

Integrating Complementary and Alternative Medicine (CAM) into US Undergraduate Medical Curricula

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Abstract


More and more Americans are using CAM (Complementary and Alternative Medicine) practices including natural products obtained over the counter (OTC) to treat illnesses. This invariably creates challenges for the allopathic physicians who treat patients who had previously taken natural products or are currently taking them. This situation necessitates conventional medicine doctors to educate themselves of at least the commonly used natural products, their uses, side effects and more importantly, drug interactions natural products might have with conventional medicines, as this could alter the treatment efficacy and outcome. These realities should be reflected in the undergraduate medical education within the curriculum or without. The University of Texas McGovern Medical school in Houston Texas has adopted a combination of electives, workshops and special projects to address this issue.

Keywords: Complementary and alternative medicine; Undergraduate medical education; Ayurveda; Natural/Herbal products; Supplements; Allopathic medicine

Abbreviations: CAM: Complementary and Alternative Medicine; OTC: over the counter

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Introduction

It is estimated that approximately 38 percent of adults in the United States aged 18 years and over and nearly 12 percent of U.S. children aged 17 and under use some form of CAM [1,2]. This in large part includes natural products obtained over the counter (OTC). This invariably requires for allopathic physicians who treat patients who had previously taken natural products or are currently taking them to be knowledgeable on their uses, side effects and more importantly, drug interactions natural products might have with conventional medicines, as this could alter the treatment efficacy and outcome [3]. Due to the widespread use of natural products, it is highly likely that a patient might have taken OTC products for their illness prior to visiting their primary care physician.

OTC natural medicinal products does interact with conventional drugs prescribed by the physician leading to drug interactions effecting treatment outcomes. Therefore, integrating CAM into undergraduate education is vital for many reasons [4]. At UT Health McGovern Medical School in Houston Texas, steps have been taken to integrate CAM into the pre-clerkship curriculum "doctoring 3" in the Musculoskeletal and Dermatology module since 2017. We also offer electives, workshops and special projects for fourth year medical students on usage of CAM in different specialties.

Importance of integrating CAM to the medical school undergraduate program

A. The medical community will have to accept that patient intake of OTC products is largely unregulated, making it imperative to create an awareness of this reality among students and help them prepare to face this situation in their future practice. Thus, having a CAM program that teaches, at minimum, their uses, side effects, and potential drug interactions is imperative [5].

B. As aforementioned, the demand for CAM is rising among patients in the US [1,2]. Many individuals seek holistic approaches to health, often combining CAM with allopathic medicine [5,6]. Educating undergraduates about CAM might provide them with a broader perspective on patient care, equipping future healthcare professionals with the knowledge to discuss and incorporate these options responsibly [7,8]. It is also recommended that physicians inquire about herbal or supplement use when taking patient histories. Herbal and supplemental history should be a part of patient history.

C. Understanding CAM helps to develop cultural competence. Many CAM practices are rooted in diverse cultural traditions, and exposure to these methods helps students appreciate the intersection of culture and healthcare, enhancing their ability to serve multicultural populations effectively. For example, most US cities are cosmopolitan, therefore it might be useful if physicians who practice in those cities be versed in at least the commonly practiced CAM modalities, their side effects and drug-herb or drug-supplement interactions [8].

D. Introducing CAM in undergraduate programs encourages critical thinking and research literacy. Students learn to evaluate the efficacy and safety of various CAM modalities through evidence-based approaches, distinguishing between scientifically supported practices and those lacking empirical validation [9,10]. These practices come handy when these students go out to the community. Not only will they serve the community better with empathy and understanding their day-to-day needs but also with additional evidence-based support to patient care [11-15]. Research in CAM also poses unique ethical challenges, including the need for culturally sensitive methodologies and the inclusion of marginalized populations. The undergraduate curriculum should introduce these concepts, encouraging students to pursue responsible and ethical research practices if they choose to study CAM further.

E. Undergraduate education in CAM promotes interdisciplinary collaboration and professionalism. By learning about CAM in conjunction with conventional medicine, students gain an appreciation for integrative healthcare models, fostering collaboration between CAM practitioners and conventional healthcare providers [16]. Unlike other health care systems around the world such as in China, India, Sri Lanka or Japan, US lack in having an integrated allopathic medical system side by side with other traditional health care systems. This interdisciplinary collaboration will give patients necessary support for example in relieving pain with acupuncture, massage therapy, cold and warm therapy. Additionally, professionalism in CAM includes the ability to work effectively within interdisciplinary healthcare teams [16]. Students should learn how to bridge communication between CAM practitioners and conventional healthcare providers, respecting differing perspectives while advocating for integrative approaches that benefit the patient.

F. Including CAM in the curriculum aligns with the trend toward preventive and wellness-focused healthcare. Many CAM practices emphasize lifestyle changes, stress management, and preventive care, which are increasingly recognized as essential components of modern healthcare. This education is valuable not only in terms of patient care but also for medical students/professionals' wellness and mindfulness. Students learn about meditation, yoga, tai-chi and other practices such as pranayama breathing technics during their pre-clerkships and clerkship years. Incorporating CAM into undergraduate programs can take various forms, such as standalone courses, modules within health science programs, or interdisciplinary seminars. This approach not only enriches students' education but also prepares them to meet the evolving needs of patients and the healthcare system. Understanding ethics and professionalism within the context of CAM is also crucial in the U.S. undergraduate curriculum. As CAM continues to integrate into mainstream healthcare, educating students about ethical considerations and professional standards is essential to ensure patient safety, informed decision-making, and respect for diverse healthcare practices [16]. This focus benefits not only future healthcare providers but also students in broader fields who will encounter CAM in professional or personal contexts [17].

Additional considerations in implementing a CAM program

Additional educational objectives that can be attained through CAM curriculum.

A. Respect for patient autonomy and cultural sensitivity. CAM often intersects with cultural and spiritual beliefs of patients. Educating students about the ethical principle of respecting patient autonomy and fostering an appreciation for individual healthcare choices, even when they differ from conventional practices. Understanding the cultural and historical origins of CAM enhances students' ability to interact respectfully and meaningfully with patients who use these modalities.

B. Evidence-based practice and informed consent. The undergraduate curriculum should emphasize the importance of evaluating CAM practices based on scientific evidence and ensuring informed consent. Students must learn to critically assess the safety, efficacy, and potential risks of CAM treatments, and to communicate this information transparently to patients and if necessary to their families. This education prepares future professionals to guide patients in making well-informed healthcare decisions without bias or misinformation.

C. Professional boundaries and ethical practice. The integration of CAM requires adherence to professional boundaries to maintain trust and integrity in healthcare relationships. Undergraduate courses should address scenarios where ethical dilemmas may arise, such as dual relationships between CAM practitioners and clients or claims of cures unsupported by evidence. Ethical training also

includes recognizing the limits of one's expertise and making appropriate referrals when necessary.

D. Avoiding exploitation and ensuring equity. CAM practices can sometimes be expensive or marketed in ways that exploit vulnerable populations. Understanding these ethical pitfalls is critical. Students should learn to identify unethical practices, such as overpromising results or prioritizing profit over patient well-being. Additionally, they should explore issues of accessibility and equity in CAM, ensuring that all patients can access safe and effective care regardless of socioeconomic status.

Conclusion

Integrating CAM into western medical education is crucial due to rising patient demand for holistic treatments, the need for cultural competence, and the importance of evidence-based practice. By learning about CAM, future physicians gain insights into a wider range of patient-centered care strategies and become better equipped to navigate collaborative, interprofessional environments. This exposure also reduces bias, enhances patient satisfaction, and fosters respect for diverse cultural practices. Finally, integrating CAM encourages ongoing research and innovation, expanding the body of scientific knowledge and potential therapeutic options. This not only prepares them for roles in healthcare, but also fosters informed, compassionate, and responsible attitudes toward an increasingly diverse and integrative medical landscape in US and around the world.

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