Editorial

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Translation of Lifestyle Into Clinical Practice: Making the Case, Providing the Cure

It is my honor to be the Guest Editor for the 2018 Conference Issue of the *American Journal of Lifestyle Medicine*. When assisting movers and shakers in lifestyle medicine with putting their work into writing, one is struck by the privilege of such a task. This year's conference theme was "True Healthcare Reform" and indeed, many of the presenters delivered a challenge to their audience in the form of overwhelming evidence: Without changes to diet, level of physical activity, sleep, stress, and ability to access human connection, society is in trouble in the United States and across the globe.[2,3] These challenges also seemed to come at a time when perhaps lifestyle medicine as a discipline is at a "tipping point."

Each year, conference attendance to the American College of Lifestyle Medicine (ACLM) increases. As Secretary on the board of ACLM, I was able to deliver the wonderful news during our annual membership meeting that ACLM membership has increased by 48% in the previous year. Membership has grown in an exponential manner since 2010, from 132 to 2385 as of September 2018, and since then, even more. ACLM Annual Conference attendance has increased from 850 in 2017 to 1200 in 2018. It seems that physicians, advance practice providers, allied health professionals and health care executives seem to be understanding en masse that a change is needed in the current model of health care delivery.[1]

Several themes ran through this year's conference. One was the pressing need for lifestyle medicine as a solution to the global pandemic of lifestyle-related diseases,[3] It is clear there is an incredible breadth and depth of evidence available to make the case for a predominantly whole-foods plant-based diet, increased physical activity, adequate sleep, decreased stress, and personal connection to be able to not only prevent but also reverse these diseases. This will no doubt serve as the foundation for research that will facilitate greater clinical application of Lifestyle as Medicine. This year's speakers also seemed to bring home the importance of interventions that are multi-faceted, interdisciplinary, and span many different settings – from advocacy and policy, to clinical practice, to community level interventions that change our environment. We must not only target the proverbial "body" but also the proverbial "mind" and the proverbial "heart", for lifestyle related behaviors are inextricably intertwined with our daily lives.

That up to 80% of the leading causes of death are preventable by lifestyle is a commonly discussed statistic. One of these is Alzheimer's disease. Drs Dean and Ayesha Sherzai made clear in their keynote and in their article for this issue that the prevalence of Alzheimer's disease is on par with an epidemic, with a prevalence of close to 50% in individuals older than 85 years. But what is even more striking is the scientific case they make for poor lifestyle as an indirect driver of Alzheimer's disease, positing that 90% of Alzheimer's disease expression is driven by modifiable lifestyle-related factors such as glucose

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and energy dysregulation, lipid dysregulation, inflammation and oxidative damage. In trying to find "the Alzheimer's gene" and "the Alzheimer's drug," it is clear we have missed the point entirely in a disease caused by several interdependent factors such as genetics, epigenetics, and environment (lifestyle). As a solution, they suggest community-based interventions.[10]

This emphasis on community engagement, collaboration, and a multidisciplinary approach is also reflected in the 2 articles by Dr Janani Krishnaswami et al.[11,12] A social-ecological approach is necessary to make strides in uptake of lifestyle medicine interventions.[4,5] Dr Krishnaswami suggests the PURER approach in her session on reducing maternal and infant mortality, with a focus on culturally competent care, resilience, the need for social connection, and advocacy. While in the article by Drs Dean and Ayesha Sherzai we see a focus on the elderly, we see the need for this broader definition of lifestyle medicine through the life span in the article by Dr Krishnaswami et al. With her emphasis on the effect of unhealthy lifestyle on the alarming rates of maternal and infant mortality in the United States, lifestyle medicine becomes quite literally, a life and death issue. Dr Krishnaswami makes a compelling case for the urgent need to address infant mortality by supporting women's health. Her session with Dr Jasmol Sardana was on Community Engaged Lifestyle Medicine, an evidence-based participatory framework, which was used to translate the implementation of lifestyle medicine interventions into the community in McAllen, Texas, a place that has gained notoriety for one of the highest obesity rates in the country, and simultaneously one of the highest poverty rates in the country. It is not a coincidence that the poorest individuals have the highest rates of obesity, but Dr Krishnaswami's article brings to light health disparities that are more than just about poverty. Women in all socioeconomic strata have worse care. This is more so the case for African Americans. One striking statistic from Dr Krishnaswami's review—in New York, college-educated African American women are more likely to die than white women without a high school education, despite being less likely to drink or smoke during pregnancy. Discussing the causes for this is out of the scope of this editorial, but Dr Krishnaswami makes the case that bias is at least one factor. Social ills need social cures; thus, lifestyle medicine practitioners desiring to make an impact must use an approach that addresses social determinants of health. Interventions must include community engagement (engaging the target population), inter-sectoral (engaging stakeholders in institutions outside of the health care sector), multilevel and culturally responsive. Among women and those who are particularly susceptible to unequal access to health care resources, a multilevel approach includes the individual, peer/family group, health care team, neighborhood resources, and cultural context.[11]

This holistic view is also suggested by Dr Robin Ortiz in her article on adverse childhood experiences (ACEs). Seventy percent of Americans are said to have been exposed to an ACE, with graded exposure seemingly associated with worsening health outcomes. Here too, we see that the pathophysiology explaining the link between poor health and exposure results due to a combination of factors, including a dysfunction of the hypothalamopituitary axis, neuroplasticity, epigenetics, and inflammation. Tackling the effects of ACEs requires resiliency strategies (mindfulness and social-emotional learning), trauma-informed care, and policy/advocacy in communities.[13]

A grassroots approach to changing the culture of medicine within medical education is discussed in an article by Dr Melissa Mondala and myself. We present a review of the contributions in the literature and contributions of Lifestyle Medicine Interest Groups (LMIGs) and professionals in training to ACLM. For such a review to be possible, the work of previous individuals must be acknowledged. Many student and trainee leaders have contributed to this work, but scholarly activity in this area has particularly been advanced by Dr Beth Frates, Dr Mark Faries, Dr Sami Beg, Dr Edward Phillips, Dr Tonya Cramer, Dr Brenda Rea, Dr Jennifer Trylk, and Dennis Muscato through their support of Professionals in Training through initiatives such as the Donald Pegg award, the Lifestyle Medicine Residency Curriculum, and LMed.[16]

The influence of epigenetics is another theme that we see throughout the conference and this issue. Epigenetics makes that case that genes are not destiny, and it is becoming increasingly clear that, in the era of personalized medicine, epigenetics is the science that will help make the case for lifestyle interventions as a mediator of gene expression. In Dr Ortiz's article, we see an explanation of the epigenetic underpinnings of ACEs. In addition to the session on ACEs, ACLM attendees had the opportunity to learn about epigenetics during a concurrent session on the subject by Dr Kent Thornberg.[7]

Another theme that we see throughout this issue and the conference is the importance of resiliency and connectedness. We see this discussed in our article on ACEs, in our articles on community engaged lifestyle medicine, and our article on maternal mortality and infant mortality. Dr Dean Ornish often regales with a story in his keynotes, of a woman he met during his medical school training. This woman tells Dr Ornish she has no friends, her cigarettes are her friends. She asks the medical student if she would take her only friends away.[6] Without happiness, the other healthy habits do very little. This is why healthy relationships, personal connection, and sense of meaning and purpose are such an important part of lifestyle medicine. But it is not just enough to fulfill one's basic needs. Positive psychology practices focus on helping an individual recognize, utilize and cultivate their strengths, enabling them to thrive, and lead meaningful lives, as opposed to plugging the proverbial holes in the ship to prevent it from sinking. In previous articles, we have discussed the benefits of positive psychology. In this year's conference

issue, we discuss the Happiness Summit, an event hosted by Dell Medical School and ACLM. This was an expert panel that, once again, makes the case for the importance of evidence-based lifestyle medicine interventions.[14]

A final theme of this issue is the translation of lifestyle medicine into clinical practice. The ABLM has graduated more than 250 diplomates.[9] There is an urgent need to equip lifestyle medicine practitioners with practical tools to be able to succeed in the field. Each year it seems that greater strides are made in this arena. In this year's issue, we make the case for partnering with self-insured employers. Diabetes is one of the most expensive diseases in the country. National statistics support this,[8] but Mary Delaney and Dr Mahima Gulati show that this extends to employer data as well. Just below 40% of our population is obese, around 30% of individuals are prediabetic, and 10% are diabetic. Prediabetes converts to diabetes at a rate of around 9% per year. The case to be made is obvious to the lifestyle medicine practitioner, but to employers, not so much. Gulati and Delaney walk the lifestyle medicine practitioner through how to make the case to employers while speaking the language of dollars and cents.[15]

Overall, this year's conference issue is one that tackles some of the most difficult problems in health care and addresses the entire life span. By making a compelling public health case for lifestyle medicine, the articles make it plain that lifestyle medicine is an obvious, sustainable, pragmatic and economically viable solution. Not too long ago, It used to feel as though Lifestyle Medicine as an answer to the epidemic of chronic disease would be a monumental undertaking to translate into practice. The authors in this issue demonstrate beautifully to us that we are tantalizingly close to making the shift from lifestyle medicine as an exciting theoretical concept championed by a few pioneers to mainstream clinical practice. AJLM

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