

Getting to Average Life Expectancy: It Takes Commitment

 See also Kindig et al., p. 87.

In 2012, the Institute of Medicine (now the National Academies of Science, Engineering, and Medicine) report *For the Public's Health: Investing in a Healthier Future* recommended that

the Secretary of the Department of Health and Human Services . . . adopt an interim explicit life expectancy target and establish a specific per capita health expenditure target to be achieved by 2020 [to] engage all health system stakeholders in actions intended to achieve parity with averages among comparable nations.^{1(p33)}

In this issue of *AJPH*, Kindig et al. (p. 87) provide a historical perspective on how achievable the life expectancy target might be.

LOST MOMENTUM

The sad truth is that the United States, once the nation with the longest life expectancy, has slipped further and further behind competitor nations. It is not for lack of per capita health care spending. In that, the United States leads the world. The United States remains mired in health inequity as well. The Affordable Care Act enabled millions of people to get health insurance—surely a step forward. But the reality is that more fundamental change will be needed if we are to resume the extraordinary life expectancy trajectory that we had in the 20th century. Over that time, life expectancy rose from 47.3 years in 1900 to 76.8 years in 2000—a gain of almost 0.3 years for each year over the entire century. That momentum has been lost. By 2012, life

expectancy had increased to 78.8 years, a gain of less than 0.2 years for each year so far this century.²

MEDICAL CARE

Although medical care has become more sophisticated and more costly, it can solve only a small part of the problem. As formulated by County Health Rankings, clinical care accounts for only approximately 20% of health, whereas 40% can be attributed to social factors, 30% to individual behaviors, and 10% to the physical environment.³ Yet, as Bradley has shown,⁴ the United States devotes an inordinate proportion of its dollars to clinical care and badly underspends in social services. Medical spending is virtually uncapped, whereas social services are squeezed and policies to enhance equity languish. Childhood poverty, inadequate educational opportunities, unsafe communities with poor access to parks, high rates of incarceration, racism, lack of active transportation, unhealthy diets, and unaffordable housing exemplify structural problems that underlie our poor health indices.

FOSTER EQUITY

The enormous achievements (and ultimately the size) of clinical care over the second half of the 20th century fostered public acceptance of and overconfidence in the medical model of health. Yet most of the greatest progress has

historically been in population health initiatives—clean water, safe homes and workplaces, decreases in smoking, safe roadways, vaccinations, and many more. Recognition is growing that we must more vigorously address the social and environmental determinants of health if we want to regain the levels of progress in life expectancy that we had in the past century. This will require major changes in the public perception of what produces health as well as a commitment to addressing and supporting the policies and activities that will improve them. Investments in, for example, education, employment, living wages, criminal justice, active transportation, and parks, can foster equity and substantially improve health. Many of those resources should come from squeezing the wasted money from the medical care system and investing it where it can do more good for the public's mental, physical, and social well-being.⁵

BECOME "AVERAGE"

Which brings us back to the Institute of Medicine's goal to become "average" by 2030. Kindig et al. show how challenging it will be to accomplish even that seemingly modest feat. Ambitious goals are set for many reasons and in many ways. The

goal to become average was very much a wake-up call. Becoming average was indeed an audacious goal despite the 18 years the nation had to achieve it. The goal was intended to capture the country's attention and galvanize action to address the underlying reasons we lag behind our competitor nations and, despite our enormous investments in clinical care and clinical research, suffer from poorer life expectancy and unacceptable health inequity. Kindig et al. show that many nations and US jurisdictions do achieve the levels of improvement in life expectancy needed to meet the goal. The question is not one of feasibility, but will.

Importantly, the goal shines a light on what we as a nation must do. Life expectancy is, of course, a long-term measure, and arguably not the most important. But it is indicative of many of the underlying problems that contribute to the well-being and prosperity of the country. Substantial change is needed, and the changes that are needed are to reorient our priorities and resources to the social and environmental determinants of health. If we fail to do that, the United States will fall further and further behind other developed nations and our future will be bleak indeed. *AJPH*

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Sexual Assertiveness Skills and Decision-Making in Adolescent Girls: Moving to Replication, Scale, and Digital Health Impact

 See also Widman et al., p. 96.

In this issue of *AJPH*, Widman et al. (p. 96) report on outcomes from a randomized controlled trial of a 45-minute interactive skills-building online program called HEART (Health Education and Relationship Training). HEART was shown to have a significant effect on the study's primary outcomes of sexual assertiveness skills and intentions to communicate about safer sex behavior, and the authors reference research linking such intentions to improved sexual health behaviors. The secondary outcomes included evidence that HEART helped adolescent girls improve their sexual health knowledge as well as attitudes and norms about condoms and self-efficacy for condom use; these improvements were sustained at the four-month postintervention follow-up.

This work adds to the growing body of evidence that digital health solutions—Internet, text messaging, social media, and mobile health applications, or “apps”—can affect key antecedents to sexual health behavior, sexual health behaviors, and sexual health outcomes; the work also adds to the evidence of effects on other health behaviors and changes in health outcomes.^{1–5}

CHALLENGES

Although the evidence of the effectiveness of digital health is expanding, there are some key areas where the field faces challenges. One critique of digital health solutions is a lack of consistent attention to using these tools for those facing disparities. This attention would address an important gap in access to effective strategies for health promotion, illness prevention, and self-management for disadvantaged populations. In their explicit consideration of high-risk adolescent girls, the HEART developers work to address this gap and offer a clear example of how we can capitalize on the reach of effective digital education and training to support healthy behavior.

Another challenge we face in digital health is not understanding whether and how specific elements of effective programs work. Too often our research explores the outcomes of interventions in their entirety without critical considerations of whether and how people engage with specific program elements and whether increased engagement or the program results in greater efficacy. The HEART authors offer the intriguing evidence that computerized role play in sexual communication can be even

more effective than in-person role play. In HEART it appears that girls can simulate conversations through computerized role play without the embarrassment that can be present during in-person role playing. This offers better accuracy on how the program specifically affects sexual assertiveness skills.

Digital health solutions are perhaps uniquely positioned to parse participant exposure to and engagement with different program elements because we can document where people click within programs, what they do online, and how long they engage with elements—getting greater precision on engagement than we do in real-world programs. The success of HEART's computerized role play mirrors the findings of digital education more generally: that computerized teaching strategies can facilitate building competency, and ultimately mastery, of material.⁶ This is important and useful information for the field to build on. Finally, the HEART study is one of a small number of studies that show that digital health

effects can last beyond the very short term; some of their secondary outcomes were sustained for four months after intervention, suggesting immediate decay is not inevitable.

LIMITATIONS

The research on HEART is not without limitations. The authors assessed sexual assertiveness in a posttest rather than a more rigorous pre-post assessment, which would have allowed time by treatment comparisons. Additionally, baseline differences in attitudes toward condoms across intervention and control groups suggest that postprogram differences in condom attitudes may not be fully attributable to the HEART program.

The small sample of sexually active youths precluded the ability to demonstrate intervention effects on sexual health behavior. However, this limitation is perennial for any investigator wishing to focus on primary prevention in sexual health. In sexual and reproductive health, we appropriately wish to focus on building skills before sexual debut. Without the resources or support to conduct longer-term follow-up as youths transition to sexual activity, it remains a challenge to demonstrate the effects on sexual health behavior as long as the

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