

EDITORIAL COMMENT

Tackling Health Disparities

Many Challenges Ahead*



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A lifelong healthy lifestyle is the most important way to prevent atherosclerotic vascular disease, heart failure, and atrial fibrillation (1). A healthy lifestyle not only prevents disease, but can also maintain optimal cardiovascular health (CVH) resulting in a healthier and longer life (2). This has led the American Heart Association to promote individual lifestyle efforts to control 7 risk factors that help achieve and maintain optimal CVH (3,4). The Life Simple 7 includes managing your blood pressure, controlling your cholesterol, reducing your blood sugar, getting physically active, eating a healthier diet, losing excess weight, and stopping smoking (3). Even modest gains in 1 or more of these factors can make a big difference in your health.

Although the Life Simple 7 is a vital step to CVH, it will be very challenging to achieve, especially among the high-risk vulnerable population (4). A recent National Health and Nutrition Examination Survey (NHANES) study among adults found that between 1988 and 2014, CVH declined in the United States (5). In addition, racial/ethnic disparities persisted, and modest gains in decreasing disparities were mostly due to worsening CVH among whites rather than gains among African Americans and Mexican Americans.

Children and young adults were not included in this study (5). However, behaviors that support CVH

among adults are likely to develop when acquired during childhood and the early adult years (4). Of concern is that in the United States, among children and adolescents, we have evidence that key lifestyle elements are not trending positively. A 2018 Report Card study from the National Physical Activity Plan Alliance summarized national data assessing delivery of the 2008 Physical Activity Guidelines for Americans (6). The Guidelines recommend that children and youth ages 6 to 17 years participate in ≤ 1 h of physical activity every day of the week. In total, 9 indicators related to physical activity in children and youth were studied: 1) overall physical activity; 2) sedentary behaviors; 3) active transportation; 4) organized sport participation; 5) active play; 6) health-related fitness; 7) family and peers; 8) schools; and 9) community and the built environment. The report found that providing children and youth opportunities and/or support for physical activity to meet these Guidelines was occurring only 20% to 39% of the time.

Obesity and overweight are also becoming more common among children (7). Despite previous reports that obesity in children and adolescents had remained stable or decreased in recent years, a recent study using NHANES data from 1999 to 2016 found a positive linear trend for overweight and obesity among children age 2 to 19 years (7,8). Non-Hispanic African-American and Hispanic children had higher prevalence rates of overweight and obesity compared with other racial/ethnic groups. Alarming, children age 2 to 5 years showed a sharp increase in obesity prevalence from 2015 to 2016. Finally, data from the SEARCH for Diabetes in Youth Study indicate that among children and adolescents age 10 to 19 years, minority populations had higher rates of new cases of type 2 diabetes compared with non-Hispanic whites (9).

In this issue of the *Journal*, Fernandez-Jimenez et al. (10) tackle health disparities and report on the

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impact of 2 different lifestyle interventions on parents/caregivers and children attending preschools in Harlem, New York, a socioeconomically disadvantaged community. This cluster-randomized trial within Head Start preschools gave participants 12 months of an individual, a peer-to-peer-based, or a control group lifestyle intervention. The interventions also included some social determinant-related efforts, including financial management and tax advice for participants. Their main outcome was a composite score related to blood pressure, exercise, weight control, eating habits, and tobacco use—aligned with Life Simple 7 indicators. After assessing study-end outcomes at 12 months, they repeated the same measures at 24 months to determine intervention sustainability. They found no impact at the 12-month study-end nor at the 24-month sustainability assessment. While the investigators found more favorable impact trends among the participants who had high adherence to the intervention, the effect size was very modest.

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Strengths of their study's approach are noted here. The use of a cluster randomized method with the unit of randomization being the Head Start preschools mimics more the real-world approach if such interventions were successful and were to be more broadly implemented. They used interventions somewhat tailored to the community's capacity and engaged key stakeholders (Head Start schools and parents). They used a composite score containing key Life Simple 7 elements. This type of measure can identify meaningful gains in composite risk reduction. The intent-to-treat analysis was highly appropriate in this setting. Having a sustainability measure was also a strength, although a more in-depth assessment would be very useful (11,12), along with qualitative data to help understand the facilitators and barriers to uptake and sustainment.

Some of the major challenges for the study were the 30% of participants lost to follow-up, the high baseline composite scores across all 3 groups, and the potential that robust intervention elements were received among the control group. Finally, the effect found among adherent participants must be interpreted with caution, as this group will likely have inherent bias.

Focusing on this vulnerable population is a step forward as we tackle disparities—but much improvement is needed. For example, the 2018 National Healthcare Quality & Disparities Report highlights the

gap in access to health care among the poor compared with high-income populations as well as the proportion of racial/ethnic groups receiving worse quality of care compared with the majority population (13). Head Start, Medicaid, and the Children's Health Insurance Program (CHIP) are all examples of education and health efforts to reduce disparities (14). Advances in reducing health disparities also need to consider elements outside of the health sector that address social determinants more broadly (15), the built environment (16), community structural challenges, and the need to integrate social service alongside health care (17,18). Finally, cultural preferences need to be considered during intervention development to avoid discordance (19).

In addressing health inequities, the role of implementation research—taking proven effective intervention and finding optimal strategies for delivering them—is critical. Currently, the National Heart, Lung, and Blood Institute is investing in this approach to eliminate heart and lung disease disparities in communities (20). In tackling these disparities, the approach includes: identifying high-burden communities, using best practices in community engagement, implementing evidence-based interventions, aligning community partners with care networks, incorporating novel research methods and milestones, and finally, investing in training the next generation of implementation researchers focused on health disparities (21-23). An example of a successful implementation model can be found within national diabetes prevention programs, which have linked communities with preventive care and use lifestyle-focused interventions (24,25). These efforts have been found to have good economic value (26).

In conclusion, if we are going to make progress toward our common goal of eliminating disparities, effective interventions focused on populations with a high burden of health disparities are sorely needed. Implementation research can then take these effective interventions and find the optimal way to deliver them in a sustainable fashion.

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