

A Public Health of Consequence: Review of the May 2016 Issue of *AJPH*

Last month we began coupling this column with invited editorials from experts to help frame and operationalize a Public Health of Consequence. The first of these editorials introduced the concept of Population Health Science as a discipline unto its own.¹ The notion of Population Health Science as a discipline aims to inform how we approach our work in public health, restate how we frame our hypotheses, and help forge a new understanding of the determinants of population health to effectively improve the health of populations. This month's editorial by Krieger helps focus how we approach our work through the lens of theory.² Krieger asks us to stand at theory-informed crossroads and critically examine our work against five main axes. Krieger makes a powerful argument that theory stands at the crossroads of imagination, observation, metaphor, insight, and action—key elements of a public health of consequence. These axes we would argue build well on the themes of a population health science that

is the study of the conditions that shape distributions of health within and across populations, and of the mechanisms through which these conditions manifest as the health of individuals.^{1(p633)}

In much the same way as population health science can be framed as a way of thinking,

a theoretical framing can help ground our questions—and our perspectives to make sure that we ask high-priority questions—toward a public health of consequence.

Building on these two editorials, we comment here on two articles in this issue of *AJPH* that address a core problem of latter day public health concern—obesity—and in so doing illuminate one of the core principles of population health science, as well as the theory that can inform our practice.

Chen et al.³ tackle obesity, one of the sentinel domestic and increasingly most pressing global challenges to population health. Chen et al. show that neighborhood food environment is associated with both obesity and overweight status, even when taking into account home food environment. This analysis echoes both invited editorials. First this analysis well demonstrates that “ubiquitous causes can exert a powerful impact on disease incidence.”¹⁽⁵⁹³⁾ Neighborhood food environment is the quintessential “ubiquitous cause,” an exposure that affects how residents of the neighborhood behave and the food they eat. It is an inescapable, hence ubiquitous, determinant of dietary patterns, and a foundational driver of population health. Second, this work finds itself, in Krieger's² terminology, at the crossroads of science and society, showing us that societal factors stand to produce health

above and beyond an individual and her family.

Importantly, the work by Chen et al.,³ reinforces the importance for a public health of consequence, to ask the right question to tackle the problem at hand. Namely, obesity in the United States has risen dramatically in the past 30 years.⁴ It defies plausibility that our eating behavior has changed that much during this short time period, or that any constitutional or genetic factors have changed sufficiently to contribute to rising obesity. This then suggests that a focus on solving the obesity problem must indeed lie in examining the social and cultural factors that have plausibly changed dramatically over just a few decades and that must be tackled to address the obesity challenge. The work by Chen et al.³ illustrates some such factors but perhaps most importantly points us away from individual-based solutions to a problem whose roots clearly cannot be based solely at the individual-level but must lie at the crossroads of science and society.

A similar message emerges from the work of Wasfi et al.,⁵

also in this issue of *AJPH*, illustrating the role of neighborhood walkability, and also echoing the work of previous authors who have shown that structural factors (not individual factors), like neighborhood walkability, are core determinants of individual walking behavior.⁶ We also applaud both authors for pairing appropriately sophisticated (but often impenetrable) tables of regression coefficients with clear and refreshingly simple graphics that give the take home message at a glance. The importance of this cannot be overstated. We can only create a public health of consequence if important findings can be communicated and understood. The table-figure juxtaposition is illustrated well by Wasfi et al.⁵—which is easier to digest: the unweighted random coefficient estimate of 0.45 in Table 2 or the green line in Figure 2 of their article? We would argue it is the latter.

As we note that these two articles build well on the two editorials accompanying this section, we conclude by bringing to the reader's attention that previous work published nearly two decades ago in *AJPH* had highlighted some of the core concepts being discussed here well.⁷ Schwartz and Carpenter coined the term “the right answer for the wrong question,”

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suggesting that looking, for example, for an individual-based solution to a problem like obesity that clearly must have societal roots may usefully be called a type III error. By way of illustration, the obesity epidemic in the United States over the past few decades has coincided with an enormous increase in research about the genetics of obesity. While this approach may yield important mechanistic insights into how we gain weight, it most decidedly will not tell us anything about why obesity has increased over the past few decades, unless we were to argue that our genes have dramatically mutated over the past 30 years. This, therefore,

represents a type III error and is work that is neither particularly consequential for public health, informative for population health science, nor suitably at the crossroads of society and health where much of the solution for this particular problem must dwell. Type III error has not really caught on in public health, but we posit that it unfortunately applies to far too many approaches we often blindly adopt uncritically in public health. Ubiquity as central to population health science¹ and the crossroads of society and health as an animating theory as articulated by Krieger² are two additions to our thinking that can, with some

luck, steer us in a better direction, toward a public health of consequence. *AJPH*

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Emergency Care for Homeless Patients: A Window Into the Health Needs of Vulnerable Populations

Individuals experiencing homelessness carry a high burden of medical and behavioral health illness.^{1–3} They often struggle with balancing the daily needs of shelter, food, and safety with management of health and health care needs.⁴ They also frequently lack health insurance or access to continuity of care. This mix of factors often leads to a high usage pattern of the emergency department (ED) system. Multiple studies have documented high usage patterns among homeless individuals and the resultant high costs.^{1,5,6} Few studies, however, have attempted to evaluate the quality of care compared with individuals without experiences of homelessness.

Feral-Pierrssens et al. investigated the quality of care for homeless individuals by evaluating the quantity of resources provided in an emergency room setting.⁷ The authors conducted a cohort

study of 254 homeless and 254 matched control patients who visited 30 emergency departments (ED) in France over a 72-hour period. Homeless individuals were matched to nonhomeless individuals on gender, severity level at triage, and age. The primary endpoint of the study was the order by the emergency physician of any diagnostic test or provision of any treatment in the ED. Some secondary endpoints included ED length of stay and discharge disposition. They found no significant difference between homeless and nonhomeless patients in the rate of diagnostic test or treatment in the ED. The homeless patients did have a higher burden of behavioral health disease and longer ED lengths of stay. They were also more likely to have a return visit to the ED (30% vs 9%) and were less likely to speak French (77%

vs 98%), and only 44% had basic health insurance.

This study sets a platform for dialogue about homeless health services on multiple levels, including individual health care systems, access to care, health care reform, the need to control health care costs, and the need to narrow health equity gaps for vulnerable populations.

Health systems in the developed world are confronted with the need to provide emergent care to vulnerable populations who often have fragmented health care continuity and lack of health care insurance. Ideally, homeless individuals should

have access to appropriate continuity of care and care coordination so that the emergency department does not become a default entry point into the health care system. Multiple barriers exist, including access to health care insurance, language barriers, and the capacity for the health care system to adequately provide treatment.

In the study by Feral-Pierrssens et al.,⁷ fewer homeless patients spoke French or had health insurance, which could lead to barriers to accessing appropriate health care. This can help explain some of the differences seen in the two populations in this study, including longer ED length of stay. The group of homeless individuals in this study came back to the ED more frequently than the controls, which could have led to the development of relationships with ED staff. But

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