

# Curriculum Inventory in Context

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## Progress of Lifestyle Medicine Education

### Background

The Centers for Disease Control and Prevention report that 6 in 10 adults in the United States have one chronic disease and 4 in 10 adults have two or more chronic diseases.<sup>1</sup> In addition, 90% of the \$3.3 trillion in annual health care costs in the United States are related to chronic disease (e.g., heart disease, cancer, and type 2 diabetes), yet these diseases can be prevented or, if not, managed and treated and their risks reduced.<sup>2</sup> Physicians are in a key leadership position to educate and motivate patients to prevent and treat chronic diseases. Lifestyle medicine is the evidence-based clinical discipline of counseling on “a predominately whole food, plant-based diet, regular physical activity, adequate sleep, stress management, avoidance of risky substance use, and other non-drug modalities, to prevent, treat, and, oftentimes, reverse the lifestyle-related, chronic disease.”<sup>3</sup>

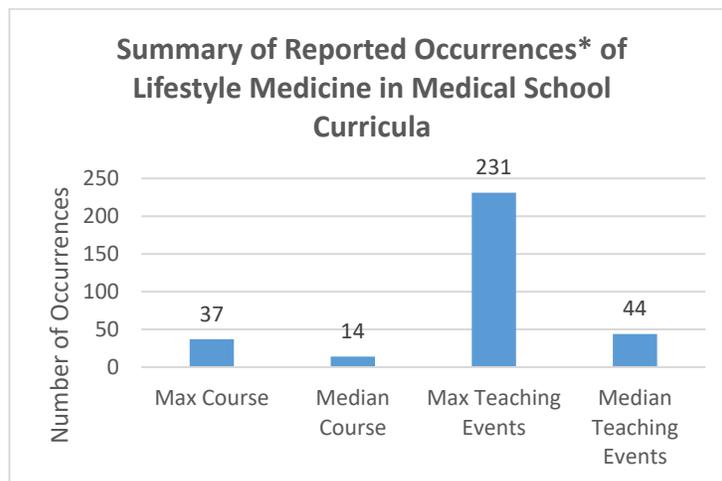
Over the last 10 years, awareness of lifestyle medicine as a clinical discipline has increased in the literature, in government, and throughout medical education. A number of recent scholarly articles demonstrate advances in lifestyle medicine tools, guidelines, and rationale.<sup>4,5,6</sup> Three bills introduced in Congress in 2017—(1) the ENRICH Act (a.k.a. the Expanding Nutrition’s Role in Curricula and Healthcare Act),<sup>7</sup> (2) the EAT for Health Act (a.k.a. the Education and Training for Health Act of 2017),<sup>8</sup> and (3) the PHIT Act (a.k.a. the Personal Health Investment Today Act)<sup>9</sup>—all promote lifestyle medicine in medical education and use of lifestyle components to prevent chronic disease. Also in 2017, the American College of Preventive Medicine put forth a resolution at the American Medical Association’s House of Delegates Interim Meeting to “ support legislation that incentivizes and/or provides funding for the inclusion of lifestyle medicine education in medical school education, graduate medical education, and continuing medical education.”<sup>10</sup> Encouragingly, the University of South Carolina School of Medicine Greenville formally integrates more than 80 hours of required lifestyle medicine training across 4 curriculum years in every module and every organ system,<sup>11</sup> and other schools are increasingly integrating various components of lifestyle medicine into their core curricula (e.g., University of California, San Diego School of Medicine), into parallel and/or elective courses (e.g., Harvard Medical School), and/or as stand-alone, for-credit courses (e.g., Stanford University School of Medicine).<sup>12-19</sup>

Since 2013, the Lifestyle Medicine Education Collaborative (LMEd) has been at the forefront of providing leadership, guidance, and resources to medical schools and faculty to advance the adoption and implementation of lifestyle medicine curricula through (1) serving as the epicenter for evidence-based lifestyle medicine educational resources, (2) fostering faculty and students to become Champions of Change to advocate for and implement lifestyle medicine throughout medical education, (3) advancing policy and advocating for lifestyle medicine education, and (4) integrating lifestyle medicine into standardized assessments throughout medical education.

Association of American Medical Colleges (AAMC) Curriculum Inventory (CI) Report

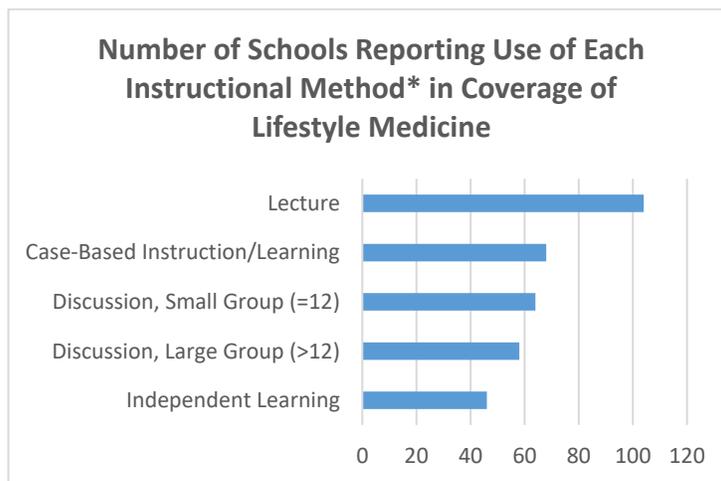
AAMC CI data on lifestyle medicine topics and training were compiled and analyzed by AAMC staff. The 2017-2018 AAMC CI Report on Lifestyle Medicine<sup>20</sup> shows that US and Canadian medical schools are incorporating lifestyle medicine training as a core required component or a nonrequired but stand-alone, for-credit course.

Of the 123 medical schools that participated in the 2017-2018 CI, 111 (90%) documented lifestyle medicine education content taught in various forms. Median (maximum) reported occurrences of courses and teaching events were 14 (37) and 44 (231), respectively (Figure 1).



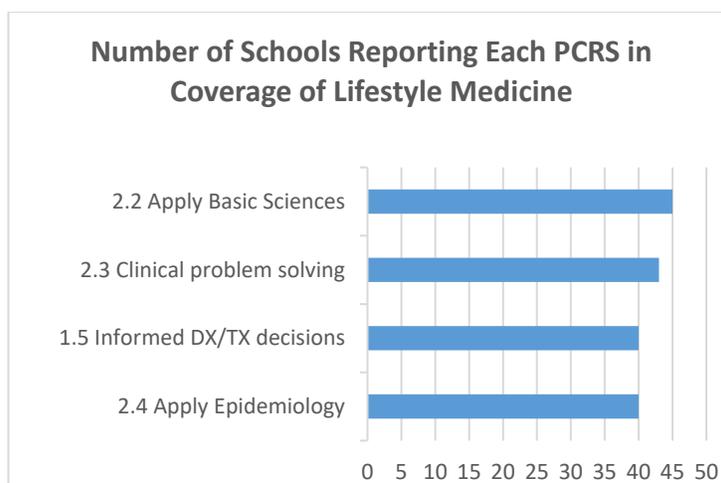
**Figure 1.** Occurrences of lifestyle medicine in medical school curricula, including courses/clerkships and teaching events.

The most used instructional method for lifestyle medicine content delivery was lecture (~100 schools), followed by case-based learning (~65 schools), discussion (small and large group, ~60 schools), and independent learning (~45 schools) (Figure 2).



**Figure 2.** Number of schools reporting most frequently used instructional methods in coverage of lifestyle medicine.

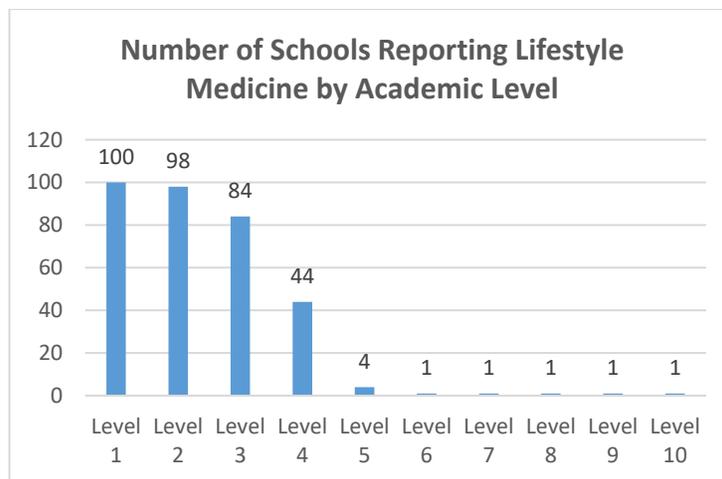
Coverage of lifestyle medicine in the Physician Competency Reference Set (PCRS)<sup>21</sup> is distributed almost equally across applied basic sciences, clinical problem solving, informed diagnostic/treatment decisions, and applied epidemiology (range: 40-45 schools) (Figure 3).



**Figure 3.** Number of schools reporting most frequently used Physician Competency Reference Sets (PCRSs) in coverage of lifestyle medicine.

The well-distributed PCRS coverage highlights the need for students to understand the underlying mechanisms that support evidence-based lifestyle medicine’s clinical effectiveness.

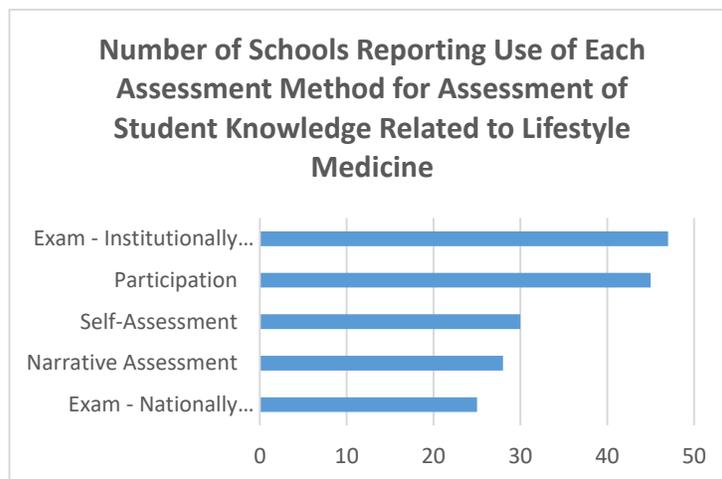
The number of schools reporting lifestyle medicine inclusion by academic level is ~100 in the first two levels, dropping off in Level 3 (84 schools) and Level 4 (44 schools) (Figure 4).



**Figure 4.** Number of schools reporting lifestyle medicine coverage by academic level. Academic levels are major progression intervals in the curriculum that do not necessary correlate to a curriculum year.

This is understandable, as students in the latter levels are participating in a variety of clerkships, and lifestyle medicine can be lost in clerkships such as surgery and neuro/psychiatry. These data also call us to action to bolster and support clerkships across all disciplines (currently highest in family, internal, preventive, and pediatric medicine), while finding avenues in the other non–primary care clerkships to integrate lifestyle medicine.

Assessment of lifestyle medicine–related topics is primarily completed via institutionally developed examinations (~45 schools) and participation (~45 schools), followed by self- and narrative assessment (Figure 5).



**Figure 5.** Number of schools reporting use of each assessment method for assessment of student knowledge related to lifestyle medicine.

Assessment of lifestyle medicine in medical education is now supported by the external work of the American Board of Lifestyle Medicine (ABLM), which has developed lifestyle medicine testable standards currently being used in residency and fellowship training.<sup>22</sup> Triangulating the CI data regarding assessment with the ABLM will help standardize benchmarks for both students and schools in the years to come.

In summary, the AAMC CI Report on Lifestyle Medicine<sup>20</sup> furthers our understanding regarding whether and how lifestyle medicine is integrated into current medical education. The CI data demonstrate that medical schools are indeed increasingly incorporating lifestyle medicine into their curriculum. Wide variation currently exists in the number of hours, sessions, etc. that are integrated into the curriculum and/or taught as stand-alone content. Using data from the CI, medical schools can track key indicators to better collaborate on teaching methods, assessment, and outcomes for medical students with regard to lifestyle medicine topics.

### Next Steps

Truly, there is wide reporting among medical schools on topics associated with lifestyle medicine. It is imperative that medical schools continue their uptake of lifestyle medicine integration into their curricula in order to slow, stop, and reverse the rise of chronic diseases. In addition to the AAMC CI Report on Lifestyle Medicine,<sup>20</sup> other efforts to monitor the uptake of lifestyle medicine are being performed by other researchers<sup>23</sup> and through the LMEd’s work.<sup>24</sup> The LMEd recently completed an informational summary regarding medical schools and differentiated schools on two levels. Sixteen Level 1 schools have taken

concrete steps towards lifestyle medicine instruction or awareness through adding an elective course to their regular curriculum, starting student interest groups, conducting workshops, or sponsoring brown-bag sessions. One hundred and three Level 2 schools have requested specific resources or access to the LMed's Dropbox files and are currently reviewing or considering next steps that would work best for them. This network is now well underway and continues to grow, with the LMed as a key part of the overall effort.<sup>25</sup>

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