

ANALYTIC R E V I E W

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Medical Education Transformation: Lifestyle Medicine in Undergraduate and Graduate Medical Education, Fellowship, and Continuing Medical Education

Abstract: *A gaping void of adequate lifestyle medicine (LM) training exists across the medical education continuum. The American College of Lifestyle Medicine's (ACLM's) undergraduate medical education (UME) Task Force champions the need for widespread integration of LM curriculum in UME by sharing ideas for catalyzing success, lessons learned, and publishing standards and competencies to facilitate curriculum reform. When it comes to graduate medical education and fellowship, the ACLM and American Board of Lifestyle Medicine have made great strides in filling the void, developing both Educational and Experiential Pathways through which physicians may become certified LM Physicians or LM Specialists (LMSs). The Lifestyle Medicine Residency Curriculum meets the Educational Pathway requirements and prepares resident graduates for the LM Physician board*

certification. LMS is the second tier of LM certification that demonstrates expertise in disease reversal. The LMS Fellowship is an Educational Pathway intent on American Board of Medical Specialties recognition of LM as a new subspecialty in the near future. Finally, continuing medical education and maintenance of certification

Introduction

According to the Centers for Disease Control and Prevention, 60% of American adults have a lifestyle-related chronic disease such as type 2 diabetes, cardiovascular disease, or cancer, with 40% of adults having 2 or more.¹ Not only is the prevalence of chronic disease

Yet physicians do not consistently address lifestyle during clinical visits despite believing that it is their responsibility to do so.

equip physicians with LM training to support knowledge, application, and certification in LM.

Keywords: lifestyle medicine; medical education; residency; fellowship; continuing medical education; maintenance of certification

in the US population staggering, but the health care cost to the nation is also unsustainable because more than 90% of 3.8 trillion dollars in annual expenditures is spent treating individuals with chronic and mental health conditions.² It is well established that poor lifestyle behaviors

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play a key pathogenic role, with at least 50% to 80% of chronic disease cases attributed to poor diet, physical inactivity, stress, cigarette smoking, and heavy alcohol intake.³⁻⁵ Multiple avenues are being explored in efforts to combat these ever-increasing health and economic costs, including increasing federal policy initiatives through the introduction of legislative bills such as the ENRICH Act, PHIT Act, and PAS Act,⁶⁻⁹ evolving the Centers for Medicare and Medicaid Services (CMS) billing codes to include Medical Disease Management and Time to Treat, adopting the CMS value-based care models, such as the Hospital Readmission Reduction Program¹⁰ and the Physician Value-Based Modifier,¹¹ and, critically, educating physicians in chronic disease prevention, treatment, and reversal through lifestyle medicine (LM).

LM is the use of evidence-based lifestyle therapeutic intervention—including a whole-food, plant-predominant eating pattern, regular physical activity, restorative sleep, stress management, avoidance of risky substances, and positive social connection—as a primary modality, delivered by clinicians trained and certified in this specialty, to prevent, treat, and often reverse chronic disease.¹² For clinicians to enter the workforce with sufficient knowledge and skill to adequately serve patients with chronic disease, medical educators must incorporate LM into undergraduate medical education (UME), graduate medical education (GME), and fellowship curriculum as well as continuing medical education (CME) and maintenance of certification (MOC). However, a gaping void of adequate LM training exists across this entire medical education continuum. Specifically, a dearth of LM training to satisfy the Association for American Medical Colleges' Entrustable Professional Activities (EPAs) exists. All medical students should be able to perform EPAs on entering residency, regardless of their future career specialty, to assess competence in real-world settings, especially in the setting of chronic disease.¹³

The objectives of this article are to (1) briefly examine the gaping void of LM training across the medical education continuum, (2) describe the latest developments in LM training at the level of UME, GME, fellowship, and CME, and (3) describe the resources that trainees, faculty and administration, as well as health care providers and organizations, can leverage to strengthen efforts within their institutions, systems, and organizations to improve LM training.

The Gaping Void of LM Training

Chronic diseases contribute to significant suffering in the form of premature morbidity and mortality and are among the most common conditions physicians encounter in clinical practice.¹⁴ Yet physicians do not consistently address lifestyle during clinical visits¹⁵⁻¹⁸ despite believing that it is their responsibility to do so.¹⁹⁻²¹

According to a Trilk et al²² policy paper that compiled multiple reports from physicians, residents, and medical students, there still resides a gaping void in LM training to prevent, treat, and reverse chronic disease across the United States.²² Physicians reported a lack of confidence in exercise and nutrition knowledge and skills to treat patients with noncommunicable chronic disease as well as a lack of time and compensation codes to provide preventive care. Only 14% of residents believe that they possess the knowledge and training to provide nutrition counseling, and the majority of residents did not know guidelines for diagnosing obesity, nor did they feel qualified to treat obese patients. In addition, whereas 76% of residents surveyed felt confident in why physical fitness should be a priority and 88% understood physical activity benefits, less than 50% felt that they were confident in their knowledge of how to implement it in their own lives, let alone how to prescribe it to their patients.²²

In other literature, reports indicate that although medical students on entrance into medical school believe that

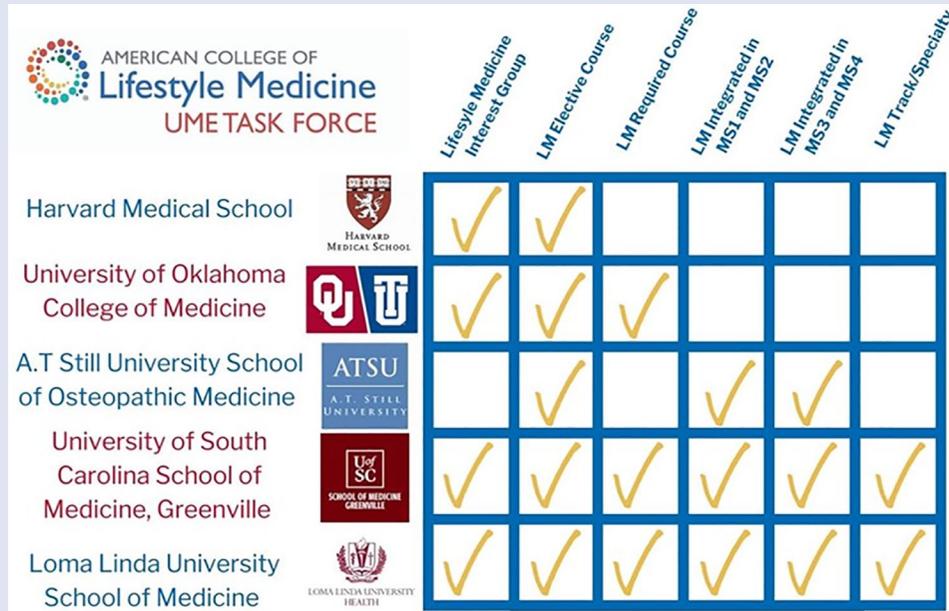
addressing lifestyle factors, such as nutrition and physical activity, is important to their future careers, on graduation, they overwhelmingly feel ill-prepared to engage patients in meaningful conversations about these topics.²³⁻²⁸ More than a decade after the National Institutes of Health-funded Nutrition Academic Award was established to catalyze nutrition integration into medical education,²⁹ only 2 in 5 US medical schools achieved the 25 hours recommended by the National Academy of Sciences.²⁵ In addition, despite the American College of Sports Medicine's calls to action,³⁰ physical activity training in medical school averages 8 hours, with nearly half of program directors feeling this to be inadequate, and only 10% perceiving their students as competent to create exercise prescriptions.^{31,32} With the exception of substance use, curriculum devoted to the intersection of chronic disease and sleep, stress management, and social connection is understudied but anticipated to be similarly lacking. Therefore, whereas medical schools vary widely in their curriculum devoted to LM training, unfortunately, most fall short of expert recommendations.

In recognition of this gaping void, the Bipartisan Policy Center released the 2014 whitepaper *Teaching Nutrition and Physical Activity in Medical School: Training Doctors for Prevention-Oriented Care*, calling on medical schools to enhance their curricula related to lifestyle.³³ In 2017, the American Medical Association House of Delegates released Resolution 959 (I-17); it "supports policies and mechanisms that incentivize and/or provide funding for the inclusion of LM education and social determinants of health in undergraduate, graduate, and continuing medical education."³⁴ In addition, the LM Education Collaborative provided a number of publications highlighting early champion medical schools with a goal to educate and provide a network to medical schools across the United States to address LM education in UME.³⁵⁻³⁸

Most recently, the American College of Lifestyle Medicine (ACLIM) convened the

Figure 1.

Undergraduate medical education task force lifestyle medicine (LM) implementation.



UME Task Force, comprising early-adopting medical schools that have integrated LM across their curriculum through Lifestyle Medicine Interest Groups (LMIGs), LM elective courses, LM required courses across the biomedical sciences, and clerkships (Figure 1). Detailed summaries of LM integration in these schools, as well as lessons learned, are given below.

Lifestyle Medicine in UME

Harvard Medical School

Since 2009, Harvard Medical School has supported a robust parallel LM curriculum via a LMIG. Each year, approximately 20 students attend the lecture/workshop series. Student leadership includes 2 to 3 copresidents who spearhead efforts to find cases and opportunities in their courses where LM can be integrated. Faculty leadership efforts have been successful with deploying the LMIG series while launching an elective in spring of 2019 titled “The Metabolism, Nutrition and Lifestyle Medicine” as one of the Advanced Integrated Science Courses in the clinical years and working together to

integrate LM concepts throughout the medical school curriculum. Approximately 24 students enrolled for the in-person Spring 2019 elective, and 60 enrolled for the virtual elective in 2020.

University of Oklahoma College of Medicine

As part of a 4-day prologue course called the “Summer Institute,” students receive an introduction to LM and social determinants of health. In the 2019-2020 academic year, the University of Oklahoma College of Medicine integrated LM & Health Promotion I (37 hours) for first year students as a mandatory part of its community medicine specialty track. This course is followed by LM & Health Promotion II (32 hours) for second-year students, with its first offering in the 2020-2021 academic year. These mandatory courses provide students with didactic and experiential learning opportunities to promote foundational knowledge and confidence in LM counseling. Activities include self-care practices such as meditation and mindfulness exercises, culinary medicine sessions, community outreach, and

simulated patient assignments. Additional elective learning opportunities include mentored research opportunities, culinary medicine community class cofacilitation, and completion of an MPH degree during a gap year.

A T Still University—School of Osteopathic Medicine, Arizona

LM is vertically and horizontally integrated into the core curriculum throughout all 4 years of training. It parallels the foundational osteopathic tenets well and ties to the 5 models of care that all students learn about during the first week of instruction.

Across the curriculum, more than 80 hours are dedicated to covering LM competencies. There is a focus on close collaboration with basic sciences to weave in the important pathophysiological processes behind LM to provide students with a deep understanding of how clinical outcomes are tied to lifestyle factors at the cellular level. Additionally, students learn to approach patients from a mind-body perspective and gain skills in behavior change. In the clinical years, students are

asked to apply the LM skills to patients they see on rotations.

Throughout, experiential learning is emphasized via multiple culinary medicine sessions, nutrition-based group activities, a breathing lab, regular mindfulness sessions and a semester-long activity focusing on goal setting and achievement. Students become their own first patient by setting goals for personal lifestyle improvements and developing healthy coping mechanisms against the stress of medical school and future practice.

University of South Carolina School of Medicine Greenville

More than 80 hours of formalized LM curriculum in both the biomedical and clinical sciences provide required undergraduate core medical student training with a graduating program-level goal to “deliver total health care using LM to prevent and treat morbidity and mortality related to chronic diseases.”

In addition, the school offers a Culinary Medicine Longitudinal Elective for first- through third-year students that includes more than 100 hours of nutrition education using case studies, cooking skills, nutrition report outs, plate presentations, and patient interactions, which is cotaught by a senior chef and LM expert, and a similar fourth-year, 4-week elective. Also embedded into the school's LM curriculum is a Classroom-Clinic-Community model that was designed and implemented to align with the school's vision to “transform the health and wellness of communities.” Two examples of this model are the Exercise is Medicine Greenville program³⁹ and the culinary medicine elective.⁴⁰

Loma Linda University

Loma Linda University fully integrates more than 80 hours of lifestyle throughout all 4 years of the medical school curriculum. In the first and second year, LM-related stand-alone sessions, sessions integrated with other topics, team-based learning activities, and labs are required for all students with a 2-week LM selective available for greater immersion into LM principles. In the third year, required LM course work

is integrated longitudinally into all clerkships, and LM workshops and plenary sessions are provided during 2 multidisciplinary integration weeks. In the fourth year, a 4-week required clerkship in lifestyle and preventive medicine highlights continued personal and clinical integration of LM with a particular focus on culinary medicine. Two- and 4-week LM electives are also incorporated in the third and fourth year. Finally, there is a competitive LM track that accepts up to 12 students per year. Students in this track participate in ongoing mentoring sessions, LM selectives, culinary medicine events, and LM-related scholarly activities for a total of 350 hours of additional LM training prior to graduation.

Lessons Learned From LM Integration in UME

The ACLM UME task force has identified catalyzers for success as well as perceived challenges in implementing LM from a curriculum, institution, administration, faculty, and student stakeholder level (Table 1).

Addressing Some of the Perceived Challenges of Incorporating LM Into UME

Lack of Awareness of the Impact of LM

Various federal bills such as the Enrich Act, the PHIT Act, and the Promoting Physical Activity for Americans Act have brought awareness of the importance of training medical and health professional students in LM.^{6,7,9} At the faculty and student levels, ACLM offers an expanding collection of evidence-based educational and practice resources, tools, research sources, webinars, curriculum, and courses that may be used to support LM education within the medical school setting.⁴¹

Lack of Time to Implement

The need for a compressed curriculum as well as faculty competition for instructional time are frequently cited

barriers to LM integration into existing curriculum. However, opportunity exists to identify like-minded faculty champions and discuss how LM topics can be vertically interwoven into existing curricular content. The transition of the United States Medical Licensing Examination (USMLE) Step 1 and Comprehensive Osteopathic Medical Licensing Examination of the United States (COMLEX-USA) Level 1 to pass/fail provides an opportunity to reassess current curricula for the relative value offered to high-quality clinical care; greater latitude may be available to integrate mission-aligned material, such as LM content, where gaps exist. With the ongoing development and dissemination of curricular LM resources by the ACLM and other organizations, the time needed for medical schools to develop their own resources is less burdensome. The transition of USMLE Step 1 and COMLEX-USA Level 1 to pass/fail also prompts residency programs to require a more well-rounded and clinically-prepared student graduate, such as those who have demonstrated competence in providing comprehensive care for common chronic disease conditions, completed medical school distinction tracks, and gained experience conducting research.

Lack of Standardized Curriculum

The ACLM UME Task Force has identified priorities for the development of standardized LM curriculum content. The next step in moving the needle forward in UME education is to support the development of these prioritized LM curricular resources, which will have the potential to be flexibly integrated into existing curricula or serve as robust, stand-alone material.

Curriculum Implementation Standards Educational Pathway

The LM curriculum implementation standards developed by the ACLM UME Task Force categorize standards, tiers, and goals for medical schools to educate

Table 1.

Lessons Learned.

Stakeholders	Catalyzers for success	Perceived challenges
Curriculum	<ul style="list-style-type: none"> - Change of USMLE step 1 and COMLEX-USA level 1 to pass/fail, allowing more time to focus on LM - Available resource materials (ie, ACPM, ACLM, LMEd) to quickly identify evidence-based, peer-reviewed materials 	<ul style="list-style-type: none"> - Lack of time for curriculum development or implementation - Lack of standardized LM curriculum
Institution	<ul style="list-style-type: none"> - Institutional buy-in (eg, cafeteria) for a cohesive approach - Culinary medicine courses/opportunities, including access to a teaching kitchen - Access to external funding donors to provide support for extracurricular activities 	<ul style="list-style-type: none"> - Lack of awareness of the impact of LM treatments - Lack of state/federal support, guidance - Requirement for competitive NBME scores and residency placement
Administration	<ul style="list-style-type: none"> - Support from administrators, especially deans of education - Medical school curriculum oversight committees who recognize and value the evidence-based information provided in the LM & Health Promotion courses 	<ul style="list-style-type: none"> - Lack of awareness of the impact of LM treatments - Lack of available faculty expertise in LM content
Faculty	<ul style="list-style-type: none"> - Faculty self-interest in LM and learning LM - Mission-aligned faculty to develop and lead or oversee curriculum implementation - ABLM or ACLM certified faculty members 	<ul style="list-style-type: none"> - Competition for instructional time - Perceived importance of curriculum priorities at the faculty member level
Students	<ul style="list-style-type: none"> - Established campus LM Interest Group - Students' desire to be trained in LM - Students' desire for a career in FM or IM 	<ul style="list-style-type: none"> - Funding - Faculty mentors available - Competition with students' perception of testable content with USMLE and COMLEX-USA examinations

Abbreviations: ABLM, American Board of Lifestyle Medicine; ACLM, American College of Lifestyle Medicine; ACPM, American College of Preventive Medicine; COMLEX-USA, Comprehensive Osteopathic Medical Licensing Examination of the United States; LM, lifestyle medicine; LMEd, Lifestyle Medicine Education Collaborative; USMLE, United States Medical Licensing Examination.

and train future physicians in LM.⁴² To become board certified in LM through the Educational Pathway, the Educational Component, 100 hours of LM curriculum, with approximately 40 hours of didactic and 60 hours of application activities, must be delivered within UME or GME training. Additionally, the distribution of “time-per-topic” ideally falls in alignment with the current American Board of Lifestyle Medicine (ABLM) certification exam competencies (Table 2).⁴³

To recognize medical schools providing training in LM, the ACLM certifies institutions whose curriculum meets a Bronze, Silver, Gold, or Platinum tier of LM integration established by the ACLM

UME Task Force.⁴² Tier designation is based on an institution's number of didactic and application hours that align with UME competencies for LM training, encouraging the achievement of 100 hours of integrated curriculum and addressing 100% of the competencies.

Lifestyle Medicine in GME

Although an Experiential Pathway existed for LM Physician board certification, the ABLM quickly realized the significant need for an Educational Pathway. As such, the ABLM developed an Educational Pathway, and academicians from Loma Linda

University and the ACLM developed a Lifestyle Medicine Residency Curriculum (LMRC) to satisfy the requirements in order to prepare residents for LM Physician certification upon graduation.

This section will compare and contrast the Experiential versus Educational Pathways for the LM Physician and explore the LMRC as a means of meeting the Educational Pathway requirements.

Experiential Pathway

The Experiential Pathway is the original Pathway outlined by the ABLM for LM Physician board certification and is available to American Board of Medical Specialties (ABMS) board-certified

Table 2.

Educational Hours and Percentage of ABLM Exam Weighting.

Module title	Didactic unit	Application hours	Total hours	ABLM exam weighting
Introduction to lifestyle medicine	2	2	4	4%
Fundamentals of health behavior change	4	6	10	10%
Key clinical processes in lifestyle medicine	3	5	8	8%
The role of physician health and the physician's personal health	2	2	4	4%
Nutrition science, assessment and prescription	10	16	26	26%
Physical activity science and prescription	6	8	14	14%
Emotional and mental well-being, assessment and interventions	4	6	10	10%
Sleep health science and interventions	3	5	8	8%
Managing tobacco cessation and other toxic exposures	3	5	8	8%
The role of connectedness and positive psychology	3	5	8	8%
Total hours	40	60	100	100%

Abbreviation: ABLM, American Board of Lifestyle Medicine.

physicians who have been practicing for at least 2 years. Eligibility through the Experiential Pathway includes completion of 30 hours online and 10 hours in-person ABLM-approved CME and completion of 1 LM case study. This Experiential Pathway was established in 2017, and the MOC processes were established in 2019. As of 2020, 1586 physicians from the United States and Canada are diplomates of ABLM with a LM Physician designation through this pathway.

Educational Pathway

The Educational Pathway to certification consists of Educational and Practicum Components and consideration of total hours needed for the Pathway took shape based on expert consensus and various recommendations, including a minimum of 25 hours of nutrition.⁴⁴ The Educational Component includes 100 hours of training that aligns

with the ABLM Certification Exam Competencies,⁴³ and the Practicum Component includes 400 patient encounters with additional group visit and intensive therapeutic lifestyle change (ITLC) hours (Figure 2).

LM Residency Curriculum

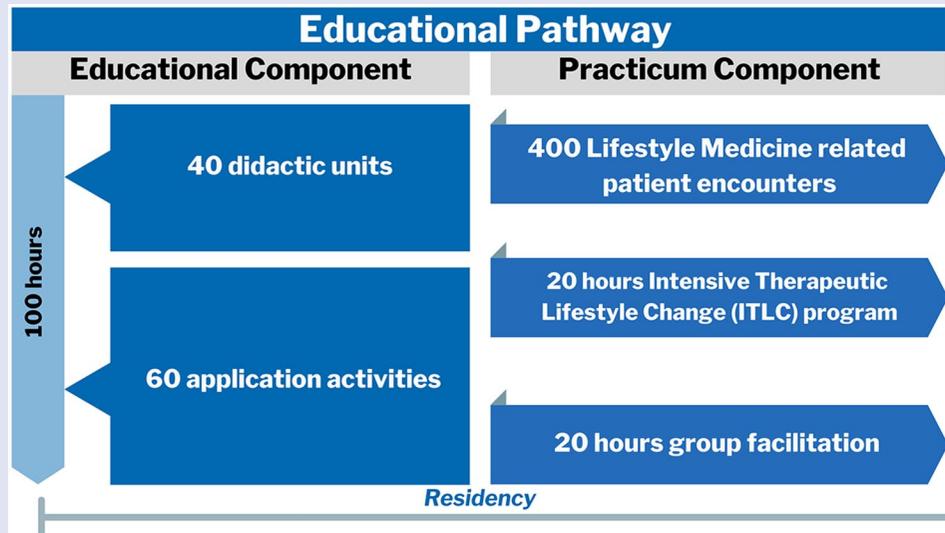
The creation of the LMRC was driven by resident involvement, with an emphasis on adult learning techniques, and once adopted, is flexible to be implemented into existing residency programs over a 1- to 3-year time frame. Beginning with development in 2017 and beta-site implementation in 4 residency programs in 2018, the LMRC has served to fill the void of LM training in GME by providing the opportunity for residents to complete an Educational Pathway. Since the initial launch and as of 2020, the LMRC has been implemented into 17 residency sites and 25 residency

programs and reached more than 600 residents across the United States, with an anticipated doubling of site participation in the 2021-2022 academic year.

The LM UME Standards intentionally align with the GME Educational Component of the Educational Pathway.⁴² The difference between the UME and GME Educational Components is the increased flexibility of LM curricular delivery style in UME to meet the 100-hour requirement. This difference is annotated by a jagged line in figure 1,⁴² as compared with a solid line in figure 2 of this article. This stepping stone approach enables an individual to complete the Educational Component during medical school and the Practicum Component during residency (whether supported by an LMRC residency site or not), ultimately leading to another path toward ABLM LM Physician certification.

Figure 2.

Graduate medical education educational pathway.



Educational Component

The 100-hour Educational Component is divided into 10 modules with content further sectioned into 40 hours of didactic units and 60 hours of independent application activities across the modules, as seen in Table 2.

The 40 didactic units within the 100-hour Educational Component are quite prescriptive with ready-made PowerPoint presentations that include full speaker notes and references. Each unit is designed for a 60-minute session and utilizes adult learning techniques with approximately 30 minutes of information delivery and 30 minutes of audience engagement activities that vary in nature and scope. The didactic units were created for residents to deliver the presentations to their resident colleagues in person. However, because of the increased need for flexibility and scalability, a virtual LMRC format is now in development.

The 60 hours of independent application activities within the 100-hour Educational Component give residents a variety of asynchronous learning activities to enhance experiential learning for each module based on individualized interests. Ideally, the independent

application activity hours allow residents to apply the principles of LM to their own health as well as that of their families/friends, community, and patient population. Examples of independent application activities include, but are not limited to, creation of a whole-food, plant-based meal at home or with colleagues, participating in journal clubs on a variety of LM-related topics, and shadowing interdisciplinary health care professionals such as registered dietitians or physical therapists.

Practicum Component

The Practicum Component encourages the application of knowledge into clinical encounters throughout residency training. The Practicum Component includes 400 patient encounters and additional ITLC and group visit hours, as noted in Table 3. The LM patient encounters can be accomplished in both the inpatient and outpatient settings, although it is more common to complete them in the outpatient setting. The intention is for LM to be another lens through which residents assess and treat every patient within a clinical environment. Within the 400 encounters, there are several required subdivisions noted in Table 3 that need

to be addressed in order to achieve broad base competency in all LM topics. Many of these requirements can be met simultaneously within the same patient encounter. For example, if a resident evaluates a patient with diabetes from a LM perspective by addressing physical activity, nutrition, sleep, and/or connectedness, the resident may document the encounter as one of the 400 LM encounter requirements and obtain credit for the specific subdivision topic(s) covered as well. The Practicum requirements also include exposure to 20 hours of ITLC programming and 20 hours of group visit facilitation. The ITLC hour requirement was developed in order to introduce residents to the design of intensive programs, enable residents to witness the power of intensive lifestyle change to produce dramatic health improvements and outcomes in a short period of time, and in some cases, expose residents to chronic disease and condition remission or reversal. Finally, given the myriad demonstrated benefits of group visits for patient behavior change and physician satisfaction, the group visit requirement allows for exposure to group behavior change facilitation.⁴⁵

Table 3.

Graduate Medical Education Practicum Component.

Topic	Requirements	Comments
Lifestyle medicine (LM) approach in inpatient or outpatient clinical care settings	400 Patient encounters	Address the 6 pillars of LM in clinical care
Nutritional assessments and interventions	40 Patient encounters	Food recall, nutrition prescriptions, appropriate referral
Physical activity assessments and interventions	40 Patient encounters	Activity diaries, exercise capacity assessments, exercise prescriptions, appropriate referral
Emotional and mental well-being, sleep, and connectedness assessments and interventions	40 Patient encounters	Assessment, prescription and indication for referrals in the following areas: stress, sleep, depression, anxiety, mental health, mindfulness, meditation, spirituality, and emotional well-being
Tobacco and toxic substance assessment, brief intervention, and referral training	30 Patient encounters	Assessment, prescription, and indication for referrals in the following areas: smoking, alcohol, other substances, chemical and toxic exposure
Interpersonal and community communication skills, practice-based learning and improvement, systems-based practice, and leadership in policy and community	Not designated	Public relations campaigns, media campaigns, policy development and change, health system change, communication of risks vs benefits, and family and community engagement
Intensive therapeutic lifestyle change (ITLC) programs	20 Hours	Participation and/or observation in group programs such as CHIP, Ornish program, McDougall program
Support or coaching group facilitation	20 Hours	Group observation, recording, and facilitating—this may occur at the same time or separately from an ITLC program

LMRC Site Implementation

Residency sites interested in LMRC implementation may complete the “interest form” link on the ACLM website.⁴⁶ At this time, options for partial or full implementation are available. Typically, partial implementation includes the 40 hours of didactic units and the 400 patient encounters with the “opt-in” ability for full implementation for residents to become eligible for LM Physician certification. A LMRC Introductory Program was created for sites that are unable to support partial or

full implementation, yet have the ability to implement a smaller LM curriculum with hopes of full curricular adoption in the future. Various considerations in analyzing implementation feasibility include the following: (1) administrative support or “buy-in” by the residency program director, residency faculty, department chair, and/or designated institutional officer; (2) number of ABLM-certified faculty or faculty strongly interested in certification; (3) resident interest; (4) sustained funding in place to support faculty time and curriculum

access; and (5) number of residency specialties interested at any given academic site along with the ability for those specialties to collaborate.

LMRC Strengths

LMRC strengths include the following: (1) status as the only approved curriculum for the LM Physician Educational Pathway, (2) development by leaders in LM education, and (3) flexibility for adaptation into a wide variety of specialties, with a virtual option in development.

LMRC Perceived Challenges

LMRC perceived challenges include the following: (1) time commitment required for integration into an already existing didactic schedule; (2) need for implementation of a tracking system for patient encounters as well as didactics, independent application activities, ITLC hours and group visit hours; (3) internal and external scalability for multiple specialties; and (4) demand for expansion to include international sites.

LMRC Benefits

LMRC benefits include the following: (1) resident and faculty preparedness for patient-centered best practices with a foundation in LM, (2) a unique skill set that addresses the chronic diseases burden from a “treat-the-root-cause” perspective, (3) infrastructure and encouragement for residents and faculty to practice healthy lifestyle behaviors that support resilience and personal wellness, (4) connecting with mentors and the LM community as a whole, and (5) ability for any faculty engaged in resident education to complete the entire LMRC pathway and become eligible for board certification at no additional cost.

LM Specialist Fellowship (LMSF)

The Lifestyle Medicine Specialist (LMS) is the second tier of LM certification, and the requirements are met through an Experiential or Educational Pathway as outlined by ABLM.⁴³ As of 2020, 7 LMSs have been certified. The LMS Pathways require an applicant to be certified LM Physician or concurrently enrolled in a GME training program implementing the LMRC. Both Pathways for the LMS require 1200 hours dedicated to LM training, including LM clinical practice as well as ITLC and group visit experiences. Multiple case studies are required and must demonstrate significant symptom improvement and/or disease reversal. Finally, LMSs are also required to engage in LM scholarly activities and contribute to evidence-based LM education and interventions. As such, LMSs have expert-level experience in ITLC programs,

deprescribing protocols, and dosing of LM across the disease severity spectrum to achieve chronic disease and condition remission or reversal.

The LMSF was established in 2019 to meet the Educational Pathway requirements for the LMS as outlined by ABLM.⁴³ Competencies published by Kelly et al⁴⁷ are emphasized throughout the LMSF curriculum. One LMSF currently exists, with the goal to scale LMSFs at current and future LMRC sites across the nation in order to support the pursuance of ABMS and ACGME accreditation of LM as a medical subspecialty.⁴⁸

Continuing Medical Education and MOC

ACLM offers multiple evidence-based LM CME courses and opportunities. The online Lifestyle Medicine Core Competencies program, coproduced by ACLM and the American College of Preventive Medicine, and the Foundations of Lifestyle Medicine Board Review Course, meet the 30-hour online CME requirement for the LM Physician Experiential Pathway, as noted on the ABLM website.⁴³ Two relatively new courses are also now available: Reversing Type II Diabetes and Insulin Resistance with Lifestyle Medicine and the Physician and Health Professional Well-Being course. The Lifestyle Medicine for Coaches course, offered through Wellcoaches, in partnership with the ACLM also exists to train certified health coaches in LM, enabling national board-certified health and wellness coaches to earn a Lifestyle Medicine Coach Certificate.⁴⁹ MOC requirements and opportunities for ABLM-certified physicians were established in 2019.⁵⁰

Next Steps

It is essential that LM be integrated into training across the medical education continuum.³⁸ Inclusion of LM education is achieved in a number of ways, with Figure 3 illustrating a continuum of options.

Academic institutions implementing LM education across the health education

spectrum are featured on the ACLM website.⁵¹ When it comes to UME, specifically, LM curriculum integration often starts with the establishment of a LMIG. LMIGs cultivate multi-institutional, student-initiated programming to support healthy habits and LM-related education for students, faculty, and the local community.⁵² Implementation of a culinary medicine elective course, using the ACLM Culinary Medicine Curriculum (CMC), further engages students and faculty in LM and provides a strong foundation of knowledge regarding what constitutes a healthy dietary pattern and how to find, obtain, and prepare healthy, inexpensive, and delicious food.⁵³ Widespread formal integration of comprehensive LM curricula into UME is an imperative next step.

Residency and fellowship programs may access more information about the LMRC, including a listing of active LMRC sites, an informational flyer, frequently asked questions, a sample curriculum, and an informational webinar online.⁴⁶ By visiting the website and filling out the interest form, the LMRC administrative team is notified to reach out and determine next best steps, regardless of LMRC or LMSF implementation readiness.

Conclusion

It is essential that LM be integrated into training across the medical education continuum in order to fill the gaping void that currently exists.³⁸ The ACLM is well positioned to lead the charge in filling this need. The ACLM UME Task Force convenes leading medical schools implementing LM to (1) identify catalysts for success and address perceived challenges, (2) champion the full integration of LM education across all 4 years of UME, and (3) develop strategies for other medical schools to become certified for LM integration. The LMRC prepares residents to use the principles of LM in the clinical setting through the LM Physician Educational Pathway and become eligible for ABLM board certification. Physicians may pursue the LM Physician ABLM certification through the Experiential Pathway by completing CME prerequisites. LM Physicians maintain

Figure 3.
Education continuum.



Abbreviations: ABLM, American Board of Lifestyle Medicine; ACLM, American College of Lifestyle Medicine; CME, continuing medical education; CE, continuing education; MOC, maintenance of certification.

their ABLM certification through the established MOC pathway. Finally, as the Educational Pathway for LM Specialists, the LMSF supports the pursuance of ABMS and ACGME accreditation of LM as a medical subspecialty.⁴⁸

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Not applicable, because this article does not contain any studies with human or animal subjects.

Informed Consent

Not applicable, because this article does not contain any studies with human or animal subjects.

Trial Registration

Not applicable, because this article does not contain any clinical trials. **AJLM**

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