


# When Population Health Science Intersects With Pressing Cultural Issues: A Public Health of Consequence, March 2019

 See also Feldman et al., p. 458; and also Fox et al., p. 497.

Population health science is concerned with the forces that influence the distribution of health in populations and points the way to public health action on these forces to improve health.<sup>1</sup> These forces include social, economic, and cultural factors, so it is not at all surprising that some of these forces are of contemporary social consequence. Two articles in this issue of *AJPH* tackle issues that are white hot in the national public conversation.

Feldman et al. (p. 458) assess the connection between neighborhood residential segregation and rates of police-related deaths in the United States. They find that police-related deaths are concentrated in neighborhoods with a higher proportion of low-income residents and residents of color. They conclude, correctly, that coming to grips with police-related deaths will require attention to the context within which these deaths occur. Perhaps even more acutely attuned to the cultural moment is the examination by Fox et al. (p. 497) of the effect on adolescent births of funding for abstinence-only education versus adolescent pregnancy education and sexuality education. The authors also compared whether this effect was more consistent across conservative or liberal states. They found that federal abstinence-only funding had no

effect on adolescent births overall but increased adolescent births in conservative states. By contrast, adolescent pregnancy prevention and sexuality education reduced adolescent births in conservative states.

## ISSUES OF CONTEMPORARY CONCERN

The issues tackled by these two articles could not be more current with contemporary public debate. Both issues are heavily politicized and are regularly featured in election campaigns, both to increase votes for candidates who promote particular approaches and to decrease votes for candidates who are opposed to particular approaches. A few highly visible police shootings have galvanized public debate. On one side of the political spectrum, police shootings are seen as appropriate responses to life-threatening situations. On the other side, police shootings of principally unarmed Black or African American men has animated the #blacklivesmatter movement and has catalyzed substantial attention to the issue of violence inflicted on, and disproportionately borne by, minority communities.

The issue of funding for adolescent pregnancy prevention versus abstinence-only

education gets at the heart of a long-simmering political divide that has allied itself with religious positions on sex education and, indirectly, on access to abortion. The political right in the United States has been propelled by calls to promote traditional values, seen by many as including sexual relations only within marriage, and by arguments for the right to life from the moment of conception, superseding the rights of the mother. Neither the left nor the right stance on these issues is a fringe or marginal position; rather, they are held by leading presidential candidates. Clearly the issues at hand are highly emotionally charged and, at core, dwell on the values espoused by those who support them, with these values being deeply enough held to sway elections.

It is therefore a charged environment in which population health science wades, indeed has to wade, to bring data to bear on the public conversation. And the involvement of scientists in these issues has not gone unnoticed by those who are engaged in the politics of the moment; science often stands accused of buttressing the arguments of one party or another, effectively politicizing

what should be an exercise in understanding the data. There is substantial danger in the science being seen as promoting a particular political, or value-driven, perspective: credibility in the dispassion that informs our work may be lost, and we may lose a hearing when we have data that can inform the public conversation.

## THE ROLE OF THE SCIENCE

With this background, what is the role of population health science in generating data that intersect with pressing public debates? We would suggest that three principles apply.

First, a dispassionate analysis of the evidence remains paramount to the population health scientist. As we have argued before in these pages, population health science is the foundational science of public health.<sup>2</sup> It is public health's role to identify approaches that can improve population health. The population health scientists' role is to analyze the data, to produce the evidence that can then inform and be adopted (or rejected) by public health practice. Therefore, credible analysis that is unbiased, and informed only by the data itself, is the central contribution of population health science.

We would argue that this is the case never more than when the population health scientist is dealing with issues that burn bright during a cultural moment, when suspicions run high that the

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science is promoting an agenda. At core, the only agenda of the scientist should be uncovering truth, and it will be up to those responsible for implementation to have the wisdom to act on this truth. It perhaps goes without saying that no science is completely free from bias. The very questions we ask embed assumptions and perspectives, as do the approaches we take and how we tackle particular questions. Therefore, the challenge is to rise above even our customary level of caution when conducting work that is salient on a contentious public stage, not because our work may be called out by those who disagree with it but because our work should have the integrity to stand up to scrutiny, regardless of context.

Second, although shaping values is a critical part of the armamentarium of the public health professional, as we have discussed before,<sup>3</sup> it is incumbent on population health scientists to be clear about their values and the values that animate a particular area of inquiry. We must hold ourselves to a high standard that ensures that these values do not unduly influence the questions we are asking and the approaches we are taking to answer these questions. We admired, for example, the work of Fox et al. (p. 497), who did not focus their analysis on solely one approach to reducing adolescent pregnancy. An article that assessed only whether adolescent pregnancy education and sexuality education makes a difference would have missed an important set of approaches to the issue—including abstinence-based approaches—and would have been presupposing the answer. That the article showed that adolescent pregnancy education achieves its desired outcome, whereas abstinence-based approaches do

not, gives us actionable evidence without presupposing an answer by way of omission. In some respects, this is just good science. However, we would argue that science being self-aware about the values that inevitably inform it is doubly important when dealing with issues of contemporary consequence.

Third, we do not think that population health science should shy away from tackling issues that are in the public eye. Issues are in the public eye for a reason: populations intuit that they matter. Intuition stands to inform important scientific questions, and we would be in error to ignore insights and hypotheses that can emerge from an observation of the issues that animate the public debate. However, in conducting such science, we also embrace a higher responsibility: to conduct the best possible science that can stand up to scrutiny and to communicate the science in a way that helpfully informs the very public conversation that generated the scientific hypotheses. Although translating the science should always be on our minds, this is more the case when public action can follow from our work in the short term, making it incumbent on scientists to ensure that their work informs the public discussion in a timely fashion. The broad array of digital avenues for communicating population health science is a wealth of platforms and opportunities for this engagement that did not exist as recently as a decade ago.

## GOOD SCIENCE TO INFORM THE PUBLIC CONVERSATION

That population health science stands to inform the public conversation is to the good—it

suggests that we are engaged with issues that matter to the public that ultimately we wish to serve. The two articles tackling such matters in this issue of *AJPH* do just that. This work reminds us of the imperatives that inform good science and the paramount importance of elevating those imperatives. These imperatives include conducting unbiased work with an awareness of our underlying values and communicating this work effectively to inform the public conversation. We must ensure that our work remains relevant and contributes, as it should, to the very public discussion that informs our thinking in the first place. *AJPH*

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### CONFLICTS OF INTEREST

No conflicts of interest.

### REFERENCES

1. Keyes KM, Galea S. Setting the agenda for a new discipline: population health science. *Am J Public Health.* 2016;106(4):633–634.
2. Galea S, Vaughan RD. Population health science as the basic science of public health: a public health of consequence, October 2018. *Am J Public Health.* 2018; 108(10):1288–1289.
3. Galea S, Vaughan RD. Data with passion and purpose: a public health of consequence, September 2018. *Am J Public Health.* 2018;108(9):1132–1133.

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