Education

IN LIFESTYLE MEDICINE

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Students Teaching Students: Bringing Lifestyle Medicine Education to Middle and High Schools Through Student-Led Community Outreach Programs

Abstract: *Lifestyle medicine has the power to reverse the growing burden of chronic disease that now plagues our health care system. The World Health Organization, the Centers for Disease Control and Prevention, and the American College of Lifestyle Medicine have all independently recognized the need for community-centered lifestyle medicine education as a means of empowering individuals to take charge of their own health. Students in undergraduate, medical, and allied health schools may serve as mediators for these conversations. With guidance from faculty lifestyle medicine mentors, these students can operate as peer educators in primary and secondary schools to supplement current health teaching with the core tenants of lifestyle medicine: nutrition, exercise, sleep, mental and social well-being, and substance avoidance as strategies to prevent and treat chronic disease. We present models of two such student-led programs working with*

middle and high school students in Massachusetts and New Jersey. Both programs have found success by engaging middle and high school students in interactive workshops and by responding to their individual interests and community needs. We share our currently available resources and, moving forward, hope to publish a tested curriculum that

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Americans today are on track to be heavier, sicker, less active, and more socially isolated than their parents. According to the World Health Organization (WHO), chronic diseases

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Our world of convenience food; cheap, inactive transportation; and online social networking has led to patterns of overconsumption, sedentarism, and isolation. In the United States alone, “90% of the nation’s \$3.3 trillion in annual health care expenditures are for people with chronic and mental health conditions.”² The health burden originally occupied by communicable disease is being replaced by preventable, lifestyle diseases.

WHO resolutions and Centers for Disease Control and Prevention initiatives indicate that a “public health approach of primary prevention is considered to be the most cost-effective, affordable and sustainable course of action to cope with the chronic disease epidemic worldwide.”³ Chronic disease is the summative impact of harmful lifestyle behaviors (poor diet, inactivity, stress, smoking, and alcohol) employed over a lifetime. And thus, the primary method of minimizing chronic disease burden is to address the lifestyle factors that give rise to them. Although chronic disease is not considered to be communicable, risk factors are. Communities perpetuate eating habits and activity patterns that define lifestyle disease and are the mechanisms of transferring the burden of chronic disease across generations.⁴ The future of each community is in their youth; healthful habits instilled in the younger generation have the potential to positively impact current and future members of the community.

The US Department of Health and Human Services (HHS) has recognized the importance of addressing the health of our youth and established the Healthy People 2020 campaign. The campaign describes areas of concern including tobacco and alcohol use, unhealthy dietary patterns, and inadequate physical activity as well as the recommended method of addressing them: “educational and community-based programs.”⁵ These topics, and the topics outlined in related WHO resolutions describing the need for a “strategy on diet, physical activity and health,” align with the goals of the American College of Lifestyle Medicine (ACLM).^{2,6} Over the past decade, the scientific literature has continued to

support solutions among a common non-pharmaceutical thread: nutrition, exercise, sleep, mental and social well-being, and substance avoidance as strategies to combat the ever-increasing burden that chronic disease places on our health care system. However, as medical professionals have learned, lifestyle medicine is not just another pill we can prescribe, it requires physician, patient, and community partnerships backed by a shared appreciation of the impact these interventions can have on health. Echoing the HHS position, leading physicians published a special report in *The Permanente Journal* last September, which called for addressing “the impact of lifestyle changes on future generations” and doing so “from the earliest ages.”⁷ Select faculty and trainees of ACLM have heard these calls and begun implementing such community interventions at schools in Massachusetts and New Jersey.

The following 2 programs emerged independently and in response to a need for early lifestyle medicine education that supplements current school health programming. The audiences differ in their ages, environments, and socioeconomic standing and yet the crux of each program, developed without communication with the other, is the same: To provide the younger generation with digestible lifestyle medicine workshops that steer them to make decisions that prioritize their physical, mental, emotional, and social health. Both the Massachusetts program, with Meadowbrook Middle School, and the New Jersey program, with Science Park Middle and High School, provide students with interactive workshops that promote discussion and are activity-based; this structure allows students to understand the practical applications of lesson topics to their lives.

At Meadowbrook, each 1-hour class consists of a short lecture that focuses on one key topic followed by an interactive discussion with the students. Rather than overwhelming the students with too much information, the unique format of these 1-hour classes allows students to thoughtfully engage with the material. The class at Meadowbrook Middle

School consists of 8 students ranging from grade 6 to grade 8. The incredible level of excitement that the students generate during class discussions makes it clear that they are eager to learn more about lifestyle medicine. At the end of each class, the students set actionable goals that push them to implement something from the course into their everyday lives. The students embrace these challenges each week and share their experiences at the beginning of the next class. At the end of the first 12-week program, the students and faculty at Meadowbrook noted the tangible impact of the course, exposing a striking demand for a curriculum rooted in lifestyle medicine for students of all ages. The teachers and administrators were so happy with the class that they wanted to offer it twice the following year, once in the fall and once in the spring.

In Newark, New Jersey, the Rutgers New Jersey Medical School Lifestyle Medicine Interest Group has created a similar after-school workshop for middle and high school boys. Each lesson consists of a short lecture, an activity that requires students to leave their seats, and a current event discussion. Incorporating combinations of visual, auditory, and tactile learning engages the students and improves information retention. The students, in groups of a maximum of 15, receive 8 lessons each academic year. The purpose of the lectures is to address the long-term consequences of poor health choices, and the benefits of good ones. The activities go on to provide practical methods of implementing lecture examples and to encourage behavior modification within the constraints of the students’ environments. In-class discussions address how individual, financial, and environmental factors all affect their health and the health of their community. The high school students particularly enjoyed sleep, healthy relationships, and exercise topics, explaining the information was new and workshops activity-based. The students believed that an understanding of lifestyle medicine core pillars is important for their families and communities and could be used to make choices that prioritize healthy living. The

hope is that through discussion the students will understand that choices they make and habits they develop today determine their current and future health outcomes. In addition to the topics of health discussed, the curriculum works to expose students to goal-setting and critical consumption of academic and nonacademic literature. All lessons conclude with current events that place the health topic in the context of the students' daily and community lives. The intent of such effort to develop a comprehensive curriculum by these students is to publish a model program with the hope that it can be easily replicated by other undergraduate and medical student groups and inserted into communities around the country.

These initiatives introduce children to lifestyle medicine principles and partner students from primary to graduate educational levels alongside community educators and physicians. These programs, created and executed by college students and medical students, have the potential to be available throughout the United States. Most undergraduate and health-profession students are encouraged or required by their institutions to serve their local communities and providing lifestyle medicine education is an impactful way of getting involved. Lifestyle medicine interest groups can partner with local schools to provide students lifestyle medicine education over months or years. This longitudinal learning is a central to the model; it allows for increased depth of the curriculum and provides mentors time to develop relationships with their students and schools. The tiered structure of the model offers primary and secondary students the chance to learn

from undergraduate and health-profession students, all of whom receive guidance and feedback from medical and health faculty.

With more robust feedback and data collection, this program model can be further refined and the effectiveness strengthened for publication and distribution. The hope is that an established and published program model will clear the way for sister programs to be implemented by lifestyle medicine student groups throughout the country. ACLM has available resources to get programs started including the *Lifestyle Medicine Syllabus* available for free on the ACLM website.⁸ The *Lifestyle Medicine Handbook: An Introduction to the Power of Healthy Habits*, written in collaboration with the ACLM, is also available for purchase. These resources, along with the ACLM's student and trainee leaders, can help interested students and health care professionals to better understand the wealth of scientific research that is the foundation of lifestyle medicine. Armed with evidenced-based knowledge of the preventive and curative power of lifestyle medicine interventions on chronic disease, it is our responsibility to inspire and educate the future generation.

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Trial Registration

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