

September 2018

Population Health: The Translation of Research to Policy



Case Studies and Commentary

Robert Wood Johnson Foundation Health & Society Scholars

The Robert Wood Johnson Foundation Health & Society Scholars (HSS) program was designed to build the nation's capacity for research, leadership, and policy change, while addressing the multiple determinants of population health. One of its goals was to produce a cadre of scientific leaders who could contribute to this research and spearhead action to improve overall population health and eliminate health inequities.

This report, edited by Robert A. Hiatt, MD, PhD, University of California, San Francisco, takes a case study approach, using six diverse examples of science to policy translation generated by Scholars in the HSS program from 2003 to 2016. Because the HSS program was discontinued in 2017, the Milbank Memorial Fund published these case studies in 2018 in hopes that many audiences, including students, would use them to learn about the connections between research, decision making, and policy.

Introduction

Population Health

Population health is a growing field of scientific inquiry, encompassing examination of the fundamental environmental, behavioral, and social determinants of disease in populations, along with their biological mechanisms.¹ In 2003, Kindig and Stoddart defined population health as “the health outcomes of a group of individuals, including the distribution of such outcomes within the group.”² In the 15 years since this definition was published, others have expanded its scope and developed novel approaches to investigate the complex determinants of health and their interactions in a population. An example of the discipline's broadening is that populations need not be restricted to geographically defined areas, but rather can be defined by a common characteristic such as cultural background or social status.³ In the ongoing debate over national health care reform, the term population health has also been used by health care delivery systems to refer to the patients or individuals cared for in a provider system or health plan.

The multifaceted problems or questions that population health seeks to examine may be disease based but also include health outcomes such as life expectancy and disability. Attention to health inequities within and across population subgroups has also become a signature concern of population health scientists. Investigations may include such diverse domains and conditions as food insecurity, chronic stress, and suicide.^{4,5}

Population health science often takes a life-course approach, reflecting growing evidence that the health of populations is critically dependent not only on genetic attributes, but also on prenatal conditions; early human development, including preschool preparation; periods of susceptibility (e.g., adolescence); and environmental influences that may manifest later in life.^{6,7}

Population health science uniquely requires an interdisciplinary approach to develop questions and design methodologies. Research teams are frequently composed of domain experts in epidemiology, demography, anthropology, political science, economics, sociology, and psychology as well as the biomedical sciences.⁴ Population health science interacts with societal sectors such as education, agriculture, engineering, environmental sciences, labor, law, business, urban development, transportation, and government. This advances the concept that health can be a goal in all policies and recognizes that many of the factors important in the health of populations are “upstream” from the clinical presentation of disease and other manifestations of ill health. These transdisciplinary approaches⁸⁻¹⁰ generate innovative ideas and continue to evolve globally.⁴

Finally, population health science emphasizes the importance of translation and dissemination of new knowledge into useful applications.¹¹ This final step in the continuum goes beyond translation to “the bedside,” with the goal of channeling findings into the interwoven sectors of society that affect the health of populations (e.g., health care systems, transportation, education, environment, and criminal justice). Action and impact are ultimate goals of many population health scientists, as improved population health may not be realized without mobilization of societal-level interventions and/or policy change. The translation of science to policy is itself a matter of scientific challenge, as population health science must be communicated to disparate audiences and decision makers in order to achieve its impact.¹²

How does one convey the complex pathways to be traveled by scientists hoping to have an impact on policy? How are the concepts of population health science and their translation to policy best taught when few scholars are equipped to individually cover its numerous disciplines? To contribute one response to this challenge, this report takes a case study approach,

using six diverse examples of science to policy translation generated by Scholars in the Robert Wood Johnson Foundation Health & Society Scholars (HSS) program from 2003 to 2016. This collection of case studies aims to illustrate how interdisciplinary population health science integrates and translates learning and knowledge from many perspectives to influence health policy. We hope this report will be used as a teaching tool to illustrate the connection between research, decision making, and policy. It could have many audiences, including students in courses in policymaking, research methods, community health, or where one of the topics, such as food policy or substance abuse, is a focus of instruction.

Case Studies

As an instructional tool, case studies teach by example rather than by the didactic conveyance of information. They provide a channel through which scholars learn by observing the successes and failures of those who came before them. The objective of a well-written case study is to stimulate independent thinking, discussion, and debate. In essence, case studies present problems to be solved but do not necessarily present answers. From their origins in the study of law in the late 19th century, they are now commonly used in political science¹³ and a mainstay of education in the health sciences.¹⁴ The analysis of policy development is itself a well-formed science. Political scientists, for example, have studied the process in depth, and texts go into some detail about the steps necessary to establish a workable policy. Among these steps is the need to “tell the story” to the relevant audiences.¹⁵ Case studies of policy development can be used to tell that story.

The studies in this report illustrate the process of translating research into policy and practice to improve population health. The diverse cases illustrate research that informs either big “P” policies (e.g., laws, statutes, or professional guidelines) or little “p” policies (e.g., practices adopted by health systems, businesses, or other organizations).

The case studies are remarkably diverse—an unplanned outcome. They represent the varied nature of the interests and skills of the authors and their own sense of where they could exert the greatest influence. Although these authors draw on the disciplines of epidemiology, sociology, health policy, urban planning, social work, and environmental health, their interests run much more broadly into studies in geographic information systems, social stigma, and documentary filmmaking. The central concept that holds them together is their common interest in understanding and improving the health of populations and using transdisciplinary approaches to achieve population health. The result is a rich offering from which educators can select examples for teaching in a variety of settings.

The intent is for these case studies to be used for skill building at the undergraduate, graduate, and professional levels. They are personal stories that can stimulate students to discuss the experiences relayed and to appreciate both the successes and challenges of integrating research into policy in all of its forms—laws, professional guidelines, or practices adopted by health departments, health systems, or local communities to improve the health of populations.

The Health & Society Scholars Program

The HSS program was designed to build the nation's capacity for research, leadership, and policy change, while addressing the multiple determinants of population health. Among its goals was to improve the nation's health by addressing the full spectrum of factors that affect health and create the evidence to inform related policies across multiple sectors of society.

Another goal of the HSS program was to produce a cadre of scientific leaders who could contribute to this research and spearhead action to improve overall population health and eliminate health inequities. During its tenure, the program trained 193 Scholars at six university sites (Columbia University; Harvard University; the University of California, San Francisco and Berkeley; the University of Michigan; the University of Pennsylvania; and the University of Wisconsin–Madison) to investigate the effects of contextual factors on behavior and biology to strengthen the knowledge base supporting population-wide interventions.

There is no inherent mandate in academia to translate the results of research, and there were differing views among faculty leadership about the appropriate timing for engagement in translation; whether it might divert attention from the core scholarship needed for academic advancement; and the cultural differences across public and private universities in their expectations for the faculty and students to contribute to state and local problem-solving. However, in 2012, the program leadership agreed that all Scholars should:

- Gain basic exposure to the policy process.
- Learn how best to communicate their research to a variety of audiences.
- Be prepared to translate their research to policy and practice.

HSS program leaders strove to build awareness of the need for policy applications; to teach communication skills to reach diverse audiences, e.g., academics, policymakers, thought leaders, and community members; and to develop relationships with policymakers, the media, and professional organizations. Scholars used experiential learning, were exposed to researchers working in the translation of evidence to policy, and enjoyed course offerings and peer learning. Central to this effort was the development and use of case studies. The

six case studies in this report are a result of this initiative. They do not all represent stories of the complete translation of science to policy, but rather present a mix of early experience and more mature results, all of which were considered useful for students interested in the ups and downs of the process of policy development and the lack of guarantees that science will be the only or even a key factor in the final decision-making process. It has frequently been observed that other factors such as politics, costs, and societal behavioral norms weigh heavily in societal decision making, and science may not win the day.¹²

Execution

The case studies in this report were developed by Scholars at various times after the completion of their training. Those who were invited to submit case studies were asked to:

- Address central questions in population health.
- Select questions and research that originated during their time in the HSS program.
- Include projects in which they were a lead investigator or co-investigator.
- Demonstrate an interdisciplinary approach to addressing a health issue.
- Highlight either a policy goal or policy consequences or outcomes of their work.

The selected case studies cover a wide range of important population health topics from food availability to global climate change. They are presented in a narrative, first-person style as though the author(s) were telling the story of the research study to a colleague or friend. The narrative is meant to be accessible to a student or faculty audience or those in policy and practice settings. Each case study includes a synopsis, learning objectives, an introduction to the specific population health issue and the goal of the research, brief description of the study design and its execution, the results of the research, how the results were used to inform policy, and challenges faced along the way. Each study concludes with study questions and assignments.

The Robert Wood Johnson Foundation, the Scholars who produced these case studies, and those of us who shepherded the process along the way hope that readers will find these case studies inspiring and of value.

Acknowledgments

Jennifer Ahern, Sarah Gollust, Jason Houle, Christina Roberto, Kate Strully, and Julien Teitler helped with the development of the request for proposals, the selection of Scholars to present case studies, and a final review of the submitted case studies. At The New York Academy of Medicine, which served as the National Program Office for the Robert Wood Johnson Foundation Health & Society Scholars program, we thank the tireless supportive efforts of Gerard Lebeda, Jo Ivey Boufford, and Christine Bachrach.

Support

This work was supported by a grant from the Robert Wood Johnson Foundation.

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