





# BMJ Open Role of workplace culture in successful lifestyle medicine implementation: a qualitative case series among health systems in the USA

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## ABSTRACT

**Objective** This study investigated how workplace culture may affect the development of lifestyle medicine (LM) programming in health systems to inform the successful growth of LM programs. No study has examined how the impact of workplace culture (shared knowledge, values and behaviours within an organisation) affects practitioners' abilities to engage in LM.

**Design** A cross-sectional, multiple case study investigation of the implementation of LM in five health systems was conducted by administering semi-structured in-depth interviews (n=45) from May 2022 to January 2023. Following the transcription of interviews verbatim, narrative reports depicting each health system's experience with LM were drafted and collectively reviewed by the research team who discussed emerging themes.

**Setting** Five health systems across the USA that have implemented LM were selected based on diversity in size, location, payer model, and patient population.

**Participants** Administrative leaders, physicians and other personnel involved in the LM programming from selected health systems were invited to participate.

**Results** The implementation of LM is facilitated when practices such as forming social groups, visually advertising LM and offering plant-based cafeteria items are present to support core values, such as trust, gratitude, collaboration and optimism.

**Conclusions** LM implementation can be supported by health system clinicians and administrators striving to make their workplaces more supportive and synergetic so that they can take advantage of all available resources. Future research should further explore this relationship between cultural factors and resource availability.

## INTRODUCTION

Lifestyle medicine (LM) is an approach to medical treatment founded on prescriptive therapeutic health behavioural change interventions designed to prevent, manage and treat diseases.<sup>1</sup> Guiding principles include an evidence-based approach to treatment, a focus on treating the root cause of diseases as opposed to prevention or symptom

## STRENGTHS AND LIMITATIONS OF THIS STUDY

- ⇒ Included health systems were limited to those belonging to the American College of Lifestyle Medicine Health Systems Council.
- ⇒ Negative keywords were not used in data analysis.
- ⇒ This analysis was completed before the completion of the full multiple case study (parent study).
- ⇒ Cross-sectional study design makes longitudinal changes difficult to assess.

management<sup>2</sup> and an emphasis on whole-person health. The American College of Lifestyle Medicine (ACLM), the medical professional society that provides education, resources and certification for health professionals practicing LM, identifies six domains (or pillars) of health behaviour that encompass LM practice. These include a whole-food, predominantly plant-based diet, getting regular physical activity, sleeping well, managing stress, developing positive social connections and avoiding risky substances.<sup>1</sup> The growth of LM in the USA has been fueled by clinician interest in an approach to treatment that emphasises health restoration, particularly in the context of the ongoing epidemiologic transition in which the incidence of chronic diseases increasingly outweighs that of infectious diseases.<sup>3</sup>

When LM is employed, patients are encouraged to become active participants in the daily restoration of their well-being beyond the boundaries of the clinic, with potential benefits such as the cessation of symptoms of chronic disease or a reduction in medication usage.<sup>2</sup> According to the Nurses' Health Study, lifestyle modifications have the potential to eliminate 82% of coronary artery disease cases and 91% of type 2 diabetes cases among women<sup>4</sup> and are recommended as part

of the standard of care in many clinical practice guidelines for chronic diseases.<sup>5–7</sup> Achieving these outcomes, however, requires a team-based approach and increased contact time with patients. Implementing these practices can require nuanced strategies such as reorganising patient load, implementing group medical appointments and devising a new billing strategy. We hypothesised that a supportive workplace culture is crucial for ensuring the well-being of both patients and their practitioners.

The concept of organizational climate emerged in the 1950s, and there are differing opinions on the meaning of organizational climate vs. organizational culture. Previous work suggests that culture and climate have an impact on staff morale and the services that they provide.<sup>8</sup> More recent literature has defined work culture as rooted in the perceptions of principles and practices adhered to by an organization.<sup>9</sup> Organizational culture may affect the ability of clinicians and other healthcare staff to work collaboratively towards common goals.<sup>10</sup>

Previous research has shown a relationship between workplace culture and financial performance.<sup>11</sup> As Braman and Edison explain, insufficient revenue to maintain LM programmes can occur in health systems that divert all of their resources exclusively towards LM too early rather than gradually integrating LM into existing practices.<sup>12</sup> Furthermore, learning the nuances of LM-specific coding is essential for ensuring these services will be reimbursed by insurance companies.<sup>12</sup> Other logistical challenges include lack of time, training and confidence in implementation.<sup>10 13 14</sup> Health systems that provide funding to overcome these obstacles ease the burden on physicians who would otherwise take on these stressors themselves.

Despite this work identifying implementation challenges, existing research has not yet addressed how workplace culture and related factors impact the implementation and sustainability of LM programmes. The objective of this analysis is to identify ways in which workplace culture has been leveraged to improve the implementation of LM from both objective measures of programme growth and the perspective of health system employees.

To meet this objective, this cross-case analysis seeks to answer the following questions.

1. How is workplace culture expressed in health systems with LM programmes?
2. What resources allow for the successful incorporation of LM into the workplace culture?
3. What are the key elements of workplace culture that facilitate the implementation of LM?

## METHODS

### Overview

This study analysis draws from a subset of data from the parent study, 'Lifestyle Medicine in Health Systems Study.' This multiple case study approach aims to identify the factors that support and hinder the implementation of

LM therapeutic approaches in health systems throughout the USA. The study's design did not involve participants or the public. A full presentation of study methods (design, research team, recruitment, data collection, etc) has been described elsewhere.<sup>15</sup>

This study involves human participants, but the University of New England Institutional Review Board (project number 1221–21) determined it was exempt from IRB review and oversight.

### Patient and public involvement

All participants reviewed and signed an informed consent before participation. The results of the research will be disseminated to participants, as well as other representatives of participating health systems.

### Data collection

#### Study team

The study team is composed of the principal investigator (MCK), a senior investigator who advised on qualitative research methods (JG), as well as an academic researcher (MMR) and ACLM staff (KLS, TAH) who provided insights with respect to the study design, implementation and interpretation of results. Data collection was performed by five research team members: one female graduate student (ND), two female PhD candidates (SMS, MLA), a male physician (BW) and a female academic researcher (MMR). All data collectors completed a training on qualitative research and the specific study protocol designed and delivered by a senior investigator (JG). Regular team meetings were held throughout the study to support iterative collaboration, impartiality and cross-checking of findings and analysis. Participants did not have a relationship with data collectors before the study, and data collectors initially introduced themselves via email to share the electronic informed consent that contained a detailed description of the study and to schedule the interview. All data collectors shared a general interest in public health and research; however, personal biases and interests in the research topics were not systematically shared with participants.

### Health system recruitment

The data represented in this analysis were collected from five health systems in the USA. A purposive sampling approach was taken to identify health systems that were individual members of ACLM's Health Systems Council (HSC) network and provided LM services during the recruitment period. A self-nomination form was distributed through HSC communications on 7 April 2022 and was closed on 28 April 2022. Completed forms were reviewed by the research team for inclusion criteria as well as the diversity of size, location, payer model and patient population. Once selected, a self-nominated leader (often the representative for the HSC) for each site was then contacted by the research team to request a list of potential staff interviewees involved in the LM programme. These interviewees occupied diverse roles,

and a member of the research team reached out to potential staff interviewees via email to invite them to participate in the study.

### In-depth interviews

This analysis includes semi-structured, individual in-depth interviews that were conducted from 3 May 2022 to 12 January 2023. All in-depth interview participants provided informed consent, and only interviewers and participants were present for the interviews. Interviewers used an in-depth interview guide developed by the research team to guide questions. Please refer to online supplemental file 1) for a copy of the in-depth interview guide. Participants were asked about individual-level factors such as their role in LM implementation, their personal definition of LM and how this differs from other medical approaches. They were also asked about the structural, cultural, administrative and financial resources available to them at their health system as well as about the demographic characteristics of the patient population. The interviews lasted 45–60 min and were conducted and recorded via Zoom. Recordings were automatically transcribed verbatim using the transcription function of Microsoft OneDrive transcription and manually edited by interviewers to ensure accuracy. In some cases where additional information was needed, follow-up interviews were conducted by phone. Interviewers either wrote notes during the interview that were incorporated into the transcript or dictated notes and observations immediately following the interview, for incorporation into the transcript. Participants were not invited to review transcripts or provide feedback on findings.

### Document review and site visit

In addition to interviews, the review of documents such as websites, blogs, lunch-and-learn presentations and wellness flyers provided additional context. Data collectors also completed one on-site visit where they took photographs and had informal conversations with LM staff. Planned site visits were unable to be completed at other health systems due to restrictions related to the COVID-19 pandemic.

### Case report narratives

The study team is developing case reports for each of the participating health systems. Reports follow a structured outline published elsewhere<sup>15</sup> and undergo iterative review by all team members. Two of these reports were completed and available for this analysis; other reports were still in development at the time of analysis. The purpose of the health system case reports was to provide a comprehensive overview of each site's LM history and offerings and facilitate cross-case analysis.

### Qualitative interviewing methodology and data analysis

One of the co-authors (JG) is senior faculty with over 80 peer-reviewed publications on study findings that use qualitative interviewing, and the approach for that work, as well as the current study, is grounded in guidance

from Bernard,<sup>16</sup> Seidman<sup>17</sup> and Spradley.<sup>18</sup> JG also developed a qualitative research course that he taught for 17 years, and this course covered qualitative interviewing as a methodological approach. JG led training on in-depth interviewing for team members on this project before the study began and participated in weekly team meetings to oversee the qualitative interviewing process and discuss findings.

An emergent design approach was used to identify themes, and no formal coding was conducted.<sup>19</sup> During weekly peer debriefing meetings with the research team, emergent themes were collectively identified through a combination of inductive and deductive approaches. Workplace culture is one emergent theme and is the focus of this analysis. The analysis included a review of each transcript, case report narratives (when available) and site documents. It focused on insights pertaining to the influence of workplace culture on LM implementation. The study team reviewed case report narratives and site documents to inductively elicit common themes such as those pertaining to interpersonal relationships, attitudes towards LM, leadership and peer support mechanisms, and LM-related clinician behaviours. The team also used quote matrices to organise and analyse transcript data. A quote matrix explores possible relationships between two variables of interest, which make up the rows and columns. The crosstabulations consist of segments of coded text from qualitative data. This approach is more useful for identifying trends in the context of participants' sentiments rather than the frequency with which they are expressed.<sup>20</sup> For this study, Microsoft Word was used to create a quote matrix with columns for each health system and rows for each theme they were perceived to represent. Quotes were selected by searching the data for keywords related to workplace culture such as 'positive', 'gratitude', 'teamwork', 'support', 'help' 'inspired' and 'encouraged'. Exemplary quotes that best captured the phenomenon in question were then highlighted within the matrix. Commonalities among these selections were then used to construct the outline and findings of this analysis.

**Research reflexivity:** The research team was composed of nine members with diverse training and backgrounds ranging from research to clinical practice. The team has extensive experience in qualitative research, with several team members experienced in the field of nutrition. Specifically, two team members are registered dietitians, one involved in implementation science research (MLA) and another in research on interventions and policy to promote healthier food environments (SMS). A third team member is a researcher in interdisciplinary health sciences focusing on improving diet quality (MMR). The project is led by MCK, Sr. Director of Research at ACLM, who has expertise in both nutritional epidemiology and lifestyle medicine, and JG, a medical anthropologist and public health nutritionist. Two other team members have an MPH and approached the study from a public health lens, one currently working in the field of epidemiology

**Table 1** Interview participants by health system

Health system name	Behavioural health specialist/ health coach	Billing/health information management Staff	Dietitian	Health system leader/ administrator	Nurse practitioner	Physician	Other healthcare professional*
Site A (n=8)	0	0	0	4	1	2	1
Site B (n=12)	2	1	2	3	1	1	2
Site C (n=7)	1	0	2	2	0	2	0
Site D (n=9)	0	0	0	4	0	5	0
Site E (n=6)	1	0	0	3	1	1	0
Total (n=42)	4	1	4	16	3	11	3

\*includes exercise physiologist, physical therapist, kinesiologist, psychologist/psychiatrist.

and research applied to LM (KLS) and one providing technical assistance advancing strategic LM integration in health systems (TAH). Thus, multiple team members approached the research with unique perspectives about nutrition counselling as well as a broader knowledge of health and LM. The lead analyst on this study (ND) holds an MSPH in social and behavioural interventions, giving her expertise in how societal and interpersonal factors can influence health behaviours. Finally, BW is a clinical psychiatrist and offers a first-hand clinical perspective.

## RESULTS

Across the five health systems explored in this analysis, fifty-nine individuals were contacted; of those, three declined to participate, 14 did not respond and 42 completed the study. Three of the 42 completers participated in an additional follow-up interview (n=45 total interviews). No participants dropped out. Interviewees included health system leaders and administrators (38.1%), physicians (26.2%), dietitians (9.5%), behavioural health specialists and health coaches (9.5%), nurse practitioners (7.1%), psychologists/psychiatrists (4.8%), billing and health information management staff (2.4%) and exercise physiologists, physical therapists or kinesiologists (2.4%) (table 1). Fifteen participants (35.7%) were certified in LM.

Overall, participants described a supportive workplace culture as a key facilitator to implementing and sustaining LM programmes in their health systems. This type of culture was collectively defined as one in which social resources were present, the physical environment supported LM behaviours and colleagues engaged in LM themselves. Those who most epitomised and advocated for these factors functioned as the ‘voice’ of LM in their health system and were referred to as site champions. These individuals and their like-minded colleagues

actively promoted distinguishable shared values that facilitated the successful implementation of LM. A conceptual framework depicting this process is presented in figure 1.

### Promoting shared values

Verbal, written and non-written communication of key values indicated a supportive workplace culture. These include trust and belief, gratitude, collaboration and optimism.

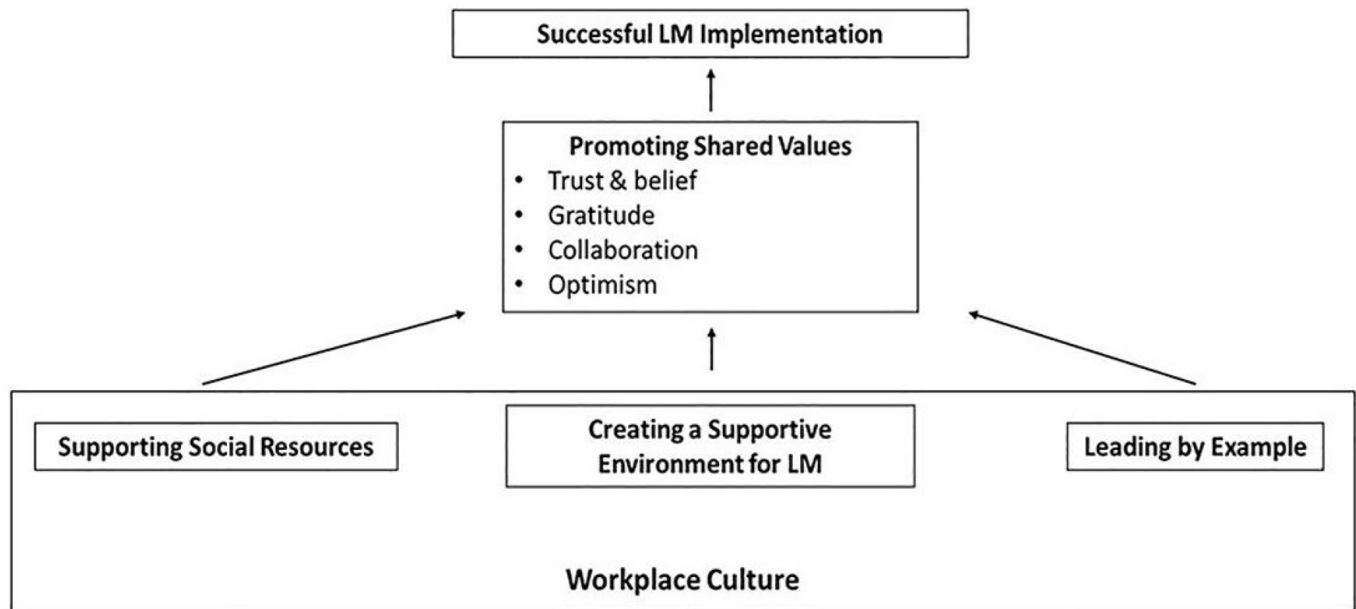
### Trust and belief

Individuals in health systems who reported successful LM implementation commonly described a strong trust in the efficacy of LM practices. As they explained, this trust was spurred by personal experiences of surviving chronic illnesses thanks to LM, or exposure to books and media from specific physicians or other experts describing their clinical experiences or research. Participants resonated deeply with these stories of overcoming seemingly incurable health conditions and were allured by the prospect of an inexpensive and unintrusive solution. Achieving the desired results by following LM confirmed individuals’ confidence in the intrinsic value of this whole-person approach. These champions did not hesitate to share their transformational journey with colleagues and patients.

If you believe in it strong enough and you exude that behavior and manifest it, people can see it. They can feel it. They can taste it. And they want more of that, more of whatever punch you're drinking. (Physician, Site D)

Another physician explains how her complete confidence in LM’s ability to extend one’s healthy years was so powerful that she felt obligated to spread awareness of it. In her words, ‘I felt like I was betraying my patients and holding back something that I needed to share with them





**Figure 1** Conceptual framework depicting the role of workplace culture in lifestyle medicine implementation.

because there was a chance that they could live more life, right?’ (Physician, Site A).

This infectious phenomenon extends beyond the workplace. In fact, one health system dedicated a webpage to LM-success testimonials from patients describing their previous or ongoing health condition, how they engaged with LM and the progress they have made thus far.

### Gratitude

Expressing appreciation for colleagues that fulfil and exceed their everyday responsibilities was frequently cited as a core component of LM implementation. According to one administrator, a simple ‘Thank you’ was not always sufficient:

It’s not just communication. It’s engagement. And it’s...gratitude and telling them that you appreciate them. And it’s telling them their ideas are great. And then when they work well, you celebrate. (Administrator, Site D)

One form of ‘engagement’ was giving gifts of gratitude such as small self-care items such as candles and gift cards to local restaurants. ‘Communication’ ranged from quick ‘Thank you’ texts to emails throughout the health system highlighting a particular employee’s notable contribution. These small acts reward efforts that may have otherwise gone unnoticed while building collegiality.

### Collaboration

Collaboration is another key value that can take many different forms. Working with others begins in one’s own workplace and extends to other health systems, institutions and organisations. These relationships are sometimes made through formal introductions at professional events such as conferences and sometimes generated more informally through lunch hour conversations, for

example. Participants reported the importance of cooperation and teamwork in drafting proposals for new LM programmes as well as funding and executing them. One health system engendered collaboration by cooking and sharing healthy food samples during a meeting. As a result, ‘that seemed like the change from like you’re sitting on one side of the table, they’re just nodding to like now they’re engaged and like, ‘Okay, well, how can we make this happen?’ (Physician, Site A). Colleagues also expressed appreciation for the specialty-specific knowledge and abilities of their peers who lent their expertise in challenging times. Collaboration was further bolstered by a commonly expressed openness to new ideas and a willingness to take risks.

### Optimism

Participants described experiencing setbacks that highlighted the value of optimism. Encouraging colleagues to not give up by affirming the importance of their efforts and reminding them of why they started was essential. Within health systems, participants often referred to their site champion as someone who maintained an unwavering positivity even in the face of adversity and were greatly admired for doing so. After describing challenges and recent setbacks in implementation, one physician reflected, ‘but I am really optimistic by the fact that there are other people who are intrigued by the idea of lifestyle medicine and want to talk about how to bring it to their programs’ (Physician, Site A). When challenged, site champions continued to smile, refused to take ‘No’ for an answer, and proceeded as though success was inevitable. This faith in desirable outcomes was reportedly essential even when things were going smoothly to perpetuate the continual evolution and growth of LM.

## Supporting social resources

Participants reported that connecting with LM-invested colleagues formally and informally was essential for creating a stronger sense of community. Less formal social support groups were used to share resources and experiences. These included plant-based recipes, reading material and personal stories exhibiting epiphanies about the value of LM particularly after a troubling medical diagnosis.

Recruiting colleagues from a variety of specialties was reportedly essential for successful implementation. A greater diversity of knowledge and skills prevented one clinician from having to invest substantial time and energy in adopting these roles themselves which most often results in failure according to interviewees. These teams included practitioners in cardiology, internal medicine, endocrinology, psychology, nutrition and sports physiology as well as certified health coaches, chefs and billing personnel.

I'm really quick to identify other people, other ideas, other processes, people that have certain expertise in the area. And my goal is not to control the situation, my goal is to edify someone else so that they can do the work in the job of connecting, educating, and helping change ideas around solutions which hopefully, will change habits which will change outcomes. (Physician, Site C)

LM experts from other health systems were also valuable at all stages of implementation. These external consultants were often clinicians who spearheaded their own system's LM efforts through trial and error or were specialist experts. Novice systems could use these experts to draft a more comprehensive vision, while more advanced systems could ask about specific problem areas. Consequently, successful implementation of LM may be achieved more quickly and efficiently by learning about the many common pitfalls and obstacles other health systems have faced. This saves the health system valuable time and resources that can instead be used to further advance their efforts.

## Creating a supportive environment for lifestyle medicine

Supportive environments facilitated interconnectedness, leveraged the built environment and promoted LM as the central modality of healthcare. In doing so, these environments facilitated the sharing of key values throughout the health system.

Both administrators and colleagues have a role in forming beneficial relationships. Administrators' access to department leaders enables them to connect clinicians newly interested in LM with more experienced LM leaders from across the system. Participants reported appreciating guidance on billing especially. The social support groups of colleagues, on the other hand, are spaces where clinicians tend to meet peers who fill the gaps in their LM knowledge unintentionally. In fact, it was suggested that

the informal nature of these relationships contributes to the credibility of the information shared.

When I'm an employee and I see, 'Hey, that's one of the nurses over there that I see on the floor'. And if she's saying this is a good program, then I know that. This isn't like watching a commercial with some paid actor to tell me how great it is. This is Susie that I, I see over at the hospital or who delivered my wife's baby. (Administrator, Site B)

Per this reflection, conversations that take place 'on the floor' influence clinicians' awareness and perceived credibility of LM practices in ways that formal introductions may not. In doing so, the information gleaned from these relationships may lower clinicians' perceived barriers to engaging with LM by potentially dispelling false preconceptions and providing the assurance that guidance will be available should any difficulties arise in the long-term.

Aspects of a health system's built environment such as visual media, workplace amenities and cafeterias serve as physical platforms for supportive endeavours. Message boards, electronic billboards, TV monitors and flyers, for instance, frame LM positively using energetic messaging. They also advertise LM workshops, trainings and seminars that physicians may not have been exposed to otherwise. Safe and attractive walking paths were also highly desired by participants as were fitness facilities where physicians could not only exercise but socially engage with their peers as well. Cafeterias that consistently offered appealing plant-based menu items were praised for supporting clinicians' (and all other patrons) transition to or maintenance of a lifestyle consistent with the principles of LM.

Health systems in which LM is viewed as the ideal and default standard of care—the primary modality—are more conducive to a positive and supportive workplace culture. One health coach (Site E) with this mentality described LM as the 'first line of treatment for chronic disease'. Other examples include encouraging referrals from all specialties to LM programmes and questioning patients about all six domains of health behaviour rather than only nutrition with a patient with diabetes. When LM is perceived as a subsidiary, alternate or supplement to best care practices, clinicians may be deterred from engaging in it as reflected in the following sentiment.

It does kind of get separated off from like (emphasis) medicine, which I think is not helpful because I think doctors think that's not what I do, you know? And it can become an alternative way of doing things, or something that's less science-oriented. (Physician, Site A)

This 'alternative way of doing things' reportedly causes frustration and stress among physicians who question why they are being tasked with the new responsibility of learning and implementing LM. Moreover, since physicians are trained to provide the best care possible,

anything that is perceptibly below this standard will not be readily welcomed or adopted.

These supportive endeavours support the diffusion of information, raise awareness and reflect the health system's intentionality in implementing and growing LM practices.

### Leading by example

'Walking the walk' was the language used by participants to refer to an individual's or a health system's personal engagement in the LM practices that they promote. At the individual level, clinicians who 'walk the walk' are admired as role models by their colleagues. Most examples that study participants provided of their colleagues failing to 'walk the walk' involved unhealthy dietary choices in the workplace, which invoked confusion and irritation.

There's pizza parties all over the place, there's always donuts and muffins in the doc lounge, and so it's just a trickle-down effect. (Physician, Site A)

This 'trickle-down effect' challenges clinicians' efforts to bring more of their colleagues into LM implementation.

Aside from maintaining a healthy diet, the ability to manage stress was also compromised in the workplace. According to participants, overly demanding workloads made it difficult to maintain a work-life balance. This was acutely felt during the staffing shortages and increased cases from the COVID-19 pandemic. Individuals interviewed did, however, note the potential benefits of stress-reduction policies that granted more flexible schedules or offered on-demand employee counselling services. Moreover, stress-reduction was a latent component of other employee LM programmes ostensibly targeting other domains.

Participants reflected that 'walking the walk' has many benefits to LM implementation including improved patient care and increased buy-in. Boosting clinicians' well-being makes them less susceptible to burnout and exhaustion, thereby enabling them to provide better care for longer periods of time. Less burnout also leads to less turnover, thereby providing a greater opportunity for healthcare teams to strengthen their social network necessary for successful LM implementation.<sup>21-24</sup> Additionally, since patients hold their practitioners to a higher standard, practitioners must convey authenticity to achieve patient buy-in.

If we don't practice what we preach then it becomes, you know it's not authentic at all. And I find that with a lot of doctors, I mean they're talking about, Hey, you should not have so much salt. And you shouldn't eat fried food. And you see a can of soda, you know right on their desk. (chuckles) Or they're crunching, munching on potato chips, or finishing eating a cookie with a little bit of crumbs on their face. And it's like, wait a minute, you can't be talking about this stuff if you don't do it yourself. (Physician, Site D)

Other participants echoed this by explaining that personal experiences with the day-to-day challenges and nuances of LM engagement allows clinicians to relate to their patients' lived experiences, anticipate future obstacles and provide more appropriate strategic solutions. This display of empathy increases the probability that the patient will feel understood and be more resilient in facing LM-related challenges.

In summary, collaborating with others, supporting physical resources and 'walking the walk' are invaluable goals for anyone aspiring to implement or grow LM in their health system. These three elements (supporting social resources, supportive physical environments and leading by example) build the united front that characterises successful LM implementation.

### DISCUSSION

This study is the first to investigate how workplace culture influences the implementation of LM in five health systems across the USA. We identified the elements of positive workplace cultures that are conducive to successful LM implementation such as supportive social resources, creating a supportive built environment and actively practicing LM (leading by example). Such practices perpetuate key values such as gratitude, openness to new ideas and faith in LM's efficacy. In turn, these values build the momentum necessary to discover, access and capitalise on the relationships, funding and knowledge required to successfully implement and grow LM in a given health system.

In the healthcare setting, leadership, management skills and teamwork have been identified as factors of a positive workplace culture.<sup>9</sup> When present, these elements allow for more efficient delegation of responsibilities, motivate employees and unite them towards a common goal.<sup>9</sup> Our results confirmed that these outcomes convey key values that contribute to a positive workplace culture. Delegation and unification communicate collaboration and confidence, while motivation inspires optimism, gratitude and openness to new ideas. Physicians who are not 'hooked' on LM are not invested in expressing these values and, thus, present a threat to implementation. Getting this buy-in is particularly challenging since LM is not part of a mandated routine, requires additional training and may be perceived as distinct from, as opposed to complementary to, the traditional, prescriptive practices to which they are accustomed. Overcoming this inertia, however, is critical to building the necessary momentum to achieve system-wide LM growth.

Previous research on the role of resources in LM implementation has examined how external, social, community, professional and physical assets contribute directly to patient care and buy-in. Community programmes<sup>25</sup> and physical infrastructure,<sup>26</sup> for instance, provide patients with more personalised support. Networking helps build multi-disciplinary teams that can address all six pillars of LM and can appeal to a greater variety of stakeholders.<sup>25 27</sup>

Beyond this research, we have found that these resources help integrate LM into a workplace culture that is conducive to successful implementation. Collaborations with external organisations, for example, reduce the burden on individual clinicians or administrators, thereby reducing burnout and fatigue. Furthermore, building professional connections expedites problem-solving and streamlines bureaucratic processes that make LM opportunities seem more achievable, which builds momentum. While these interpersonal level factors are critical, consideration of policy-level changes is a valuable direction for future research. The presence of physical resources such as fitness equipment and teaching kitchens demonstrates that LM is highly prioritised within the health system. The lack of these resources may lead clinicians to question the health system's genuine investment in LM and whether their own efforts are worthwhile.

Factors that facilitate LM implementation have been identified in previous research as general facilitators, rather than as derivatives of workplace culture. The perceived importance of a given health behavioural change intervention, for instance, is indicative of how well it will be adopted by the clinicians in question.<sup>10</sup> Similarly, 'healthcare professionals' own behaviour' affects how likely they are to recommend the health behaviour to a patient and to what degree the patient respects and relates to them.<sup>10 27</sup> Our own findings support these conclusions while adding that they are made possible by the communication of key values. 'Perceived importance', for example, requires confidence that LM will be an effective solution and therefore worthwhile. Similarly, healthcare professionals who are open to LM are more likely to engage in LM behaviours themselves. This is especially relevant considering those who do so are less likely to experience burnout.<sup>28</sup>

As we have found, practices such as creating a supportive environment, making LM central and 'walking the walk' actively use workplace culture to increase the implementation outcomes cited in the literature. In doing so, health

systems form a united front with consistent messaging that bolsters rather than degrades the trust between a patient and their clinician. [Table 2](#) displays recommendations for actively improving LM implementation.

### Strengths and limitations

This is the first study to evaluate the role of workplace culture in LM implementation. The use of a multiple case study approach allows for the preservation of contextual richness from each site, and an in-depth exploration of workplace culture factors that contribute to successful LM implementation. Locations for the parent study were selected based on geographic location to capture a variety of perspectives and experiences. Within each site, we used multiple sources to allow for data triangulation (interviews, document review, site visit). The iterative nature of data collection and peer debriefing enabled the research team to explore new directions with consequent participants and health systems as they emerged, as well as to discuss common themes and data saturation.

A multiple case study approach is not without limitations. Although we aimed to select a diverse sample of health systems and perspectives, we were limited to those belonging to the ACLM HSC; therefore, it is possible that health systems with important LM experiences were not included. Since LM practitioners were purposefully selected with the intention of gaining insights from their experiences, their perspectives may favour the benefits of LM. At the end of each interview, we inquired about who else should be contacted for an interview at the health system. Key personnel, however, could have been missed or declined to participate. The analysis of the interview transcripts used keywords that predominantly related to positive workplace culture, thereby leaving room for future studies to more fully investigate the influence of negative workplace culture specifically on LM implementation. This analysis was conducted before the completion of the multiple case study. That said, only five out of eight total health systems were included. One of the three cases

**Table 2** Recommendations for action to improve lifestyle medicine implementation at the interpersonal (meso) level

Recommendation	Justification
Clinicians should connect with site champions.	Clinicians who reach out and stay connected to their site champion overcome obstacles more quickly, prevent future concerns, feel supported and valued and create more demonstrable interest in LM throughout the health system.
Administrative leaders should connect LM leaders to relevant resources.	Administrative leaders who actively improve the built environment while connecting clinicians with LM leaders from other health systems, personnel from other specialties within their own health system, informational resources, and training materials such as those provided by the ACLM expedite the process of implementing LM.
All employees should participate in LM wellness programmes.	Health systems where both clinicians and administrative leaders personally engage in LM at work create a united front in support of LM implementation, improving both employee and patient health.
ACLM, American College of Lifestyle Medicine; LM, lifestyle medicine.	



not included in this analysis experienced more difficulty with LM implementation and was, therefore, a contrasting case that could have provided additional context about workplace culture. Finally, the cross-sectional study design makes it difficult to assess how the operational decisions within health systems affect their workplace culture and ability to implement LM over time.

## CONCLUSION

The communication of key values through practices and resources found in a supportive workplace culture facilitates the successful implementation of LM. These key values expressed by colleagues and administrators alike serve to mitigate implementation barriers by streamlining decision-making, forming a united front, rapid problem-solving and increasing patient, provider and funder buy-in. Doing so is further benefitted from the availability of resources both within and outside of the health system that perpetuate LM momentum by integrating it into the workplace culture. Practices that capitalise on both successful workplace cultures and available resources include developing a supportive work environment, making LM central and ‘walking the walk’. Accordingly, health systems are encouraged to support their LM advocates, seek appropriate resources and inspire engagement with LM in the workplace.

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