health disparities and health equity, and health policy. Alumni were specifically asked about leadership roles and the relative importance of health policy and health equity to their current positions as well as their engagement in non-professional roles. The survey also captured the impact of the fellowship on career choices, op-

portunities, and trajectories related to the program focus areas above. The survey included questions such as “Have you advanced in your career since completing the fellowship program;” and “Please describe how participation in the fellowship program impacted your ability to secure a position after the fellowship program.” Qualitative questions were used to clarify roles and elicit specific examples. (The complete SHLI Health Policy Fellowship Alumni Outcomes survey questionnaire is available from the corresponding author.)

In preparation for survey dissemination, fellowship program staff reached out directly to all 22 alumni to verify current contact information. In addition, an announcement was sent via our invitation-only fellowship alumni LinkedIn (a professional social media platform) group to inform alumni they would be receiving the survey as well as the aims and timeline for survey completion. In June 2015, the fellowship director sent all fellowship alumni from 2009-2014 an email invitation to participate in *The Satcher Health Leadership Institute Health Policy Leadership Fellowship Alumni Survey*; the email included a link to the survey. Following this, the director sent weekly reminder emails over the four subsequent weeks. “Cohort champions,” alumni (one per cohort) who agreed to facilitate survey participation, also reached out to their training cohort peers to encourage participation two and four weeks after the initial invitation. The fellowship director sent the final request for participation directly to individuals who had not yet participated after the fourth week.

We collected the data in REDCap and analyzed the data in Microsoft Excel. Mixed-methods analyses, descriptive statistics, frequencies and coding of free text data were performed from September 2015 through August 2016. Institutional review board (IRB) approval was granted from MSM to conduct this work. All procedures were in accordance with the ethical standards of the responsible committee on human experimentation (institutional and national) and with the Helsinki Declaration of 1975, as revised in 2000. Informed consent was obtained from all participants included in the study

RESULTS

Demographics

Nineteen (19) out of 22 fellowship alumni (86%), who were 1-5 years post-program, completed the alumni survey. Respondents ranged in age from 25-53 years, with the majority between ages 35-44 (53%). The majority self-identified as Black or African American (74%), in addition to 16% identifying as White or Caucasian, 5% Asian Indian, and 5% “some other race.” Five percent (5%) identified as Hispanic, Latino, or of Spanish origin. Fifty-three percent (53%) of respondents identified as female, 42% as male, and 5% as transgender (female-to-male). (Table 1)

Alumni were evenly represented across the five fellowship years. At the time of fellowship participation, nine (47%) reported having their highest level of educational attainment as doctoral degrees (five in public health, three in psychology, one

Table 1. Respondent descriptive statistics, N=19

	n (%)
Gender	
Male	8 (42)
Female	10 (53)
Transgender	1 (5)
Race	
Asian Indian	1 (5)
Black/African American	14 (74)
White/Caucasian	3 (16)
Some other race	1 (5)
Ethnicity (Hispanic, Latino, or Spanish origin)	
Yes	1 (5)
No	18 (95)
Age	
25 to 34 years	5 (26)
35 to 44 years	10 (53)
45 to 54 years	4 (21)
Employment type	
Full-time	16 (84)
Part-time	2 (11)
Unemployed	1 (5)
Employment sectors	
Academia	9 (50)
Government agency	6 (33)
Non-profit organization	2 (11)
For profit organization	1 (6)
Current positions	
Assistant professor (5)	
Associate project director, chief medical officer/medical director	
Director of HIV/STD, State Department of Health	
Epidemic intelligence service (EIS) officer	
Epidemiologist	
Graduate research assistant	
Instructor and behavioral health disparities researcher	
Medical program administrator	
Physician	
Postdoctoral research fellow (2)	
Project director	
Public health policy analyst	

in health education), six (32%) had medical degrees, three (16%) had law degrees, and one reported a master's in public health, in addition to degree in dentistry. Physicians included specialists in community medicine, family medicine, internal medicine, obstetrics and gynecology, and pediatrics. All respondents reported a history of full-time work experience pri-

or to participating in the fellowship.

At the time of the survey, 84% of alumni reported they were employed full time and reported being hired within 1-3 months of program completion. Ten percent (10%) were employed part time or on a contract basis, and 5% were unemployed. Employment sectors and positions are shown in Table 1. Eighty-nine

percent (89%) of alumni reported advancing in their careers since completing the fellowship program. Examples include: 1) being “hired into a leadership position within an organization with influence over policy and direction of programmatic activity;” 2) getting a “junior faculty position [and] serving on a leadership committee of the APHA [American Public Health Association] and [as] a board member of a Georgia organization;” 3) “completed a Health Disparity Research Training Scholarship, promotion from Instructor to Assistant Professor;” 4) developed health policy curriculum for third year medical students and created a health policy/advocacy rotation for second year residents;” 5) “accepted into the highly competitive EIS [Epidemic Intelligence Service] program at the CDC [Centers for Disease Control and Prevention];” 6) “served on professional committees, published two articles and 5 book chapters;” 7) “leadership role as Project Director of [institutional] TCC (Transdisciplinary Collaborative Center);” 8) “Tenure-track faculty position;” and 9) “serve as director of HIV/STD for state department of health.” In all cases, alumni reporting advancement were able to share tangible support for their assessment.

Ninety-five percent (95%) of fellowship alumni reported they were “mostly” or “completely” prepared to assume leadership roles that support the development of programs and policies that reduce disparities and advance health equity—the core fellowship goal. Fifty-eight percent (58%) reported this was “very important” or “essential” for their current positions.

Table 2. Leadership roles

Roles in Current Jobs

Took lead on developing and implementing mental health workshops on campus
 Chair of a search committee for director of the Psychological Services [training] Clinic
 Chair, Global Field Experience Committee [and] principal investigator, President's Health Disparities Grant
 Course director of health advocacy rotation
 Directly lead a team of approximately 25 people. I am the senior most health care professional in my organization, providing leadership [to] the governing board, in addition to clinical leadership
 Serve as project director for the TCC for Health Disparities Research
 Leadership [for] \$67 million in federal and state funding [for] comprehensive [state] service delivery system. [Provide] leadership to 6 direct reports and 45 staff
 Oversee TB, STD, and HIV programs for county Department of Health and Wellness. [Serve as] liaison for county at local, state, and national meetings

Roles in Professional Organizations

Elected to the American Academy of Pediatrics National Committee on Adolescence
 District director for Georgia Academy of Family Physicians [and] Conference Delegate for American Academy of Family Physicians
 [Member of] Equal Health and Opportunity Committee of the American Public Health Association [and] Women's Cluster Leader for the Research Centers in Minority Institutions Program
 Co-chair and chair for the program committee for the Community Health Planning and Policy Development section of the APHA
 Steering representative for county for UCHAPS [Urban Coalition for HIV/AIDS Prevention Services] Organization, which sets national agenda for directly funded HIV jurisdictions [and] assisted with development and writing of 5-year strategic plan
 Vice chair, National Alliance of State and Territorial AIDS Directors [and] secretary, Southern AIDS Coalition

Roles in Community-Based Organizations

Advisory committee member with the Illegal Gun Ordinance Oversight Committee for the City of Portland
 Board member of Someone Cares, Inc. [nonprofit HIV/AIDS outreach organization providing holistic support and interventions to the LGBTQ community]
 Board member of Georgians for a Healthy Future [state consumer health advocacy organization]
 Appointed to the National Advisory Board of Foreverfamily, Inc., a national organization that provides services and resources to children with incarcerated parents

All are direct quotes from alumni survey responses.

Eighty-four percent (84%) reported that they had taken on leadership roles at their current jobs. Almost half (47%) of respondents also reported leadership roles in professional and/or community-based organizations. Subjective reporting of "leadership roles" reflected a range of relevant examples across career, professional, and community-based settings, as shown in Table 2. Examples provided not only reflect alumni engagement in leadership roles, but also demonstrate compelling alignment with the training program's focus on advancing health equity. This also reflects the broad range of collaborative organizations and networks in which fellows are engaged, addressing issues from

mental health and HIV to gun violence prevention and incarceration.

All fellowship alumni reported they were "mostly" or "completely" prepared to both critically analyze issues, programs, and policies that impact health and health care, particularly as they related to health disparities and advancing health equity and to inform the development of health policies to reduce disparities and advance health equity. More than two thirds (68%) reported this preparation was "very important" or "essential" to their current positions; 53% reported that informing the development of health policies was "very important" or "essential" to their current positions. In addition, 21% of respon-

dents reported they had developed, implemented, or changed public policies that addressed health disparities. Descriptions of policies affected are described in Table 3 and reflect significant health policy engagement and impact on issues relevant to disadvantaged and at-risk populations.

As reflected in many of the examples, 74% of respondents reported that health disparities and health equity were "very important" or "essential" to their current positions. Examples included: work related to engagement of American Indian/Alaskan Native populations in public health research; work at the state-level focused on HIV/AIDS, in which "minorities, particularly African Ameri-

Table 3. Health policy impact

Type of policy	Description
Maternal and child health	Consulting on maternal child policies in Nigeria to create “baby-friendly” hospital designation
HIV/AIDS	Developing geospatial maps of HIV/AIDS prevalence by state legislative districts in collaboration with a community-based advocacy organization to inform the legislature’s decision to sustain state ADAP [AIDS Drug Assistance Program] funding Changing state HIV surveillance policy to include transgender individuals Informing modernization of state HIV laws and statutes
Tuberculosis screening and management	Standardizing implementation of CDC-recommended administrative controls across homeless shelters to reduce tuberculosis rates in homeless population of metropolitan county. This policy, which I developed and implemented, has reduced rates of tuberculosis in the homeless.

All are direct quotes from fellowship alumni responses.

can and Hispanic” and “sexual minorities, including men who have sex with men and transgender persons,” are the populations disproportionately affected; several clinicians reported that health equity was relevant to their patient populations (“80% Medicaid”/ “underserved”); and a number of respondents reported it was the primary focus of their research, teaching, and/or program implementation as reflected in the comments: “health equity infuses all of my work” and “health disparities and health equity is all my work is about.”

Finally, fellowship alumni were specifically asked how their “career goals and trajectory” were impacted by participation in the fellowship program. A majority referenced enhanced preparation and skills in

both leadership and health policy as well as positioning through networking and policy-relevant experiences, as shown in Table 4.

DISCUSSION

To our knowledge, this is the first study that evaluates the longitudinal impact of health policy training on the career trajectories of program graduates. In contrast to published reports focused on program descriptions and end of training self-assessments, this study assessed learner outcomes 1-5 years post-training and relevant to overarching training objectives. While our results are early and reflect a relatively small sample size, the majority of respondents are

meaningfully engaged in leadership and professional roles at the intersections of health policy and health equity as reflected in both self-reporting and qualitative sharing of relevant examples. Graduates’ professional positions taken post-fellowship reflect both the multidisciplinary nature of the learners and the broad programmatic lens and curriculum that exposes fellows to leadership roles and opportunities across settings and sites. The range of issues in which graduates and the professional and community-based organizations with which they are involved are engaged, reflect the fellows’ broad spectrum of interests, the range of program partners, and the fellowship’s broad health-in-all-policies lens. The level of reported policy engagement by respondents

Table 4. Impact of training on career trajectory

Provided a strong basis for public health and health policy leadership.
Launched my career in policy.
Prepared me to understand the intersections between research, program implementation, and health policy.
Prepared me to work in the broad-based policy arena where science interacts with public policy.
Critical to helping me make a transition from primarily clinical career to a career in public health.
Provided me with the confidence to pursue health leadership positions I once thought were unattainable.

All are direct quotes from fellowship alumni responses.

was strongly aligned with the program's goal of preparing graduates with a policy tool kit. We were surprised that more than 20% were able to share tangible examples of personal involvement with the development and/or implementation of health policies, despite respondents being only 1-5 years post-training. We believe this reflects their preparation as well as their ability to leverage both leadership roles and their specialized training to move policies forward.

Limitations

There are several study limitations that need to be acknowledged. As noted, the overall small sample size (19 respondents) and relatively short 1-5-year post-training period require us to acknowledge results as preliminary. While we intentionally recruited diverse, multidisciplinary training cohorts and view this as a program asset, the multidisciplinary nature of our learners and range of academic and work histories, also challenge our ability to generalize results across larger, more homogeneous training populations. In addition, as a non-degree-conferring, post-doctoral fellowship, we were not limited or bound by the training requirements of more traditional programs—something that gave us considerable flexibility in designing and implementing the fellowship, but another factor that limits generalizability to more conventional programs. Our program's relationship with a prominent former US Surgeon General (Dr. David Satcher) and location in Atlanta, Georgia, home to a spectrum of public health agencies and organizations, including the Centers for Disease Control and Pre-

vention, also provided several training opportunities and partnerships that might be difficult to replicate in other settings. Probably the most important limitation is that of attribution. Program graduates were very successful in achieving career advancement and in assuming leadership roles in policy and health equity-relevant positions post-training. While the degree to which their post-fellowship career trajectories were a result of or

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coincident to their training experience is impossible to quantify, qualitative responses from the fellowship alumni identified tangible skills as well as increased levels of confidence to pursue career areas of interest.

CONCLUSION

Health professional leaders and educators are increasingly advocating for the importance of health policy training to support engagement and

leadership in public policy issues that impact their professions and the health of communities they serve. Preparing health policy leaders will require not only the development of relevant, evidence-based curricula and training programs but meaningful evaluation to assess the longitudinal impact and outcomes of training on the careers of health professional trainees. This report shares a unique approach to health policy training and evaluation that we believe offers several opportunities for replication and translation across health professional training settings. Intentionality regarding desired learner outcomes, aligning training and learner experiences with outcomes, and meaningfully capturing and measuring outcomes in program evaluation are essential. In addition, integrating and prioritizing health equity and leadership development as core training components are critical to developing the next generation of health policy leaders.

ACKNOWLEDGMENTS

This project was supported by the National Institute on Minority Health and Health Disparities (NIMHD) Grant Number U54MD008173, a component of the National Institutes of Health (NIH). Its contents are solely the responsibility of the authors and do not necessarily represent the official views of NIMHD or NIH.

CONFLICT OF INTEREST

No conflicts of interest to report.

AUTHOR CONTRIBUTIONS

Research concept and design: Heiman, Bayer, Smith; Acquisition of data: Heiman, Bayer, Smith; Data analysis and interpretation: Heiman, Bayer, Smith, Respress; Manuscript draft: Heiman, Bayer, Smith, Respress; Statistical expertise: Smith, Respress; Acquisition of funding: Heiman, Bayer; Administrative: Heiman, Bayer, Smith, Respress; Supervision: Heiman, Bayer

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