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SUPPORTING RESILIENCE IN MEDICAL SCHOOL: BREAKTHROUGHS AND BARRIERS

Carol Gonsalves[1*], Millaray Sanchez-Campos[2], Heather MacLean[3]

1* Corresponding author: Department of Medicine, Division of Hematology, University of Ottawa, Ottawa, Ontario, Canada
Ottawa Blood Disease Center, The Ottawa Hospital-General Campus, 501 Smyth Rd., L2276B, Ottawa, ON K1H 8L6

2 Department of Family Medicine, University of Ottawa, Ottawa, Ontario, Canada

3 Department of Medicine, Division of Neurology, University of Ottawa, Ottawa, Ontario, Canada

In 2012, the University of Ottawa's Faculty of Medicine made a foundational decision to include a mandatory workshop in mindfulness in the first clerkship year (year 3 of a 4 year program). This initiative was championed by Dr. Millaray Sanchez-Campos and supported by the Department of Family Medicine, with the intention of exposing students in this particularly high-stress time during their training to a practice that could promote personal and professional resilience. An expansion of this program to include both of the pre clerkship years (years 1 and 2) was spearheaded by Dr. Heather MacLean and launched in 2014 as the longitudinal mindfulness curriculum. This curriculum, with the intention to support resilience and reduce stress while providing role models and opportunities for discussion of personal and professional meaning, explores foundational concepts in mindfulness as they relate to present-moment awareness, openness, curiosity, and acceptance of personal and professional experiences of our trainees as they move through their undergraduate training. After a mandatory session in the introduction unit of year 1, students in these preclinical years (years 1 and 2) are offered seven one hour elective sessions over the course of these two years. Each session explores a concept relating to mindfulness as well as experiential exercises. Home practice in the form of experiential exercises is suggested. Students have access to an online iBook which mirrors these sessions and serves as a resource for them for the exercises (Figure 1). While not

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without controversy, after review of evaluations and in consultation with faculty administration and student representatives, the entire longitudinal curriculum was made mandatory in 2016. It should be clarified that although participation in the experiential exercises itself is not mandatory and students may instead opt to observe the practice, the vast majority of students do choose to participate in the exercises. Weekly elective drop in, on site, mindfulness meditation sessions support the curriculum. This curriculum is part of an overall undergraduate medical curriculum with an allotted ~50% of time in formal learning opportunities such as didactic lectures, CBL (Case-Based Learning), TBL (Team-Based Learning) and workshops, a large number of which are optional to attend. The rest of the time, four afternoons, is allotted to self-study.

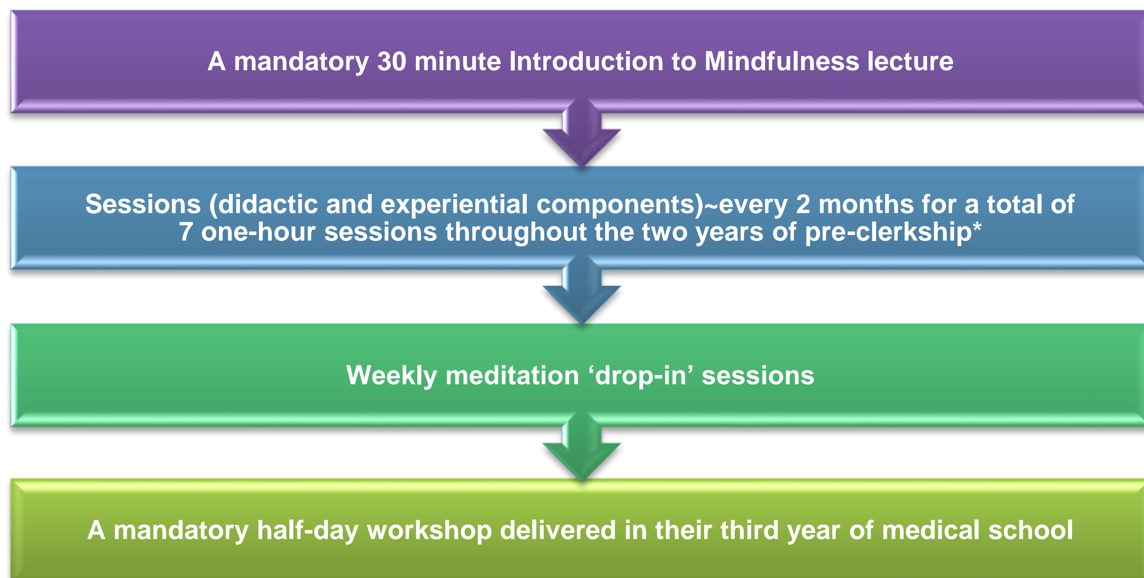

Figure 1 Longitudinal Mindfulness Curriculum at the University of Ottawa Faculty of Medicine. The introduction lecture occurs in the Introduction unit in the first week of the first preclerkship year (Year 1).

The development and implementation of the longitudinal mindfulness curriculum was and continues to be supported by faculty physicians, psychologists, and social workers with personal and professional interests in mindfulness in medicine. These faculty involved in the delivery of the curriculum have held longstanding personal mindfulness practices supported by a variety of training experiences in mindfulness. A core committee including student representation meets regularly to review feedback to ensure positive evolution of the curriculum. With the explosion in research on the determinants, mitigators, and solutions to support trainee and physician wellness in the last 10 years, it is no wonder that faculties worldwide have made wellness initiatives available to medical trainees. As the longitudinal curriculum was made mandatory in 2016 it involves the entire class cohort of a particular year each session (approximately 165 students per

*The 7 one hour sessions mirror the content in the supporting iBook developed for this course (https://itunes.apple.com/ca/book/mindfulness-for-medical-school-residency-and-beyond/id914285826?mt=11).

year across two language streams, approximately 115 in the Anglophone class and approximately 50 in the Francophone class). The workshop in third year has 6-15 students per session (varying depending on the size of the clerkship group). The University of Ottawa was the first to our knowledge to make the leap to an integrated longitudinal curriculum. The experiences of this curriculum for its faculty and learners have been, for some, profound. We have been witness to those trainees who profess their lives have been changed as a result of this newfound practice (time will only tell). Most often students indicate they find the practice of mindfulness enjoyable, relaxing, and helpful, and many are willing to further pursue the practice on their own. Less common, but also valid, are experiences of disinterest or frustration. The latter, however, is occasionally based on misconceptions of mindfulness' foundations and applications and a belief that this practice is peripheral, superficial and a fad. Alternatively, some students express frustration due to an impatient need to get back to studying 'real medicine' and feel they don't have the time to spare to practice mindfulness. While Faculty Wellness and Humanities Programs exist, there has been a lack of championed integration of mindfulness initiatives; the longitudinal curriculum exists alongside rather than integrated with these programs although this is gradually changing. The move to a mandatory curriculum in the last three years has added another noted disadvantage: the challenge of exploring contemplative topics and experiential exercises in a large group. While student disinterest during a session teaching biomedical content may not interfere with the session progression, in a session focusing on present-moment attention, curiosity, and compassion towards self and others, disengagement by even a few can noticeably affect the group dynamics, the learning process and the quality of the teaching.

Not unexpected and as it often happens with new approaches and with change in any field, it has been met by roadblocks largely relating to the entrenched biomedical and science based culture in medicine (medical training and practice). There remain those students and faculty who feel that this focus away from biomedical sciences is unnecessary and perceived as soft skills. There are similarly faculty who feel that these learners (who have been vetted through stringent admissions processes) may not be mature enough to handle the information provided in the mindfulness curriculum. Another concern in implementing initiatives such as mindfulness practice which largely focus on individual effort is the focus they may take away from institutional obligations to support resilience. It is well documented that when physicians are doing poorly personally, the risk to their professional roles may translate into suboptimal patient care, suboptimal quality of care, and negatively affect patient safety.[1,2,3] Among medical students, burnout may cause professionalism lapses.[4,5] While a proven thousands year old practice like mindfulness can support the individual in their personal responsibility for wellbeing, resilience remains a multifaceted construct. *Organizational resilience* must support individual resilience.[6] All the mindfulness meditation practice, online wellness resources, and proffered opportunities to engage in yoga, exercise, and healthy food choices will strain under the burden of increasing patient overload in conjunction with an increasing number of administrative and IT functions transferred to physician responsibilities in the face of budget cuts and

financial strains limiting hospital and community resources for patient care. Infrastructure matters to individual resilience and will remain a barrier to the success of individual efforts.

We are fortunate to have leaders in medical education continually striving to innovate how we teach and assess. The most recent initiative of Competence by Design is such an example. However, serious efforts to implement deep changes in culture and training promoting resilience and a humanistic approach need to mirror these efforts if we are going to support the profession's lifelong commitment to expert and compassionate patient care and contribute to the evolution of the physician role in the face of increasing technological innovation in diagnosis and management. Pursuing milestones without supporting meaning risks stifling competence to fall short of mastery. Entrusting our trainees the lifelong task of championing skills that supports their ability to communicate effectively and empathically as well as monitor and reflect on their own responses to high stress environments and situations is imperative to true expertise.

A research study aiming to identify base levels of stress, resiliency, empathy, and mindfulness along with longitudinal follow up to identify any changes in these characteristics with exposure to the longitudinal mindfulness curriculum is in its final year of data collection. While there are limitations to the study affecting what can ultimately be inferred from these results, they nonetheless support the increasing number of efforts by those in the medical field to challenge the status quo.

The integration of contemplative studies and practices into the medical curriculum is an idea whose time has come. Once often thought of as being 'fluff' and peripheral to core content, practices promoting resilience and wellbeing are more often now felt to be imperative to a successful and fulfilling career. At the University of Ottawa, this curriculum has been met by the majority of evaluating students and faculty with openness and positive reflection. There have been no noted adverse psychological outcomes to date. While medical expertise will always remain at the forefront of our professional obligations, the need to provide humanistic interpretation, communication, healthcare system navigation and stewardship will be an increasing expectation from our patients. The reported recognition of increasing levels of stress and burnout, not only among medical trainees and practicing clinicians but also in the general population, will make this transition challenging. Identifying formal opportunities from established practices to support self-awareness, resiliency, wellbeing and compassion – for ourselves and our patients – will be the challenge of educators to support the very best of this profession. As Hippocrates espoused thousands of years ago, we cure sometimes, heal often, but comfort always. As we realize that even those cured are often not wholly healed, mindfulness offers a time-tested practice with the opportunity to bridge that divide between the science of medicine and the art of medicine. Incorporating measures that may support resilience in our curricula aim to improve physician wellness and concomitantly patient care. As the overall success and

dynamic evolution of the curriculum at the University of Ottawa attests, seeking solutions to the barriers are worth the potential breakthroughs.■

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