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The International Journal of Whole Person Care

Programs in Whole Person Care

Department of Medicine, Faculty of Medicine and Health Sciences

McGill University

3640 University Street, Montreal, Quebec, Canada

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EDITORIAL

WHOLENESS AS PURPOSE

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KEYWORDS: Purpose, Wholeness

I grew up in a Mennonite world. My dad was Mennonite and could trace his Mennonite lineage back more than two-hundred years. My mother was Mennonite and would recount the story of how her father moved from their traditional community in southern Ontario to plant the first Mennonite church in northern Ontario. Growing up, that church and my family were my universe, without any discernable lines between the two.

Then I went to school. It felt like an interstellar voyage. In this foreign land, they worshiped hockey and professional wrestling and spoke a different language (I was in a French immersion program). And it was often a hostile environment (in the '80s, hockey players loved to fight).

I tried my best to keep these two worlds apart. It was like I was two different people. At home, I was a boisterous imp – streaking naked from the bathtub to play at the park at the end of street, convincing my younger sister to eat dog food, narrating elaborate stories to whoever would listen. At school, I was invisible. My dad would recall with alarm when, at their first parent-teacher interviews, he slowly realized that I was the only kid in the class that didn't have a storage cubby. My early report cards implored me to "share more of my thoughts" with the class. But that was the last thing that I wanted to do.

Mennonites have a long (and often complicated) history of living out the Christian scripture that we are to be in this world, but not *of* this world. With roots in the 16th century protestant reformation, we quickly set

ourselves apart with a strict separation of church and state. My parents grew up adjacent to the old-order Mennonite community, which, to the uninitiated, would have been hard to differentiate from the Amish, and where church and farming are *the* pillars of life. None of my friends knew what a Mennonite was. And I did my best to keep it that way.

In grade seven, these worlds started to collide. The school Guidance Counsellor (who was also the Vice-Principle and Music Teacher) came to lead an activity with our class. He circulated a fill-in-the-blank worksheet about our future. *What do you want to do when you are older? Where do you want to live?* Until then, I had never connected school to these types of broader questions about life. This had always been the domain of my home world. Determined to fit in, I saw an opening to win some laughs. *I want to be a garbage man, I wrote. I want to live in a ditch.* I passed my worksheet around to my friends and landed some much-coveted validation. Then – to my horror – my Guidance Counsellor/Vice-Principle/Music Teacher collected up our responses.

A couple weeks later I was summoned to see him. His dimly lit office was long and narrow, and his rectangular desk nearly spanned its width. Backlit by a small, elevated window, he struck an authoritarian, god-like figure – much more VP than Counsellor. As I sat down opposite to him, he slapped my worksheet on the desk. *What the hell is this?* he demanded... I had no response. He waited a beat, then quickly picked it back up to read my answers aloud. I cringed. He waited. ... nothing. *What am I supposed to do with this?* ... silence. *Do you want me to send this to your parents?* No – that would be REALLY bad, I thought to myself, but remained frozen. An eternity passed. He broke the silence with a suggestion – *How about you just rip it up? Pardon me?*, I stammered. *Why don't you just rip this page up, right now?* Still stunned, I slowly realize that this was a very good idea. With torn pieces of paper piled on his desk, I was sent back to class without any further words exchanged.

After this, something started to shift. For the first time, I started to try at school. Up to that point all my effort had been invested in fitting in. I had never really thought about making more than the minimum effort in my classes. But my sense of place and purpose gradually shifted from my home world to school and the potential future it offered. My grades improved and I started to think about going to high school in town, where fewer of the students rode snowmobiles to class and smoked hash in the parking lot. During my grade 8 graduation ceremony, the only award that I remember receiving was a “Most Improved Player, Music Award”. Looking back, I wonder whether my Music teacher/Guidance Counsellor/Vice-Principle had simply created this award for me. Either way, for the first time in this world, I had felt seen.

It was in this foreign land that my professional ambition was birthed. Ambition – and the restless striving that accompanied it – was an alien impulse in relation to the world I grew up in and slowly acted as a wedge in my ability to connect to it. Initially, my ambition was grounded in developing a career in clinical practice

and could be readily aligned to the values that I grew up with – selflessness, compassion, service to others. The parts of physiotherapy practice that resonated with me most – listening with empathy, holding space with those who were suffering, nurturing and supporting others toward a better life – felt like an implicit expression of these values. However, as I transitioned from clinical practice to research it became more difficult to find this grounding.

Entering the world of research felt like, once again, I was travelling to a different planet. In this land, outputs and performance metrics were the primary currency. The holy spirit of striving filled the air, and all eyes were locked on the future. In stark contrast to clinical practice, the present moment only seemed to exist for the instrumental value it might hold for a better tomorrow – to work *like a machine* was the ultimate compliment. I slowly learned how to live, and then thrive, in this new professional world. There was excitement upon securing each achievement that helped me climb the initial rungs of academia, and comfort working in a system that had such clearly laid out trajectories for success. After I inhabited this world, I no longer needed to think about where I was headed, I just needed to put my head down and work – or, at least, so I thought.

Before I knew it, I had landed a coveted tenure-track faculty position at a leading research university. Securing this position culminated nearly a decade of professional striving. And yet, something was missing. I remember the feeling I had upon securing my first set of funding applications – a major landmark as a new investigator. I was so happy to be able to add the grants to my CV but dreaded actually doing the work. This feeling would come to haunt me. I began to feel like such a waste of potential. Here I was with some of the most professional freedom one could imagine but felt utterly lost in relation to my sense of purpose. The core values that first led me to clinical practice felt so disconnected from the focus of my work. I longed for something deeper and more meaningful but didn't know how to get there.

What followed, was a slow arc of professional transformation and refocusing of my research (which I've previously touched on in this space [1, 2]). Taking a cue from my Vice Principle/Guidance Counsellor, I needed to rip up this imagined version of my future and create a new path forward. What I've come to appreciate is how central *wholeness* was to this process. It seems that what I needed most was the exact opposite of my school-boy priorities – a deeper sense of purpose could only be found by building more robust connections between my fractured worlds.

This involved finding new ways to live in each of these spaces. I began to let my cloud of youthful insecurity drift away and re-engage with the world that I had grown up in – reconnecting with people that were part of my early life and letting myself rediscover the qualities that had first drawn me to them. I also re-engaged with the religious community of my upbringing by breathing new life into what felt meaningful, letting go of unhelpful dogma and finding small ways to contribute. In my professional life, I learned to decouple my

sense of worth from performance metrics and to stop climbing for the sake of climbing. I also needed to come to terms with my ambition – something that had no place in my home world yet is a part of who I am.

This also involved letting my worlds come together. Letting more of my personal life bleed into my work, and vice versa. This journal has served as an incredible vehicle for navigating this newly formed bridge – a rare space that both family and colleagues can engage with.

This world-merging process is very much ongoing. But I have come to appreciate that striving for wholeness is a purpose I can get behind. This sense of what might help me cultivate wholeness serves as a rudimentary compass for orienting my professional life – a feeling to follow, rather than a ladder to climb – helping me to discover meaningful ways to contribute that feel uniquely mine. And helping me to focus as much on the moment-to-moment process – the rhythm of each workday, the arc of completing projects, the feeling of slowly wrestling through challenges – as on the potential for future success.

The articles in this issue provide rich and diverse examples of personal journeys toward wholeness and developing a deeper sense of professional purpose. I hope they help you reflect upon how these themes might fit within the worlds you inhabit and where you may want to go from here. ■

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Biographical Note

Timothy Wideman is a physical therapist and associate professor at McGill University. His research aims to help clinicians better understand and address suffering associated with pain, and to improve how future health professionals are trained to care for people living with pain. He has been serving as Editor-in-Chief since 2023.

STORYLINES

EMBRACING PURPOSE

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KEYWORDS: Purpose, Resolve, Priorities, Choices

A couple of years ago, there was a change in the administration of the next-door offices. Soon after, inspirational frames started appearing on the walls, above the cupboards and even on the doors in our common kitchen area.

“live your purpose” says one of the frames across from the electric kettle. It sounds nice in my mind when I read it. The colors and the wave-like shapes add to the positivity of the message. And the absence of capital letters renders the message more tameable somehow. The problem is, I’m not sure what “live your purpose” means.

I roughly know what purpose is. If one of my children asked me to define it, I would probably manage fairly well. “It is the real reason for which you do something,” I would say, “for example, the purpose of going to school is to learn and make friends.” Well, that was easy!

However, purpose is far deeper than that. It is a weighty concept that I have held at arm’s length out of fear. I have been afraid that if I searched, I might realize that my career choices are misaligned or, worse yet, that I might be unable to identify a purpose onto which to anchor my life’s decisions.

However, I have learned that it is unwise to be afraid of asking myself questions. So, what is my purpose?

The Search

For better or for worse, whenever I think purpose, I think work. Almost two decades ago, when I was a medical student on a surgery rotation, I was asked to go see a consultation in the emergency department. “Busy” was the minimal qualification that could be made of the surgery service. We were always putting out fires, it seemed. Wearing my scrubs and my short white coat which identified me as a student, I squeezed myself in the narrow space between the curtain and the stretcher.

As I started gathering information – using all my might to ignore the sounds around me – I realized that the patient and I had difficulty understanding each other. As time went by and the conversation continued to be arduous, I started raising my voice and repeating my questions with greater emphasis. I became more and more invaded by irritation and distress, feeling the pressure of time and of my duty to complete the consultation. Up to that point in my training, I had not acted nor reacted in this way.

Perhaps due to the novelty of my negative behavior, I had a sudden moment of insight. It was as though I was observing the situation from above. With clarity, I saw myself being the antithesis of what I wanted and expected myself to be as a healthcare provider. Here was a vulnerable person seeking help, undoubtedly scared by his sudden health problem. And here I was, deepening his sense of vulnerability and fear with my intimidating attitude. In that moment, I had lost touch with the strong desire that had landed me in medical school two years earlier: to alleviate suffering with compassion, gentleness and respect. In that moment, my only goal had become to complete the “task” in a timely manner and report to my superiors.

That encounter has remained etched in my mind as a representation of what I did not want my work purpose to be. It also confirmed my resolve to base all my medical interactions, first and foremost, in respect and compassion.

Over the years, I have been able to live by this resolution. But unfortunately, I have felt a lot of pressure from different constraints that threatened to compromise the type of care I provided. The conflict between systemic demands and my desire to continue practicing “slow medicine” weighed more and more heavily on me. And so, I became deeply disoriented, unsure of the value of my self-identified purpose in medicine. Perhaps, I thought, the greater needs are too pressing for me to hang on to my ideals.

Beyond Medicine

Alongside these professional doubts, different events in my life took place. The wisdom they provided led to new priorities taking shape. Priorities that, I now realize, are purposes of their own: striving to live with humility and gratitude, guiding my children with love, preserving and cherishing my marital relationship, and making people – whether family, friends or patients – feel seen and heard.

Though I avoided the question of purpose for years, embracing these fundamental priorities has brought me tremendous lucidity. I have discovered that purpose is a pervasive force in my life that transcends the distinction between the “personal” and the “professional”. Therefore, I can now question and examine whether my choices – at home *and* at work – align with my purposes. And I can now see that continuing to practice in a way that is faithful to my understanding of medicine *is* one of my purposes.

Navigating Vastness

When I think back to the frame in the kitchen, the wave-like shapes had more wisdom in them than I thought. I realize now that our purpose arises from the ocean of our deeper convictions and personhood. And like waves, our purposes shift throughout a lifetime.

Perhaps then, to “live our purpose” we need to navigate our everyday choices with exquisite awareness and respect for our waves and ocean. Perhaps we need to do this not just once before applying for a degree or a job, but regularly, repeatedly, purposefully. Perhaps only then can we continue aiming faithfully at the right destination. ■

Biographical Note

Sandra Derghazarian is a community neurologist and a physician coach who has loved stories for as far back as she can remember. *Storylines* is a column in which she shares stories about work and life. As much as possible, she tries to stay loyal to the messy and sometimes contradictory experiences of everyday life.

ROOTED IN MY WHY: A STORY OF NURSING, IDENTITY, AND INTEGRITY

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KEYWORDS: Purpose in nursing, Nursing education, Equity and anti-racism, Professional identity

A few weeks ago, my colleague told me about this invitation to write about the concept of purpose in healthcare. I ignored it at first — too many tasks, too little time. But even as I moved on with my days, the question lingered quietly in the back of my mind. What would I write if I let myself pause long enough to answer? I didn't open a blank document right away. Still, the story began anyway, unfolding softly. And today, I find myself ready to start. I'm inviting you into that story — the one that's been forming, slowly and unexpectedly, since the moment I chose not to respond.

I am a nurse and currently a Faculty Lecturer at a school of nursing. Reflecting on my professional life, I realize that a consistent pursuit of purpose has shaped it. Whether at the bedside, in the community, or classrooms, my actions are guided by a clear sense (or need) for meaning and contribution. My most recent full-time clinical role was at a community health center. I was doing home visits for families welcoming a baby into their lives. Despite the struggles and hardships of life, it was generally a setting filled with great joy. It was in that role — entering people's homes, holding space for their stories, and walking alongside them through significant life transitions — that my understanding of purpose deepened. These experiences weren't just clinical duties; they were human moments that reaffirmed why I chose this profession in the first place.

When I was 17, I recall flipping through the pages of a college program guide without necessarily knowing what was to come next. I was trying to figure out what to do with my life. I remember feeling discouraged. Most of the programs left me uninspired and bored. They felt abstract and theoretical, and I couldn't connect with them. But when I stumbled upon the nursing program description, something shifted. Nursing combines various disciplines — including biology, psychology, pharmacology, and social sciences. More importantly, it brought them together to support others. The profession promised a way to do, to act, to care. And that's what I was looking for: not just a subject to study, but a path to walk — a contribution to make.

From the very beginning, I had a clear understanding of the population I wanted to work with: children and their families. I was told to start with adults, to follow the more "traditional" path, but I listened to my instincts instead. I knew where my passion lay. After graduating, I began working with pediatric populations in a hospital setting. I later moved to community nursing, where I supported infants, school-aged children, adolescents, and their families. I never worked with adults in my nursing career — not because I didn't value that work, but because I knew that wasn't where my strengths as an individual and a professional were. I had a unique connection to younger populations and families, and I wanted to build on that strength.

To me, purpose isn't just about what I can accomplish; it's about what I bring to the table — my values, my identity, and my capacity to be present with others. It is connected to how I perceive the world and how I choose to engage with it. That's why community nursing became such a meaningful chapter of my life. During home visits, I was welcomed into people's private spaces. I worked with families from all over the world, many of whom were navigating the complexities of immigration and integration into a different society. These encounters were rooted in trust, reciprocity, and relationships. There's something incredibly humbling about being a guest in someone's home. In those moments, I wasn't the one in control. I wasn't directing the narrative. I was there to listen and support. That was my role — and that's what made the work so rich. Community nursing gave me time. Time to foster genuine relationships, to witness growth — even slowly — and to offer care that was responsive and personalized. I didn't need to lead the story; I just needed to hold space for it. That, to me, is what nursing is truly about.

The transition into teaching nursing meant I had to redefine my professional identity, which was both exciting and challenging. I was comfortable in my clinician's role, and now, I was moving toward the unknown — I was stepping into academia. My first year was full of questions. I felt somewhat lost, still doing the work, but something was missing. It took me time to realize that I was once again searching for my "why." I never moved without it. And I lost it for a brief moment. I lost it because I was navigating a new space I wasn't used to — one intensely focused on performance. In trying so hard to meet expectations and prove myself, I became consumed with checking boxes and doing things just to get them done. And that wasn't me. Slowly, I began to feel sad and lonely. For me, work is not just what I do — it's a reflection

of who I am. I've always believed I must bring my whole, authentic self into the spaces I inhabit. When that connection is lost, so is the joy, the clarity, the why that guides me.

Eventually, I found it again. I began engaging in initiatives related to social justice and equity, and I brought this perspective into the classroom. Purpose, in the context of social justice and equity work, is not a luxury — it's a necessity. And this social justice lens was always part of who I was, but it became clearer to me later in life. This suggests that a sense of purpose evolves and grows in ways that can seem unclear, but clarity is never far away. My goal is to shape a generation of nurses who not only understand clinical tasks but also reflect critically on the systems in which they work. I want learners to see themselves as advocates — as change-makers. Teaching is more than sharing knowledge; it is an opportunity to build awareness, nurture compassion, and cultivate courage. The nursing profession is evolving, and it's finally placing greater emphasis on equity, inclusion, and justice. As an educator, I have a responsibility to reflect that evolution in how I teach, what I prioritize, and how I support learners.

This brings me to a different chapter of my life: I decided to return to school to pursue a master's degree in education. I had just started teaching, and I wanted to feel more confident in my role, understand the foundations of pedagogy, and develop my own teaching identity. I always told myself that I would never pursue a graduate degree just for the sake of having one. I needed to care deeply about what I was learning and see how I could apply it meaningfully in my work. My academic journey took an unexpected turn when a professor shared a profound insight with me. She said, "When you follow a course-based path, you're learning through someone else's lens — your professor's. But when you take on a thesis, that's your chance to bring your voice, values, and perspective to the table." This conversation was a turning point for me. It empowered me to make space for my ideas and lived experiences. I decided to write a thesis, confident in the value of my voice.

My research focused on a topic that is deeply important to me: anti-Black racism in nursing education. I also made the deliberate choice to include art as part of my project. I had always been drawn to art, but growing up, I wasn't encouraged to explore it. One of my professors, seeing my interest in art, invited me to reconnect with that part of myself, and I did. I used collage artwork as a method of data collection (Fig. 1 & Fig. 2). It was a transformative process. Today, I bring the same transformative method into my teaching (again, thank you to my teachers). I use collage with nursing students to help them reflect on who they are, what they value, and how those inner truths shape the kind of nurses they want to become. This exercise is a powerful tool for fostering a sense of identity and belonging in the nursing profession. Ultimately, it fosters a stronger sense of purpose in nursing.

In reconnecting with my why, I am also fortunate to participate in a community-based project centered on anti-Black racism in nursing education. This initiative allowed me to engage meaningfully with Black

community members in my local area. The goal is not just to consult — but to truly collaborate — working alongside them to imagine and shape a nursing education that is more inclusive and responsive. It is a powerful learning experience. Through the academic world, I came to understand the depth of relationship-building, the time it takes, and the value it brings. These moments taught me to move away from transactional approaches and toward fostering genuine, reciprocal connections. The impact of that kind of engagement is not only long-lasting but also transformative for the profession.

Over time, I also learned the importance of pausing. Earlier in my career, I didn't always take time to reflect. I kept going, driven by instinct, which is not a bad thing; we need to trust it. But now I know how valuable it is to stop, to assess, to reconnect with my core values. Every now and then, I need to ask myself: Am I aligned? Is my work still rooted in meaning? Am I contributing in a way that reflects who I am and what I stand for? The times I didn't pause, I found myself confused, chasing goals that weren't mine. I became focused on performing, on proving my effectiveness, on showing I was worthy. And while these things aren't inherently wrong, they can't be my driving force. As a human being, I am already worthy. Reading the book *Rest Is Resistance* by Tricia Hersey reminded me of this truth — that just by existing, we are worthy of everything. We don't need to earn rest, or dignity, or love. We carry that worth within us, regardless of output. I've also come to realize that different realities can coexist. I can live my values and be effective. I can show up with excellence without abandoning my true self. Capitalist values — constant production, competition, external validation — cannot be what defines me. I move with love. With compassion. With justice. With respect. That is the rhythm I choose. That is the compass I return to.

As a Black woman in a profession that has long overlooked the contributions of Black nurses, I also think deeply about positionality. We are only beginning to uncover and acknowledge the legacy of Black nurses in Canada and around the world. I carry that legacy with pride and a sense of responsibility. I know that the doors I walk through today were opened by the efforts and sacrifices of other Black nurses who refused to be invisible and who fought for dignity, equity, and recognition. For me, honoring that legacy means staying true to my values. I don't take it lightly. Those nurses didn't fight for nothing. They fought because they believed in their mission. They knew that their voices, their care, and their presence mattered. And that's why I can't approach my work passively. I show up with intention — because I owe it to them and myself.

Purpose, as I've come to understand it, is a dynamic force. For me, it evolves as I grow, but it always pulls me toward integrity. It helps me navigate uncertainty, embrace challenges, and remain grounded in my values. It gives my journey meaning. I know that wherever I go next in my career, this will remain constant: I will always seek to act with purpose. Whether I'm at the bedside or in a classroom, I will continue to ask: Why am I doing this? Who am I doing it for? And how can I do it with integrity? That is what sustains me. That is what drives me. And that is what I hope to pass on to the nurses of tomorrow. ■

Figures



Figure 1: Collage from My Master's Research-Je suis/I am

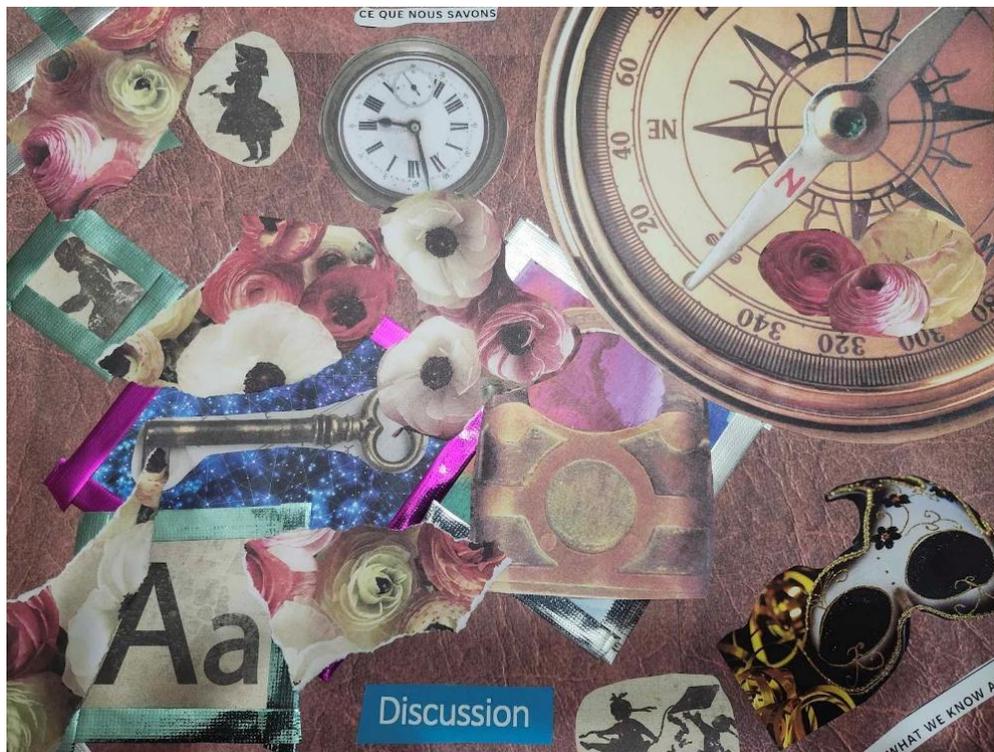


Figure 2: Collage from My Master's Research- A la recherche/Searching for

Biographical Note

Anne-Laurie Beaubrun holds a Bachelor's degree in Nursing from the University of Sherbrooke and a Master's degree in Education from the University of Ottawa. Her clinical experience encompasses pediatric care and community health. Since 2018, she has been a Faculty Lecturer at the Ingram School of Nursing, McGill University, where she teaches in both the on-campus and online undergraduate programs. Her academic and professional interests include perinatal and family health, community nursing, and social justice. Anne-Laurie is actively engaged with the Ingram School of Nursing's Office of Social Accountability, collaborating with community partners to enhance the curriculum and support nursing practices rooted in social justice.

DROP OF INDIGO DYE

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KEYWORDS: Family medicine, Narrative medicine, Purpose

The dreaded waiting room. I'm surrounded by the typical silver-haired patients with finely creased skin. *I don't belong here.* Intrusive thoughts creep into my mind. The burden of waiting is released when my name is called, and they usher me into an exam room. Near the end of my appointment, my specialist pauses. I look up.

"Your right upper eyelid is drooping slightly," he observes. His eyes don't meet mine.

"Could it be from not having enough sleep?" I inquire.

"Unlikely," he responds. I shift my weight uneasily in the stiff maroon exam chair.

My head spins. I rush home to figure out when this ptosis began. *Could it be myasthenia gravis?* I can hear a tiny voice in my head as if my brain is somehow whispering to me. I don my doctor's hat. *Duration doesn't fit,* dismissing the idea. It's as if I'm in conversation with myself. *Dyspnea worsening with exercise. Weak upper extremities – despite lifting weights for years. Decreasing stamina, yet no answers despite a battery of tests.* My brain rattles off everything that is wrong with me.

I shake off these thoughts before fear pierces my soul like shards of glass. I slip into my weathered physician armour and compile a list of symptoms to share with my family doctor to make the most efficient use of my upcoming visit.

Before she's done eliciting the history, I catch her eye and implore, "I need this sorted out. I'm worsening."

“Yes, we definitely need to,” she declares. “Let us order some labwork and imaging. I will also fire off an urgent referral, too.” I melt with relief hearing those poetic verses. “I’ve got you, Aisha. If we don’t find answers, I will find someone smarter than me who can!” she quips with a coy smile as she slips out of the room.

I’m shocked at how quickly the neurologist’s office calls me for my appointment. Guilt prickles my skin. *My patients wait weeks to see me!*

The neurologist’s office is nestled in the same russet-coloured building perpendicular to the hospital as my ophthalmologist. This waiting room has grey-washed oak laminate floors, crisp white walls, and floor-to-ceiling translucent windows. An orchid graces the receptionist’s desk. I’m the only one waiting in this room.

He ushers me into his consultation room. He appears much younger and taller than I imagined from reading his notes over the years. His eyes emanate kindness. “How is work?” he asks casually.

“It’s fine,” responding politely. I’m afraid of revealing how work is bogging me down. After a thorough examination, he reassures me that it’s normal. I doff my doctor’s hat momentarily so that I can absorb what he’s saying without overthinking. “I’m not sure if you saw my MRI yet... I just had it done a few hours ago.” He nods, returning to his mahogany desk and pulls up the images onto his computer, perched off to the side, with its screen in full view for patients.

I imagine seeing my pristine scans, just like my previous tests. I imagine he’d reassure me there’s nothing to fret about. I imagine I’d return to work, blaming burnout as the root cause of my billowing symptoms.

My eyes widen as the image pops up. I don’t need the radiologist’s arrow to tell me where to look – the opacity glares at me. My body stiffens. Silence thickens the air. “It doesn’t look good,” he starts. I’m pleasantly surprised by how well he’s breaking bad news. And as if he could read my mind, “Your ptosis is unrelated.” *Cancer.* My brain throbs for my husband’s support. I cling to my physician armour, letting its stiffness hold me instead.

“What’s the next step?” I croak. *Damn! Why can’t I ask an intelligent question?!*

“I will refer you to the neurosurgeon. He is very good.” He pauses again to give me time to process. “You’re lucky you got the MRI. It picked up this incidental tumour early.” He pauses again. “Please reach out with anything I can help you with,” he says, folding his hands kindly.

"I appreciate all that you've done and taking the time to see me." I can hardly stave off the tsunami of grief, on the verge of breaking the levee. I sail back to my car and call my husband. "I have brain cancer!" I wail. This diagnosis stuns every cell of my being. I lean further into salah (prayer) to find my way through this thick fog. I find reciting verses from the Scripture offers solace. *Subhanah-rabiyal-al-'ala* (Glory is to my Lord, the most High) as my forehead graces the ground, in child's pose. The glow of spirituality broadens my perspective amidst the abyss. *Everything that is happening is meant to be. This world is but a test. Don't despair*, my brain soothes me with spiritual teachings.

"What's wrong, Mom?" my youngest teen says one bright but frosty day after school. Her brows furrow.

"Uh...nothing," I stammer. "Actually, I am feeling sad." My back straightens. "There's something I need to share." I gesture her over to the family room. Beams of the afternoon sun tickle our skin. We sit on the couch facing our yard, blanketed with snow, tall pines on one side, junipers caressing our deck on the other. "You know how I've been feeling weak?" I share slowly as I draw in a breath.

"Yeah! You've lifted weights for years, but your arms never get strong!" she teases. My muscles tighten at her astute observation.

"You know, I've had this for years... maybe it's my superpower," I retort. She gets this reference. We're both Marvel fans. I soak up courage like Wanda Maximoff to break this news to my other teens. I find my son having a snack in the kitchen.

He asks pointedly, "Is it cancer?" My heart leaps into my throat. *How did he know?!* I nod. He continues, "Which organ?" He lands another arrow right at the center of the target like Hawkeye. Hearing my reply, his eyes well up. I swoop around the marble island slab for a tight embrace.

And my eldest? She keeps scrolling on her phone. A tiny teardrop emerges as she desperately distracts herself, trying to evade eye contact. *Kindness to family pleases God*—another spiritual reminder bubbles up to my conscience. "No matter what, I love you," I offer. Her head melts onto my shoulder as we both weep.

That night, my husband is restless. I touch his shoulder delicately and whisper, "We need to prepare for the worst. I'm ready to proceed to the afterlife if it's in my qadr (God's divine plan)." Since becoming a physician seventeen years ago, performing heroic measures, I vowed never to prolong my life.

"But I can't lose you. I'm supposed to die first!" His body trembles.

As spirituality allays my sorrow, my husband turns to family. His brother, a cardiologist in the US, offers, “I don’t know much about cancer treatments, but forward me the images. I’ll get my friend to look at them.” The American neuro-radiologist quickly gets back to us. “It’s likely low-grade glioma, situated where the neurosurgeon can easily access for a biopsy”. *Alhamdulillah* (Praise be to God)! Gratitude emanates for my husband’s family navigating us through this. My sister-in-law, an internist, checks in on me, too. *How I wish I had done the same when she was fighting cancer*. I sense genuine patience in listening to my whole story. As I share, the pressure eases off my chest. I can breathe.

—

One evening, as I finish up charting, I receive an unexpected call from my family doc. “I received the consult letter from your neurologist. I’ll take care of the tests to rule out mets,” there is a pregnant pause. “How are you and your family coping?” I reveal how I’m drawing strength from my faith. She offers, “I’m here for you, too, walking alongside you on your journey.” Her words touch me. They ebb down my synapses and reverberate throughout my body. Her commitment envelopes me. My glioma has diffused for years, like a drop of indigo-blue dye in a tall, clear glass of water. It will continue to do so. Indefinitely.

I find myself peering out of the car’s passenger window to see the towering cinder block building with neat rows of windows juxtaposed with sleek white steel and glass curtain façade. Its sea-green windows twinkle in the morning light.

“Did you know I was born here?” I turn to my husband as he parks. “My mum had to stay here for weeks postpartum. Can you believe I’ll only be in here for just two days after major surgery?”

We find our way through, through a labyrinthine set of corridors, to the surgical registration and join a serpentine line of patients waiting for registration to open. I feel myself slip into the sick patient role as the seconds creep by. Finally, it’s my turn at the registration window. I straighten up and don my façade of composure.

“Good morning!” I sing. “How are you today?” I hand her my health card pre-emptively. The receptionist looks up with a smile while her pencil scratches a checkmark on her list and steers us to the left.

This waiting room is furnished like a French Provincial sitting room, with walnut side tables and bergère chairs upholstered with toile fabrics. Muted sage camel-back tufted sofas grace like ballerinas with their gently rolled arms. Large paintings in ornate frames, accented with brass picture lights, hang on the walls. I melt into a cozy floral settee. Later, I learn about the local philanthropist who furnished the waiting room so patients could be at ease prior to surgery.

Soon, I'm ushered to another area. *The team flows so seamlessly! They talk to me genuinely while efficiently working.* I'm in awe of how I feel cared for. *They're maintaining eye contact!* My brain lowers its guard, and I melt into the gurney.

—

Buzzzzzzzzzzzz.

The sound reverberates from under the sky-blue drapes. I hold my breath as I imagine the surgical tools drilling through my crown. My head twinges from the cold clamp gripping my skull. Despite being tightly strapped onto the OR table, tension eases as I silently recite memorized verses from the Scripture, *Bismillahir-Rahmanir-Raheem* (In the name of God, the most Gracious, the most Merciful). I hear an unfamiliar voice on the other side of the drapes. I assume it's one of the fellows starting to give me instructions as they coached me prior to surgery. "Can you wiggle your toes?"

"Yes," I obediently reply. As I help them identify different areas of my brain, I have a growing urge to sweep over to the other side of the drapes, to be part of the OR squad. I wonder how my brain looks! Before my thoughts wander further, my hand jerks rhythmically. *Oh no! Help!!*

Hours later, I awake to a familiar voice. "We'll stop here," my neurosurgeon announces. "I know she wants to continue to work as a physician." *He was actually listening to me during my consult!* We converse about my family and kids as he meticulously works.

Postop, my insolent body lies limp. *Shimmy a bit to get comfortable.* My eyes widen as commands to my left side fall on deaf ears. I can't move my left arm or leg. Words are not flowing out as quickly as I'm thinking them. "It's Supplementary Motor Area syndrome. We expected you'd experience this complication," one Fellow states during rounds. I nod politely while trying to recall the informed consent. I had assumed that the discussion was just a formality. As an MD, I'm used to providing informed consent and reassuring patients that complications are rare. My throat burns as my brain fiercely tries to say something.

"There is a rare, albeit temporary, sequelae from this type of surgery," I hazily recollect my surgeon saying weeks ago. "It spontaneously resolves within days. We used to think the brain had eloquent functioning, but we now know it has plasticity. Patients' brains figure it out, and functioning recovers spontaneously. If that occurs, your hospital stay might be longer." I sustained that rare complication. I won't be out of here quickly after all...

After several days, the team updates me that they clinched a bed at a neurorehabilitation hospital. It's Christmas time, and guilt swells in my helpless shell, feeling I'm burdening them during the holidays. *They*

should be enjoying the festivities, not taking care of me. They swaddle me up in blankets like a mummy while two EMS chatter boisterously with the ward staff.

Between snippets of time with the rehab team, I stuff the rest of the void by immersing in sweet luxuries, like audiobooks. Or lazily critically appraise neuro-oncology guidelines and papers. *Well, at least I get to practice what I learned from grad work!* I convince myself. My care squad teaches me how to pace myself at home by attuning to my body, mind and emotions. *Emotions.* I have been trained to suppress these as a professional.

Weeks slip by. My husband is frustrated by the tiny bouts of rehab. “It’s daily, though,” I whine, biting my lip. I do enjoy their positive feedback on accomplishing simple tasks, like placing rings onto pegs.

“We need more intense rehab at home,” he purses his lips. *I’m in a rehab hospital—you can’t get better care than that, right?!* My brain screams. *And I’m one of the lucky ones who got a spot so quickly and didn’t have to wait. Especially during the holiday season!* Then, I start noticing how time does sloth by. I turn my attention to coordinating my outpatient rehab. *If I’m capable of making all these arrangements, I wonder, do I really need to be in the hospital?*

Once home, my days are spent training longer with my newfound spirit. I’m elated as my recovery progresses earlier than expected. Practicing the tenets of my faith bolsters my mindset further: *never give up.* Determination shoots through my veins to not let anything push me down, not even my cancer. I soon get clearance to return to work and carefully dip my toes back in.

“It’s so hard to climb stairs,” a patient would share. *A flight of stairs is still a challenge for me, too.* “That sounds frustrating,” I’d respond. “Tell me more about how this makes you feel.” I infuse more moments to reflect on their story, closely examining how they share it, when they pause, how they’d shift uneasily in our grey plastic chair. Just like I once did when my ophthalmologist noted a sign that catapulted me to my diagnosis. Patients of 17 years begin opening up about their vulnerabilities. *Why now?*

Has my illness experience made me more attuned to their suffering? Or is it because now I inquire more about their emotions – something I yearned to be asked about during my journey? While I don’t know for sure, what I can say with more certainty is that I no longer fear that my cancer hinders my ability to care. While healthcare workers were stretched thin, their compassion still touched me, leaving an indelible mark. Sensing authenticity, I lowered my guard and placed full trust in them. From my family physician listening to how my unexplained symptoms were impeding my quality of life, to my care team bearing witness to my suffering, I felt genuine care, that they were there for me. My extended family gave me space to open up and share my whole illness journey, which kindled my healing. It ignited me to re-evaluate my purpose in

life. Through spirituality, I rediscovered meaning and forged my path to heal. This revitalized lens now drives my purpose to heal with compassion, not only for my patients, but for myself, too. ■

Biographical Note

Aisha Husain has been practicing comprehensive family medicine for nearly two decades in a rural community. She is an Assistant Professor at the University of Toronto. Her passions include medical education and faculty development in narrative-based medicine to cultivate well-being.

FOR LAYLA: RECLAIMING PURPOSE THROUGH SERVICE, HUMILITY, AND EMPATHY IN HEALTHCARE

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KEYWORDS: Purpose in healthcare, Empathy, Service, Humility

Layla sat in her mother's lap. She looked up at us with bright eyes. From initial glances, Layla appeared to be a happy three-year-old. She made eye contact with us but would otherwise intermittently bury her face in her mother's arm. Her mother provided comfort to Layla, but she was clearly curious who we were among the various teams their family had met. We introduced ourselves to Layla and her parents – the pediatric palliative care team.

We're a team that consists of doctors, nurses, social workers, and chaplains with diverse training, experiences, and skillsets that lend to unique perspectives. When united, our differences broaden our understanding of the family's goals and values. We're a team of healthcare providers who each self-selected to specialize in palliative care after being called to the tenderness and vulnerability of the work. We're a team whose purpose is to develop rapport and understanding through a commitment to empathy, humility, and service. Such a mission statement is undoubtedly overwhelming. Stated more simply, as we described to Layla's parents, our hope is to serve as a supportive care team to families while they navigate medical complexities.

We inquired if now was a good time to meet with Layla's family. Her parents nodded. Their agreement to meet with our team was not always the norm. The idea of "palliative care", particularly for a child, was often the last thing parents anticipated, let alone welcomed. On occasion, the introduction was the extent of our visit, with parents declining after asserting their intentions of wanting to "do everything" and "never stop fighting". Such statements often provided us clues to their concerns related to our team's intent, yet our hope is always to align and give voice to their values and goals – including when it is to "do everything" and "never stop fighting". We have overcome hesitations to our team through gentler paced education, validation, and patience. At times, we've also pulled back when boundaries are resolutely drawn, and guards are firmly raised. In such situations, we offer ongoing availability and hope to be invited back.

We pulled up chairs to sit alongside Layla and her parents, mirrored their body language, and engaged with curiosity. We introduced our team members and then asked Layla's parents to share what the medical chart couldn't tell us – who they are as a family and who Layla is as a person. As her parents took turns sharing their family's story, we heard the heartache. They described their relationship, building upon their shared passion for boating, camping, and hunting. They shared their long, difficult journey to have children, and the overwhelming excitement of having a son and now Layla. They shared how Layla loves her brother, the family dog, and all things purple. They identified that Layla had an uncomplicated birth, and her development progressed as typical. Yet, they began to worry when Layla began having issues with feeding and reaching milestones. Her health took a turn for the worse when they noted difficulty breathing, which prompted the trip to the hospital. They admitted the guilt of not knowing to push for a work-up prior to the current admission, as well as the pain of now watching her endure so many evaluations without concrete answers.

Layla's parents also shared the difficulties of balancing time at home with Layla's older brother, who would soon be starting school, and being present at the hospital to support Layla and each other. Our team continued to listen. Her parents were aware of the resources available to help support them at home as well as at the hospital. They weren't asking for more resources. They simply wanted a chance to speak about their worries and have someone hold the tension of their days while acknowledging the difficulty of their experience.

We asked about their understanding of Layla's medical condition, as well as their anticipated plan for the coming days. We inquired about this to ensure decision-making was anchored in their medical understanding and their family's values for Layla's current and future quality of life. In this regard, our empathy actively guided our purpose and provided clarity around the role of the team.

They identified that the recent genetic diagnosis provided relatively little plan or trajectory for Layla. They shared the heartbreaking facts – Layla's future remains unknown. Her life expectancy may be months to

years with the ongoing potential for acute life-threatening events, much like the one that led to the current hospitalization. The family shared the spectrum which may exist for Layla and the frequently uttered line of “time will tell”. With this uncertainty, our team’s continued purpose was to support Layla and her family through service. We walk alongside families, not because we hold the answers but rather to empathetically and humbly serve their needs over time. We support and validate as they consider opportunities to honor Layla and her life, weighing future interventions, and prioritizing comfort over milestones.

As our team held silence with them, Layla’s mother began to shed tears and looked to her husband. We allowed her time and space, and soon she opened up about how difficult it had been. She admitted, “It’s hard to feel, let alone say out loud, but I am angry that no one can give Layla a diagnosis with a treatment to help her.” She paused and added, “I’m just exhausted.” Layla’s father nodded in agreement, then shared, “If I could take her place, I would.” They both reflected on what was important to them as parents and as a family. Through teary eyes, they shared their hopes for Layla to have a fulfilled life, playing and laughing alongside her older brother and their family dog. They smiled as they described the things they enjoy doing as a family. We continued to listen.

Supporting Layla and her family demanded that we lean into their experience. That was empathy in action. It required curiosity and authenticity to feel alongside Layla’s parents the full range of their emotions. To do this, it remained imperative that we remembered that this was their story, not our own. Together, as a team, we held this uncertainty without agenda or judgement. We asked questions to understand what has influenced the lens of their perspective – their experiences, values, and faith, including their quiet hopes and deepest worries.

We recognized there were no easy answers. No innovative options for tests, scans, or treatments. However, in our time with Layla and her parents, we provided them with the space and permission to have hard conversations, both with each other and in collaboration with our team. As we closed our pediatric palliative care consult, we shared our commitment to supporting them throughout Layla’s life – being their cheerleader to celebrate the wins and a shoulder for the heavier moments. We thanked them for being vulnerable with us and let them know we would be back to visit, although always available.

As we stepped away from this interaction and headed onto our next consult, we refocused on the shared objective to ensure goal-concordant, values-based, family-centered care. As a team, we have learned to acknowledge the emotional toll these repeated, deliberate conversations can have on individual and collective professional sustainability. To mediate the impact, we have adopted practices to process experiences and emotions, while carrying forward lessons learned. Although we may not always have the answers, our team maintains a shared purpose – to humbly and empathetically serve families facing medical complexity with their children. ■

Biographical Notes

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MACHINE TRANSLATION USE AS A PURPOSEFUL ACTIVITY

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KEYWORDS: Google Translate, Machine translation, Machine translation literacy, Multilingual communication, Translation, Translation technologies, Translation tools

I am not a trained healthcare professional but rather a translator and translation professor with a research specialization in translation technologies. In the early part of my career, my work did not have any direct links with healthcare, but then my young son was hospitalized at the Children’s Hospital of Eastern Ontario (CHEO). It was in 2006 – the same year that Google released the first version of their free online automatic translation tool known as Google Translate. These two pivotal events – one in my personal life and one in my professional life – converged and led me to develop a new direction and sense of purpose in my research.

Regardless of the setting, the overriding purpose of translation is to facilitate communication between people who do not speak the same language. There is a well-known textbook in translation education entitled *Translating as a Purposeful Activity* [1]. In it, author Christiane Nord stresses that translators must choose their translation strategies according to the purpose that the translated text is intended to fulfil. Since communicative purposes need certain conditions to be successful, translators must analyze the text’s intended purpose carefully and adapt their strategies accordingly.

Communication is central to healthcare. Without effective communication, how can a person make an appointment to see a healthcare provider? How can a healthcare professional gather a patient’s history, enquire about symptoms, share information or instructions, or help to put a patient at ease? In the absence

of communication, healthcare professionals could not fulfil many of their own purposes. And if healthcare professionals and patients speak different languages, translation becomes a key element of communication.

The Toll of Not Understanding

While my son was a patient at CHEO, I learned what a privilege it is to speak the same language as the members of the healthcare team. I was already carrying a high cognitive and emotional load as I tried to process the fact that I had a very sick child. This left little space in my brain for language processing, and I was thankful that I did not need to muster up additional cognitive resources to be able to follow conversations with the hospital staff. Even in my own language (English), I encountered unfamiliar specialized terms and abbreviations, but I had a better chance of puzzling them out or remembering them (to look them up later) because I was receiving the information in my dominant language. Other families at the hospital were not so lucky since they spoke other languages and, consequently, had a different experience from mine.

In an already taxing situation, such as being unwell or having a family member who needs medical attention, imagine the additional layer of stress that would be added if you could not understand or had a limited ability to communicate with the healthcare providers. Sitting in CHEO, I did not have to imagine it. I could see it clearly in the confusion, anxiety and sometimes the sheer panic on their faces as they struggled to make sense of what they were hearing. Even though I was a translator, I specialized in technical translation (e.g. user manuals, software interfaces, websites), and I had never reflected too deeply on the added dimensions of healthcare communication. If someone is trying to accomplish a task in word processor but doesn't understand the menu options, they may feel frustrated, but that hardly compares to the level of parental anxiety that is present on a pediatric oncology ward – a level that can easily be doubled for parents who cannot understand the healthcare team. It was clear to me that even the kindest tone and most patient manner from a healthcare provider could not sufficiently mitigate the stress associated with being unable to comprehend the message. It pushed me to consider how, in contexts such as healthcare, translation is more than simply a convenience; it can be a lifeline.

Reducing Language Barriers Leads to Better Patient Outcomes

Beyond being a tool for communication, language forms an important part of a person's identity, cultural worldview, and social framework. Responding to and caring for the whole person means taking their language into account in a meaningful way and not treating it as a technical detail or an administrative burden.

Canada is a country with two official languages [2], more than 70 Indigenous languages [3] and numerous heritage languages [4]. On top of this, Canada welcomes millions of visitors from other countries annually [5]. But when a medical situation arises and some of these people need to consult a healthcare provider, what happens when there is a language barrier? Research in Canada [6] and elsewhere [7, 8] shows that patients tend to have better outcomes when language barriers are reduced. And isn't achieving the best possible patient outcomes an intended purpose of healthcare?

One common reaction to not understanding is to tune out. This could mean not really paying attention to a conversation, skimming over a document instead of reading it closely, or comprehending only fragments and piecing them together incorrectly. In some cases, people are embarrassed to admit that they don't understand, so they may fake a higher level of comprehension than they actually have. When the conversations or documents involve questions or instructions from a healthcare provider, a partial or lack of understanding could mean not providing relevant details of a medical history, or not following home care instructions appropriately. As a result, the medical issue could be exacerbated unnecessarily, or the patient may end up having to come back to the hospital – a visit that could have been avoided if better communication had been achieved during the first visit. In contrast, when a person understands the language, they are more likely to be engaged, to feel at ease asking additional questions, and to follow instructions correctly, leading to better outcomes as well as more efficient service delivery. Translation can act as a bridge that connects the healthcare provider and the patient, bringing the patient into the conversation, rather than leaving them isolated, confused, and more likely to make a misstep.

Professional Interpretation – A Valued but Complex Solution

Of course, healthcare providers are acutely aware of the value of smooth and meaningful communication, and professional translators and interpreters¹ have long played an important role in helping to ensure effective multilingual communication in healthcare [9]. However, there are challenges associated with interpreting services. For instance, a hospital cannot employ full-time interpreters in all of the world's 7000 languages just in case someone needs this service. Therefore, hospitals usually have contracts with interpreting service providers for the most commonly used languages in a region, but if there is a patient who speaks a language not covered by this service, there is a gap. Sometimes there is a medical emergency that requires immediate communication, but the interpreter may be busy elsewhere at that moment, creating another gap. Telephone or video interpreting can be options, but telecommunications connections are not always reliable in remote areas, and if the interpreter is in a different time zone, this may also impact their availability – more gaps. Therefore, even though healthcare providers value the

¹ In the field of Translation and Interpretation, translators are typically described as being people that work with written text, while interpreters work with spoken or signed language. In the age of machine translation, this distinction is being blurred somewhat since some people use translation apps (e.g., Google Translate) to support spoken interactions.

services of professional interpreters and may prefer to use interpreters as a first option, it is not always possible. In situations where professional interpretation is not available, a healthcare provider might be tempted to take out their personal smart phone, pull up an automatic translation app (e.g., Google Translate), and use this to communicate with a patient. In the moment, this option may seem like a good choice, but do these translation tools always succeed in meeting the purpose of the interaction? [10]

Automatic (Machine) Translation and the Need for Machine Translation Literacy

My experience of being at CHEO and observing both my own privilege in being able to communicate in my own language, and the disadvantage experienced by other families on the ward who could not, stayed with me after my son returned home from the hospital. It sparked a new sense of purpose in my research, and I began to look for ways to contribute to an improved healthcare experience through my research on translation technologies.

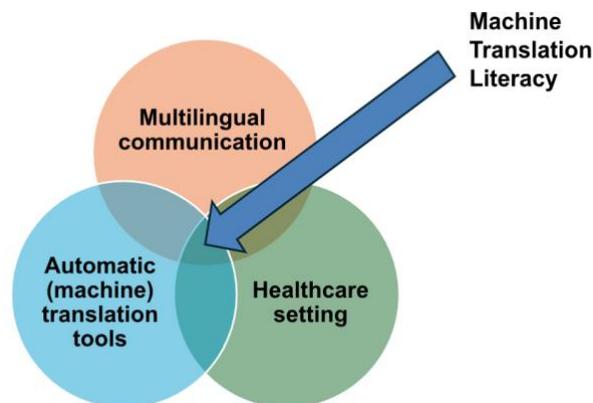
Unfortunately, early versions of tools such as Google Translate did not produce reliable results, especially in specialized fields. Because they were not particularly useful, these tools were largely ignored in the early years, and in many cases, hospitals and other healthcare organizations did not have any clear policies around the use of machine translation. Gradually, the tool quality improved, especially following the introduction of AI-based techniques in 2015. As the tools improved, more people began to take notice, but a lack of clear guidelines and understanding of the technology led to some misuse, which in turn led to mistrust. More organizations began to introduce policies, but these often consisted of blanket bans that lacked nuance and resulted in missed opportunities for using the tools.

A simple example that I observed while at the hospital with my son was the case of parents who wanted to ask whether they could bring in some of their child's favourite foods that were not available in the hospital. This family was newly arrived in Canada, and their child was not used to a Canadian menu. The parents wanted to give their child a small degree of comfort by bringing in familiar foods, but they didn't want to break any rules. Because I overheard their conversation and happened to know their language, I was able to help translate their request. The next day, I also got to witness that child's delight – and the parents' relief – as he ate his favourite snacks. But later I wondered whether that small pleasure would have been absent if I had not happened to overhear the conversation or know the language. That type of simple request could have been a great use for a machine translation app. Unfortunately, that experience also had a downside. Thinking that I was fully fluent in their language, those same parents later asked me for help understanding a medical document. I had to explain that, while I could navigate my way around a food menu, I did not have the domain knowledge or specialized vocabulary needed to translate the document. Their disappointment was palpable, but I am grateful that I had the sense to decline, rather than to offer them a

garbled or incomplete translation, which could have been damaging. If a machine translation app had been easily available in 2006, would they have used it? And with what result?

Today, there are few people who have not heard of or tried tools that can produce automatic translations, such as Google Translate or ChatGPT. However, most casual users of these tools still do not really understand how they work, which makes it challenging for them to appreciate the potential risks involved in using this type of technology in a healthcare setting. Healthcare professionals are unlikely to have received any formal instruction on translation or translation technologies as part of their own education and training, and many workplaces still do not have meaningful policies or guidance to help them navigate the use of these tools.

This space at the intersection of the need for multilingual communication, the availability, ease and convenience of free automatic translation tools, and the potential risks and sensitivities of a healthcare context is where I found a clear purpose for my research: machine translation literacy [11, 12]



What Is Machine Translation Literacy and How Can It Help to Improve Healthcare?

Essentially, machine translation literacy involves adopting a purposeful approach to the use of translation tools. While human translators or interpreters have been explicitly trained to view translating as a purposeful activity [1] and are equipped to analyze the situation and implement appropriate strategies, translation apps cannot do this. Because the apps cannot adopt a purposeful approach to translation, the users of these apps must learn to do so. In other words, they must cultivate their machine translation literacy, which involves understanding a bit about how automatic translation tools work, evaluating when they may be helpful vs when they may cause harm, and knowing how to work with them in a responsible way. A significant part of machine translation literacy is about evaluating risk, such as by asking the question “What are the consequences of a bad translation in this particular situation?”

A healthcare setting involves many scenarios – from booking an appointment to delivering life-altering news. Some are low-risk communicative situations, where a poor translation would not have a serious impact, while others are higher risk, and a faulty translation could have devastating results. The higher the risk, the more caution is needed when using machine translation. An important part of developing machine translation literacy is evaluating these risks. Some questions to ask include:

- **Is the information sensitive or private?** Personal devices and free online translation tools do not offer adequate security for managing sensitive data.
- **Is the language (or language variety) widely used?** Machine translation tools are data-driven, meaning that they must be pre-trained using millions of high-quality examples of text. If the language is not widely used (e.g., an Indigenous language, or a regional variety of Spanish), then the tool will not perform as well as it does for a more commonly used language or language variety.
- **Is the topic highly specialized?** The more specialized the topic and the terminology, the less likely that the training data will include a sufficient number of relevant examples, and the lower the chances that the tool will perform well for this topic.
- **Does everyone understand the risks?** Who has initiated the decision to use machine translation? Does the other person feel pressured to agree? Are all parties equally well informed about how machine translation works and where its limitations lie?

The data-driven nature of machine translation tools explains why the performance of these tools can vary tremendously. The tool may do a good job translating a text on a common topic between two widely used languages, but this very same tool may do a terrible job translating a text on a more specialized topic in a less widely used language. Understanding the data-driven aspect of how these tools work is a key aspect of knowing how to use them responsibly. Other suggestions for promoting the responsible use of machine translation tools in the context of whole person care include:

- **Offer basic machine translation literacy training to healthcare staff.** When it comes to machine translation, a little information goes a long way!
- **Develop some guidelines.** Be proactive and offer guidance to healthcare staff rather than missing good opportunities to use machine translation tools or regretting poorly informed uses of these tools.
- **Use plain language.** Most machine translation tools are trained on general language. Use plain language in your communications to get better results from translation tools. Avoid highly specialized terms, metaphors, idioms, or culture-bound phrases.
- **Be aware of challenges.** Machine translation tools often struggle with proper names (e.g. names of drugs), with numerical conventions (which differ across languages), with abbreviations (which abound in specialized domains), and with negatives (sometimes producing the opposite meaning).

- **Test the viability by translating some non-critical information first.** Before using a machine translation tool to convey important information, translate some non-critical information first. If it doesn't go well, be extra cautious about relying on the tool for more critical information.
- **Consult more than one tool.** Each machine translation tool has been trained using a different set of training data. Get a second opinion! Verify the translation that you get from one tool by consulting another.
- **Learn to identify the purpose of the translation and to distinguish between low- and high-risk scenarios.** Machine translation is appropriate for lower-risk situations, but opt for language professionals for higher risk situations.
- **Use machine translation tools in combination with other techniques.** Don't rely exclusively on machine translation – combine it with other forms of communication (e.g. pictograms, gestures, plain language). View the purpose of machine translation as a means of supporting human-to-human communication, rather than as a way of outsourcing an inconvenient problem to a machine.

Remember that machine translation literacy is not about trying to forbid all use of translation technologies in a healthcare setting. Rather, it is about encouraging and supporting people to develop a keen sense of judgement and risk analysis about where and how these tools can be used effectively and responsibly, and where their use may not be a good choice.

Conclusion

In many ways, machine translation literacy is about remembering to focus on the purpose of the interaction. It is also about considering the whole person and remembering that language and translation are key facets of whole person care and should not be treated as an inconvenience that can be outsourced to technology without a second thought. Language forms an integral part of a whole person, and treating a person holistically with dignity and compassion means treating language and communication issues thoughtfully and carefully as well. Sometimes translation tools may help healthcare providers to achieve this purpose, but when used without due consideration, they may be a hindrance to whole person care.

It has been almost 20 years since I sat with my son at CHEO and witnessed firsthand the difference between successful and less successful communication in a multilingual healthcare setting. I could not have anticipated in that moment the direction and purpose that my research journey would take, but it has been highly rewarding to work on helping people who are not trained in translation to develop their machine translation literacy and to approach the use of translation tools as a purposeful activity.

A key piece of the puzzle is making information accessible – I am committed to explaining machine translation in ways that non-experts can understand and making this information freely available. The website of the Machine Translation Literacy Project [13] contains a range of free materials about machine

translation in a variety of formats, including a free book called *De-mystifying Translation: Introducing Translation to Non-translators* [12], as well as a popular series of infographics about machine translation that are now available in more than 15 languages. I have collaborated with companies that develop translation tools, such as Care to Translate (a healthcare-oriented translation tool) [14], to share information, guidance, and resources about machine translation literacy. I have partnered with the libraries at various universities to deliver workshops on machine translation literacy, and moving forward, I would like to see machine translation literacy incorporated into training programs for various types of professionals, including healthcare professionals.

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Biographical Note

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PURPOSE IN THE BROKEN: A JOURNEY FROM DISILLUSION TO DIRECTION

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KEYWORDS: Purpose, Mental health care, Healthcare, Systems, Practitioner well-being

Much like the Japanese art of Kintsugi – which honors the cracks in broken pottery by filling them with gold – I’ve found that acknowledging the fractures in our healthcare system is not an act of division, but of restoration – an act that has helped me to forge my own sense of purpose in mental health care.

To give some context, my interest in psychology and mental health was shaped early on by personal experience. Having faced significant challenges in my youth and early adulthood, I was driven by a need to make sense of my inner world – to understand, validate, and articulate feelings that had often gone unseen. This is a common thread for many drawn to the helping professions. Growing up at a time when mental health was rarely acknowledged – whether at home, school or among friends – my therapists’ offices were some of the first spaces where I felt truly seen and held. These experiences left an indelible mark. As I began mapping a professional future, I carried with me a simple but powerful conviction: if I could help just one other person feel less alone in their most vulnerable moment, then this work would be worth it.

As a result, I embarked on a path in counselling psychology, specifically through the lens of the creative arts therapies. This choice was guided not only by a desire to support others, but by a deep belief in the arts as powerful tools for connection, expression, and healing. There was something profoundly human and intimate in this approach that resonated with me. Like the aforementioned art of Kintsugi, I was drawn to the possibility of creating something meaningful, purposeful, and beautiful from experiences of pain and fragmentation.

Disillusion

My graduate training was holistic, rigorous, and intellectually expansive. I gained a strong foundation in therapeutic practice and was fortunate to be surrounded by like-minded peers equally committed to the field. At the same time, the demands – both academic and emotional – were substantial. As I entered my internship, I began to notice subtle cracks in my sense of purpose. Convinced that it could simply be part of the learning curve, I remained determined to overcome this hesitancy. I was working in a psychiatric acute care unit with adolescents and adults in New York City – an environment I had been eager to join given my research focus on community and acute trauma. However, I soon found myself grappling with feelings of inadequacy and self-doubt. The clinical work was undeniably challenging, but what struck me the most was the rigidity of the systems of care and how swiftly questions, alternative perspectives, or constructive opinions from newcomers were dismissed. This experience exposed the often-unspoken hierarchies of credibility within clinical spaces – a reality that was both eye-opening and disappointing.

In my first years of practice, I was repeatedly met with comments such as: “*That’s just how we’ve always done it*”, “*Give it time, you’ll stop asking questions too*”, and “*No system is perfect – are you really going to exhaust yourself trying to change them all?*” These remarks, often delivered casually or with a tone of seasoned authority, left me deeply unsettled. Despite the depth and intensity of my graduate training, I felt unprepared for the implicit message behind them – that silence, compliance, and emotional endurance were the undeclared rites of passage. I fully recognize the value of experience in shaping clinical judgement, but must that come at the cost of curiosity, critique, and care for systemic integrity? Was there truly no space for fresh perspectives, or the insights offered by lived experience?

The sense of purpose that had once motivated and anchored me in this field – rooted in a genuine desire to support and understand – was further shaken between 2019 and 2020. Shortly after graduating, I obtained my first clinical job in the field. Though I only held that employment for about a year, I was profoundly marked by the significant incoherence and inconsistency of its environment. What began as a source of excitement and pride for this promising professional opportunity, quickly turned sour due to the unsustainable demands of the role. These included mandatory training weekends, expectations of self-disclosure during supervision and seminars (later weaponized when I raised concerns or dissent), and insufficient compensation that left me, ironically, unable to afford the very service I was providing.

For the year I held this role, I helped young children and adults through trauma while being in a constant state of survival myself. The core of what had once drawn me to the creative arts therapies – the sense of humanity, connection, and meaning – felt increasingly distant. Isolated and exhausted, I would come home at night questioning whether I had made the right choice in pursuing this profession. If I had been correct, wouldn’t I feel more fulfilled? More certain? I told myself I should be grateful: I have a job, I am in a position to help others, I am practicing.

And yet, I felt disillusioned and almost betrayed. I had expected to find the same vocational, almost blinding sense of care that I had felt reflected throughout the field. I believed that systems and institutions supporting such emotionally demanding work would, in turn, extend compassion and care to their workers – especially given the expectation that those workers continuously demonstrate kindness and empathy to their patients or clients. Instead, I was struck by an unsettling incoherence between the values espoused and the realities lived within these structures.

The onset of the COVID-19 pandemic only cemented my uncertainties. In the summer of 2020, I lost my employment which provoked an unexpected return to Canada. Upon arriving in Montreal, I found myself unemployed due to complex licensing regulations, despite the urgent demand for mental health professionals. I decided to step away from clinical practice – both out of necessity and reflection. After some time, I transitioned into a role focused on training development at the intersection of the healthcare and higher education systems which offered a new vantage point from which to observe different systemic challenges.

For a while, I believed I was alone in experiencing a dissonance between values and practice. Few people around me spoke freely about their working conditions or, if they did, it rarely seemed to impact their drive or professional identity. As I began sharing my experiences more openly, however, I came to realize that I was far from isolated. Feelings of shame and confusion, financial need, genuine commitment, and systemic barriers often keep practitioners from fully acknowledging their own discontent, let alone imagining how change might be possible.

Direction

These realizations prompted a deeper interrogation of my original motivations for entering the field. In hindsight, my initial sense of purpose was likely rooted in a profound longing for connection and self-understanding as a young woman who had often been told that her sensitivity would hinder her goals rather than inform them. There surely also have been traces of a savior narrative; if my therapist had once helped me reclaim a sense of wholeness, perhaps I could do the same for others.

Over time, I came to understand that the misalignment I felt was not in the field's core values, but in the structures meant to uphold them. From that clarity emerged a renewed and more grounded sense of purpose: one centered not only on mental health care, but also on advocating for the well-being and working conditions of those who provide it. My focus expanded to include the broader integration of trauma-informed principles across disciplines and institutions. What I couldn't find within the systems I worked in, I began building on my own. After all, it is rarely from comfort or complacency that meaningful innovation is born. From there, my sense of purpose propelled me to launch *Nuances*, my private consulting agency, with the mission of integrating mental health awareness and trauma-informed frameworks into professional

practices to foster safer, more responsive, and more sensitive workplaces. With this in mind, I also redefined my therapist identity and approach, and returned to clinical practice with a more informed understanding of the many systemic realities practitioners and patients face alike.

Growth and Repair

To be clear, while much of this reflection centers on the challenges and misalignments that led me to question, and ultimately, redefine, my sense of purpose, it comes from a place of compassion for all of us in healthcare. I sincerely believe that, more often than not, we are striving to do the best we can with the resources and conditions available to us. My critique is not of individuals, but of the systems and structures that often obscure or complicate our sense of *why* we chose this work in the first place.

I have found it can be difficult to discuss a shaken sense of purpose in this field, largely due to fear that it might alienate others or impact my career. I do care deeply about this work – in fact, I cannot imagine dedicating my life to anything else – and it's precisely because of this commitment that I believe we must keep space for honest, purpose-driven dialogue. When we speak from a place of care, integrity and shared responsibility, we strengthen the field, rather than divide it. My hope is to contribute to the evolution of the systems that I am myself a part of – not from the outside, but from within. Lived experience matters as a meaningful vehicle to drive purpose – it shapes perspectives, deepens empathy, and ultimately, makes for more human practitioners, thoughtful researchers, and accountable advocates.

As I conclude this commentary, I reflect again on *purpose* – not as a fixed destination, but as something living, evolving, and deeply shaped by experience. In the beginning, purpose often feels like something that finds us. For me, it emerged naturally through artistic expression, human connection, and a desire to help others. But as we move through the complexities of our professional paths, I have come to realize that purpose is not simply inherited or sustained – it is something we must continually find, lose, renew, share and nurture, with intention. Much like the Japanese art of Kintsugi, our purpose is not diminished by rupture, it is made more meaningful through it. There is purpose not only in what is whole, but in how we choose to mend what has been broken. ■

Biographical Note

Agathe de Broucker (she/her) practices as a creative arts therapist in private practice, works in training development at McGill University's Student Wellness Hub and consults with *Nuances*, her mental health consulting agency. Agathe is also entering her PhD studies in Social Work at McGill University where she will continue her research on trauma-informed care implementation in high-stress, high-accountability workplaces and with helping professionals. Outside of all things mental health, Agathe can be found painting, running, or looking for her next horseback riding travel adventure.

IN THE STILLNESS

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KEYWORDS: Nursing, Purpose, Healthcare

“**A**nd live your life with purpose!” my favorite high school teacher called out as I walked away from the last five years of my life and into what I could only describe then as a vast, expansive uncertainty. *Purpose*. It was the kind of word that always seemed to wedge itself into motivational messages, graduation speeches and tearful goodbyes. Adults spoke of it as something easily found, like a book waiting for you on the shelf. Yet at sixteen, I didn’t even know where to start looking.

Was purpose a feeling I was supposed to recognize? A thunderclap? A quiet knowing? Would it rewrite my whole life? Would I even notice if I walked right past it? The questions were endless and so were the opportunities ahead of me. With no clear answers, I did the only thing that felt grounding at the time: I leaned into what I loved. I journeyed through the next few years pursuing sciences in CEGEP. I didn’t know what “purpose” looked like, but I did know that the languages of cells and the intricacies of the human body made sense to me in a world where little else did.

As the months flew by and university applications crept closer, my friends were chasing medical schools, engineering programs, and research placements. Meanwhile, I was carrying the scattered pieces of who I was in a small bag over my shoulder, standing at a crossroads. Each path ahead promised a different version of myself. While I helped friends and school mates prepare for their interviews and applications, my own deadlines were closing in on me.

All I knew was the quiet fascination I held for the human body, and the pull to be near people. So, when nursing was suggested to me, it seemed a logical fit.

Nursing is gentle, it is kind. It's a helping hand, a tender hug. It is unapologetically precise. It demands your full attention, your best self. It is trusting and being trusted with life itself. The silent pressure and fierce empathy that define nursing felt like everything I didn't know I needed.

I had no idea what the next few years would bring, but somewhere in the back of my mind, a small voice hoped, "Maybe this is it. Maybe this career will give my life purpose?"

Looking back, I realize how naïve I was expecting purpose to arrive fully formed. But what came next was quieter and harder to name.

I found nursing school quite bland and lifeless for its first three-quarters. Like many healthcare students, I was searching for purpose *everywhere* I went. During each rotation, I would force myself to try and *feel*. Geriatrics, postpartum, community, psychiatry... the list went on. I kept waiting for a calling, yet I was always met with the same, familiar feeling of aimlessness.

On every unit, I would hear nurses and doctors share stories about patients who changed their lives – moments that reaffirmed why they chose this path, or how they just *knew* they were meant to be there. "I love it here," they'd say. "This is exactly what I was meant to do." I wanted to feel that too. So I listened closely, hoping their clarity would offer me some of my own. I kept waiting for my defining moment, for something that would make it all click.

By the end of my junior year, I felt hopeless. Not some dramatic sadness, but a quiet heaviness in my chest. I was so focused on trying to find some profound sense of meaning within nursing that I had missed the smaller, more human moments taking shape. As if I were riding a train, eyes glued to the window, scanning for signs of home, while the view quietly passed me by.

Heading into my last semester, I felt no closer to purpose than when I'd started. The only thing ahead was my final rotation in the emergency department. Unlike the slower rhythms of other specialties, the ER was a hub of ceaseless activity. There was no stillness. No time to pause. Everything and everyone moved quickly, shifting gears constantly.

I remember walking into the unit on my first day feeling completely overtaken by the movement around me. That night, I went home defeated. The pace, the pressure, the unpredictability... I was crushed under the weight. A few hours later, my mom showed up with a hot chocolate in hand. She didn't say much, just sat beside me on my bed as I stared blankly at my textbooks. Looking back now, I think part of me was scared I couldn't keep up with the pace, while a deeper, more honest part was scared that this would be my last

chance to feel something meaningful. If not now, when? But in that exact moment of uncertainty, that same quiet voice I'd heard years earlier came back again:

"Maybe purpose is built right here, in the discomfort, the stretch, the struggle."

This time, nearly four years later, the voice sounded older, wiser. No longer wishful or expectant, the words were steadfast. As if they'd been there all along, waiting for me to grow into them.

And so, as I have always done during moments when the world feels like it's crumbling down, I sat up, lifted my chin up high, and prepared to face this trial head-on.

The emergency room was daunting. It was vast and chaotic, but beneath it all, it was powerful and wise. Over the weeks that followed, I grew to love it. I no longer questioned whether I belonged; slowly, I started to trust that I did.

Still, nothing could have prepared me for that day, engraved now in my mind forever. It started as any other day. I was assigned to the resuscitation zone – moving in and out of rooms, placing IVs, and adjusting oxygen monitors. Then suddenly:

Code Blue.

The call screeched over the intercom. I looked around, the nurses near me were still, frozen mid-step. For a second, time held its breath. We all waited, listening, trying to hear where the life in crisis was.

Moments later, a man arrived, his wife by his side. He was battling Stage IV liver cancer, I would later learn, and had come to the hospital for what was meant to be his final treatment before returning home to die peacefully, surrounded by family. But death hadn't been as patient.

It all happened so fast. The curtains were pulled shut. Staff moved swiftly and quietly. His palliative care team arrived. Chairs were brought in for his wife, his children, his grandchildren. The lights were dimmed.

This wasn't a patient we were trying to save. This was someone we were making space for. The room filled with the low hum of a final goodbye.

And then came the protocols. I was asked to complete a visual assessment. I remember standing at the foot of the bed, watching him breathe. Slow. Labored. Beyond reach. I felt every emotion rush through my body at once. Sadness, helplessness, humility, awe.

There were no meds to administer, no vitals to stabilize. My job was to be still. To be present. To be human. It was the type of care that formed the foundation of hospitals; the heartbeat of healthcare.

The patient's family stood in a semicircle around the bed. Eight people, holding hands, watching the monitor, silently wondering which breath would be the last.

I don't remember what time it was, or if I ever finished the paper I had due that night. In that moment, none of it mattered. I felt small, not in a belittled way, but in a way that reminded me how immense life was. How unpredictable. How intimate death could be. And how, in a room full of people quietly bracing themselves for the end, with nothing left to do but wait, purpose doesn't announce itself, it just is.

Purpose, to me, didn't arrive in a flash of clarity or a grand realization. It didn't hit like a lightning bolt or change everything overnight. It didn't find me in a lecture hall or a textbook.

It brushed up against me in a dimly lit room, surrounded by eight grieving souls and a man preparing to leave this world. That night, my role wasn't to save, but to witness. To stand quietly beside a family bracing for loss. For the first time, I realized that presence itself could be the most profound form of care. That moment didn't ask for interventions or answers – it asked for stillness, humanity, grace.

I went home changed. I replayed the family's hands interlocked, the steady beeping of the monitor, and how quickly the room had shifted from clinical to sacred. I remembered how my own breath had slowed, how I'd stood quietly at the end of the bed, looking death in the eyes.

Purpose, I realized, was a way of being, rooted in our humanity. A quiet decision to show up in a world that so often forgets how to.

It is rarely loud.

It doesn't announce itself.

Most days, it doesn't look heroic.

But purpose lives in the margins, in fleeting glances and small human moments.

It is not a destination, but a way of life.

In healthcare, purpose lives in the cracks of how we carry ourselves.

How we listen.

How we look someone in the eyes.

How we hold space for joy, for grief, for pain, or for peace.

Hospitals are places where people arrive in their most vulnerable states—quietly asking for help, for hope, for dignity—and our job is to be the closest thing to comfort, grace, and faith.

So yes, this found sense of purpose has given me direction, not by changing the course of my life, but by changing how I live it.

Since graduating, I've stopped asking nursing to give me a purpose.

Instead, I bring purpose *into* nursing through compassion, through presence, through laughter, and through kindness. The simple ways in which I shine my humanity into this life of service.

From this journey, a quiet clarity has taken root in me – a steady sense of who I am becoming:

Someone who listens.

Someone who shows up.

Someone who cares deeply and unapologetically.

Someone led by purpose.

Maybe now, six years later, I understand what my high school teacher meant when she told me to live with purpose, not as some grand destination or distant goal, but as a quiet commitment to compassion,
to faith,
to honoring our shared humanity. ■

Biographical Note

Ana Carrera graduated from the Ingram School of Nursing at McGill University in May 2025, earning a place on the Dean's Honor List in recognition of her academic excellence. She has a broad passion for nursing, with particular interest in pediatrics and primary care, and approaches her career with curiosity and openness to the diverse opportunities the field offers. Ana has contributed to infertility research, presenting her findings at the McGill University Urology Research Day and the annual Canadian Fertility and Andrology Society (CFAS) conference, and gained hands-on clinical experience as a camp nurse at a remote summer camp, developing both her clinical skills and her ability to provide holistic, patient-centered care.

THE DOCTOR AS PERSON FELLOWSHIP PROGRAM: A PATH FOR PURPOSE IN HEALTHCARE

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KEYWORDS: Medical education, Physicianship, Purpose, Medical humanities, Compassion

What is purpose in healthcare? There are two ways we explore this question. First, we might employ the empirical method and gather data around people's purposes. But this is not the most important sense of the question. The empirical method is limited to description with objectivity as an ideal. Yet often when we speak of purpose, we ask not what the purpose of healthcare is in general but what my purpose in healthcare is. I want to know that I am doing something meaningful.

Medical education has historically emphasized an important scientific foundation, which led to the unintended consequence of splitting medical science and clinical care. Medicine has ever since wrestled with and even assumed a dichotomy between scientific and humanistic practice. Our emphasis is misplaced. Our practices flow first from who we are. We are first and foremost people before we are clinicians or scientists. This is at the heart of the Doctor as Person (DaP) Fellowship Program.

The DaP program is an 8-month fellowship drawing together medical students across the four years of their medical training to consider the deepest human questions that shape who we are as people. As a group of twelve, we have moved monthly through different texts and ideas, ranging from Tolstoy and Sartre on the meaning of life to cathedral visits to understand how architectural spaces shape our posture in the world. We ask questions and debate. New ways of being are often uncovered. Underpinning all these activities

has been an explicit attempt to move beyond simply “medical” questions and to touch on what it means to be human. We do best as people when we recognize that we are people.

The question of purpose necessarily flows from these existential explorations. We have a sense of our life's purpose more fundamentally before we have a sense of our purpose for life in medicine. Yet if we start with the latter, or at least find our full meaning therein, we are at risk of a truncated view of both ourselves and our patients. The latter have lives and dreams beyond their healthcare encounters. It is easiest for us to understand this when we recall that medicine is itself only a sub-world of the grand scheme of life, and to find our all in it is to miss something crucial. The program exists primarily for us to grapple with these things, not first as medical professionals, but as people, and not with the eye of the scientist, but of the implicated, affective, existential humans that we are. We also suffer and want to make sense of our lives. We see that we are just like our patients. This, rather than the mastery of communication skills, is at the heart of engaged, compassionate healthcare. It is the steppingstone to purpose in our work.

With both rising demands on healthcare systems and the vast accumulation of knowledge we encounter daily, we are increasingly busy without a destination. We need to make sense of our place in our world and healthcare. In small ways, the DaP program is a space to do that. The following are some of our fellows' contributions, whose reflections continue to challenge us in what it means to be first and foremost a Doctor as Person. ■

Biographical Note

Dr. Lester Liao is a Developmental Paediatrician at the Montreal Children's Hospital and Assistant Professor at McGill University, where he is Director of the Formation of the Professional as Healer longitudinal course. He is also Founder and Director of the Doctor as Person Fellowship Program and the Psychiatrist as Person Forum. His work focuses on the intersection between culture, the humanities, and medicine.

THE PHYSICIAN AS A HEALER: RELIEF OF SUFFERING

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KEYWORDS: Humanism, Suffering, Healing

Suffering in illness is a gnawing sense of unpleasantness. In Hippocrates' time, being unwell was thought to stem from a misalignment of the humors. While pathophysiological mechanisms of disease have since been clarified, there remains a sensation of disequilibrium in illness. Life is different. Malaise filters everything through a grey lens, disrupting comfort and dulling joy. Everyone, if only transiently, dons the role of the patient and bears its accompanying heaviness. To be ill is to be unwell, and one can be unwell in so many ways.

Perhaps the most quintessential way to suffer is physically. Pain is a common manifestation of illness and sometimes constitutes an illness in itself (e.g., fibromyalgia). Pain serves to protect. It restricts, preventing the body from potential further harm. Even when anesthesia pushes people into unconsciousness, their body still feels and responds to the pain of surgical incisions. Pain is an experience that is difficult to put into words. At best, it is off-putting. At worst, it is debilitating.

On my psychiatry rotation, I was asked to evaluate a 22-year-old man for blunted affect and acute stress disorder symptoms. The day prior he had been hit by a car and dragged underneath for several hundred meters, sustaining multiple non-operative fractures and significant road rash. As I entered Mr. N's room, I prepared myself to speak to someone with heightened arousal. I had expected to meet someone in anxious distress; someone who was irritable and plagued by intrusive, unwanted thoughts of their trauma. Instead, I was struck by his stillness. In blunted affect, it's as if people wear a mask that freezes their face in place. He laid rigidly in his bed, completely motionless. In few words, the cause was obvious. Any movement,

however small, led to a disproportionate amount of pain. I prioritized a few questions and felt a deep discomfort in myself as Mr. N agonized to give me one-word responses. When each breath is costly, sentences are an unaffordable luxury. I quickly ended the interview. While Mr. N did have a blunted affect, it was more from enduring his physical pain than from any psychiatric condition.

In addition to physical suffering, in psychiatry I also saw how people can suffer emotionally. On the inpatient ward, I was following Ms. S – a 68-year-old woman in a severe major depressive episode. Her bipolar disorder had been stable on lithium for decades during which she enjoyed a lavish and active lifestyle. However, when her lithium was stopped due to failing kidney function (a double-edged side effect of long-term lithium treatment), she fell into a deep depression. When I met her, she had already attempted several trials and combinations of antidepressants with no improvement. A good day for Ms. S was getting out of bed, applying a bright red lipstick, and returning to lie awake in bed for the rest of the day. On bad days, she didn't leave her bed at all. In speaking with Ms. S, I learned depression is defined by absence. Ms. S told me she had no joy, no good sleep, no energy, no appetite, and no motivation. At times, she felt she had no reason to live at all (though no active plan to harm herself). The worst forms of depression remove hope altogether and I felt an overwhelming sense of despondency from Ms. S. In a life without hope, each moment seems to feel like an unbearable eternity.

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While pain can be protective, I found avoidance of others' pain was also a protective mechanism for me.

When I went to see Mr. N the next day, I found myself stalled outside his door for several moments. I stared blankly at some notes outlining what I wanted to discuss. Suddenly, I heard an irritable voice beckoning me into the room: "Come, come!". In his tone, I heard something else: "Come on now, you don't have to be afraid of me". And I was afraid. I realized I was not trying to organize my thoughts but rather trying to build the courage to see Mr. N in agony. I was embarrassed and ashamed at the reversal of roles. I needed someone in suffering, someone under my care, to comfort and encourage me just to see them.

With Ms. S, I noticed I preferred to see her last after all the other people I followed. Part of me dreaded our interactions. The longer the conversation went on, the more uncomfortable I felt. I often left Ms. S's room feeling down and hopeless myself. Whether transference or empathy, I dreaded the sensations I felt after speaking with Ms. S. The feelings she endured every waking minute, I could barely manage for a moment.

It wasn't just the intensity of distress that triggered a sense of discomfort and avoidance in me. On my obstetrics rotation, despite witnessing the excruciating pain of childbirth, I never felt a desire to shield myself from assisting in deliveries. There was some comfort to knowing labour is transient; the pain is finite and, in most cases, very meaningful. With Mr. N and Ms. S, despite their intense physical and emotional suffering, what seemed to distress them the most was an existential suffering.

“Are you worried about anything?”, I asked Mr. N.

“No, I can manage the pain and the nightmares. What can you do for me?? You know this is the second car that’s hit me. Why did this happen to me? That’s the only thing I need answered.”

“Is there anything bothering you today?” I asked Ms. S.

“It’s all my fault this is happening to me. It’s all my fault... It’s all my fault...”

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Though medical therapies may reestablish physical and emotional homeostasis, there is no medication that alleviates existential distress. In the professional role, I feel an implicit expectation that physicians ought to have answers. They are people who know what to say and what to do. As Mr. N and Ms. S questioned why they had to endure their suffering, I found their distress deeply unsettling. When I grasped for words to offer, I found nothing at all. In these moments, I felt a strong urge to escape from our interactions stemming from a feeling of inadequacy and perhaps a brief confrontation with my own mortality.

A fundamental component of the healer role is accompanying people as they make meaning of their experiences. People often feel illness is a moral judgement; they would not suffer in illness if they had lived as they ought to have. Yet no one chooses to be ill. My experiences with Mr. N and Ms. S have shown me that healing must acknowledge existential forms of suffering. Physicians have a responsibility to reassure people they are not to blame and avoidance only compounds suffering by pushing people further into isolation. There is power and partnership in presence. Though there is no universal truth to be disseminated to relieve existential distress, healers create a space to address big questions in relationality. They empower people to find their own answers. Meaning, self-growth, and identity formation are all dynamically co-constructed when people interact with vulnerability. ■

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Biographical Note

Alex Cai is a fourth-year medical student at McGill University. Prior to medical school, he completed a BSc. in honours anatomy and cell biology at McGill University and was a national team fencing athlete. He is interested in humanism and healing in Medicine.

FINDING MEANING IN SUFFERING

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KEYWORDS: Suffering, Identity, Meaning, Sublimation

My journey as a physician began with my journey as a patient.

I was twenty-eight when I saw a family doctor, and then a dermatologist, about a strange mole on my back. I had some family history of cancer, and it turned out that this mole was my own cancer: a stage one melanoma. With excision by a plastic surgeon and ongoing follow-up with a dermatologist, I was more or less in the clear given the high cure rate in such cases. However, two years later in early 2018, I noticed a dark and growing vertical line in the nailbed of my left index finger. A painful surgery removed and reattached my fingernail, with a biopsy of the underlying tissue revealing another melanoma. This meant another surgery consisting of amputation of the entire distal phalange of that finger — something that I was not told, or did not clearly understand, would happen prior to the surgery. Various things followed: referrals to multiple specialists, a lymph node biopsy, and a PET scan. Unfortunately, I was found to have metastatic melanoma, which my oncologist at the time told me was an “incurable” disease, and which was ultimately revealed to have metastasized to my liver, to “innumerable” spots in my brain, and to various places in and below my skin.

I was offered a combination of two different immunotherapy drugs as the best treatment, and, in fact, the only viable option. This treatment came with a long list of potential side effects, but most importantly offered some hope. While I am an outlier in terms of the fairly young age that I had such a severe disease, cancer is never an easy diagnosis. Few diagnoses, perhaps aside from the psychiatric or neurologic, offer as much horror of the rebellion of our own body as cancer — something that is reinforced to a large degree by the

often unrealistic portrayal of cancer and of illness in popular culture. This is on top of the horror of death itself, something from which, along with the horror of illness, our society shies away from. Not everyone can achieve the stoic detachment of a Marcus Aurelius or Seneca, and the feeling of a life cut short, of things left undone, can be a mortal blow at any age.

Shortly after receiving my first dose of immunotherapy, I started to feel ill. I had a fever and felt like I had some sort of stomach flu or gastro, not yet having the medical terminology to describe what was going on with precision. Although I was having some diarrhea and nausea, and my liver enzymes were slightly elevated, my oncologist felt confident in continuing with the second dose. Unfortunately, things got worse after that, with worsening diarrhea and nausea leaving me unable to keep even water down, ultimately leading to me losing about twenty percent of my body weight. I also began to have severe throat and mouth pain, making swallowing difficult. Yet again, I was hospitalized and diagnosed with autoimmune inflammation of my small intestine, which proved refractory to high doses of steroids but was ultimately successfully treated.

With this latest crisis resolved, my treatment journey continued. Leaving the hospital the second time, I noted that I had started to develop vitiligo, with white patches appearing on my skin, starting on my face. This changed my physical appearance significantly, and was not the only autoimmune side effect I experienced — I developed Addison's disease, an endocrine disorder involving the adrenal glands, had two bouts of acute arthritis, and developed an eye inflammation that is ongoing. Through all this, my disease remained well controlled, and my immunotherapy was discontinued. I have been under surveillance since.

The experience of being a patient can be a humbling and even humiliating one. For me, this included having diarrhea in bed, caused by bowel prep prior to two invasive gastro-intestinal procedures. It included other things like having my liver pierced with a needle, to having my sleep interrupted, to not being able to wear my own clothes or clean my teeth. Other patients may or may not experience these things, but all share the experience of taking on the identity of a "patient." Not dying from cancer — survival — involves many things, including rage, grief, implacable uncertainty, a certain bovine placidity towards the various physiological and psychosocial injustices to which one is subject, and even confronting one's own mortality on such a continuous basis that it can become a habit. However, diagnosis with a potentially life-limiting disease spurs many to evaluate what is truly important to them, and survival can be sublimated into a positive choice to live — something that can be practiced in any circumstance, even in the setting of palliative care.

Choosing to live involves recognizing the good in the day-to-day. When I was hospitalized with bowel inflammation, I had the privilege of a bathroom with a full-length window with a beautiful view of the mountains of Vancouver, Canada. Although I was pretty miserable during this time, I was able to recognize the beauty inherent in such a view with new eyes, and to taste with a new mouth the scintillating addition

of store-brand seasoned salt to hospital food. This is something that has been popularized as "mindfulness," and which is easily overlooked in the busyness of modern life. It is a lesson that can be difficult to learn, but serious illness or other brushes with death can provide a catalyst for its swift development.

While acute suffering can throw into relief what is good in life, it can also erase the future. As Viktor Frankl noted in "Man's Search for Meaning," eventual freedom from suffering can remove the joy, hope, and sense of present purpose in facing that suffering bravely. This may be because of new limitations on activities, uncertainty due to disease now chronic, mere systemic shock and feelings of unfairness, or the awareness of a future that is worse than expected. Accepting limitations is a process we will all go through as we age, but can be something that is easier to encounter gracefully, rather than an incapacitating, disabling, and random catastrophe.

In my case, although my diagnosis created ongoing uncertainty about my future, I decided to spend my time working towards helping others as I had myself been helped — finding meaning in my suffering. The experience of becoming a physician has been a further step in this process of learning and becoming. It is built on a foundation of my criteria, learned as a patient and honed as a medical student, for what separates a good from a great doctor (or health professional). The medical education curriculum teaches competence, which is achieved by successfully finishing medical training, and acquiring and maintaining a license to practice medicine. What separates a good from a great doctor is taught by the hidden curriculum to which I am highly sensitive as a medical learner previously a patient. It involves taking time with patients to have the important conversations; bringing one's whole self to patient care; being human with other humans; being a person with other people. It is easy to forget this, to fall into the role of physician as technician, to protect oneself. By doing this, however, one risks missing out on the richness of patient care, and on the ability to contribute to true healing of patients and perhaps of yourself.

What the experience of a patient and of a physician can have in common is the risk of surrendering to the process and being carried along by it. In the former case, this is typified by surviving, rather than living, and in the latter by taking on the role of technician, rather than healer. There are many frustrations, large and small, that threaten to sweep us down the river of complacency or one of its tributaries. The division of our attention by the benign forces of everyday life, as well as the malign forces which can seek to monopolize and monetize it, can only exacerbate this problem. However, healthcare professionals have the great advantage of an almost unprivileged access to the lives of others. In this irreligious age, man is forced to dig deeper in his search for meaning, and many have compared us physicians to a new priesthood, crisis of expertise aside. Our very exposure to other people can make us more human, at least in that we can gain an intimate understanding of the many facets of the human condition and can decide which ones we would like to refine and reflect on for and within ourselves.

While this does not necessarily mean that all physicians will have (or care to have) the philosophical or spiritual depth that one might expect in such circumstances (after all, not every priest is a St. Augustine, not every philosopher is a Spinoza), it seems a wasted opportunity not to explore one's inner world and that of others when these are so close at hand. There is a potential archaeology of the mind immediately available — a museum of humanity in which we are both exhibit and curator. There are rich opportunities for lifelong learning and learning about life that are about much more than continuing medical education.

I meditate often on the value of suffering, both in my own life and in general with regard to the development of my personal and professional identity. While some might say that I have experienced enough suffering, there are those who I have seen, even during only the beginnings of my career as a physician, who are objectively worse off and in more dire straits than I was. This is not to mention, of course, those around the world who make do with much less, under even more dire conditions. Suffering can often refine one's experience and uncover what is really important — what remains when things of less importance have been refined away. While I would not recommend my path of illness to anyone, I recognize that it keeps me grounded, and helps to remind me of what is important in life. It has directed me to find a career that provides an essential part of my life's meaning. As a patient, physician, and person, I was then and am now reminded that every day is a good day if you know where to look. I hold on to this notion tightly and to the joy of spreading it to others as a source of meaning in my life. ■

Biographical Note

Oliver Terry is an internal medicine resident at McGill University, a cancer patient, and a former mechanical engineer, among other things.

THE WINDS THAT CARRY US

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KEYWORDS: Purpose, Medicine, Doctor-patient relationships, Healing

The morning sun gently kisses my cheeks, and a soft breeze carries my hair as I ascend the winding hill. The hospital's silhouette emerges faintly on the horizon; the city still slumbers. As I move forward, there is a heaviness in my stroke, a quiet weight I have come to know well. Entering the final month of my first clinical year, exhaustion has settled deep within my bones. My mind, numb, yet restless, wrestles with an unanswered question: why? While my peers outside the realm of medicine embrace new beginnings, careers, and travels, I find myself pedalling toward fluorescent corridors and shifting wards. There is something that draws me back every morning: purpose.

At its core, medicine seems beautifully simple in its calling: to heal. The concept of purpose is woven into the fabric of our education, often passed down unconsciously by those who came before us. However, in the lived experience, it proves itself less defined. It touches every part of the human experience, extending into the emotional, the social, the existential.

In periods of exhaustion and self-doubt, I have questioned whether I am truly making a difference. Inevitably, harm will be present in healthcare, through human error, systemic barriers, or personal biases. No checklist, no passing grade, no single achievement can crystallize a moment as the fulfillment of purpose. Paradoxically, in these very moments, I have learned that it must be redefined to be restored.

Like my hair flowing in the wind as I pedal, purpose twirls and transforms, constantly in a state of becoming, leading us on this endless chase. Its nature shifts not only with new experiences, responsibilities and setbacks, but also in proximity, in tangibility, in clarity. On most days, its silhouette is obscured by

paperwork, fatigue, and routine. It is elusive yet ever-present, much like the sun on the horizon, always moving, always shifting, but always there.

In this perpetual movement, I understand that it does not reside in certainty, but in reflection. It asks not for perfect outcomes, but for presence. It requires humility to recognize our limitations, and courage to remain engaged despite them. It lies in the questions we ask ourselves in the stillness: Am I enough? Did I help? Did I grow? Imposing and relentless, it sometimes fails to inspire, manifesting as a quiet insistence. It emerges not as a guiding star, but as an overwhelming expectation, a mirror that finds us when we are most depleted, pressing against the fragile walls of self-doubt. It softly asks: Can I live up to his? Is what I give truly enough? Will I have ever fully fulfilled my purpose?

Purpose returns slowly, subtly, and prudently, in moments so small, so fleeting, they nearly escape notice. They are not grand or cinematic; they're quiet, raw, and profoundly human. They are not always acts that change the course of a disease, but they carry within them a different kind of healing. They remind me that even when medicine cannot cure, it can still care. I have found meaning not only in what I do, but in how I bear witness. In moments of grief and loss, where hope is redefined, where endings are spoken aloud, I discovered purpose in its purest form, when the role of the physician is in the act of being, not doing. Patients speak of regrets, of love, of the desire to be remembered not for their illness but for who they were. Helping them reclaim that narrative, even briefly, is among the most meaningful parts of this work. Medicine, at its core, is not only the treatment of the body but the tending to the story of the person who inhabits it.

In this, I learned that purpose acts as a guide and a mirror, revealing not only where I am headed, but also who I am becoming. In helping patients find their calling, I am reminded of my own. Thus, I brace myself; I continue this cyclical dance with this intangible, changing force.

However, I wrestle with questions I cannot fully answer. Does my impact on others define my sense of success, or is it something I carry independently? The duality between these forces, the internal drive to help, to grow, and the external need to serve and heal, often create a conflict. As my competence grows, I increasingly see patients independently, later reviewing with the resident or attending. They validate my assessment, co-sign my notes and orders, at times, without meeting the person behind the chart. The process is efficient, expected even. However, as I ride home at dusk, I ask myself: Is their sense of purpose still intact? Is this the version of medicine they once imagined when they chose this path? In moments when fatigue renders the mind mechanical and the heart distant, can a clinical encounter be purposeful without empathy if the result is still healing? As medicine becomes more technologically mediated, as time with patients is shortened, I wonder how our definitions will evolve. Will it narrow, or will it deepen in new ways we have yet to understand?

Purpose in healthcare is an individual and shared pursuit. It unites us in our collective mission, fostering a quiet solidarity passed from one person to another that builds resilience and enables us to persist even when turning away feels easier. The idealism of medicine can be easily overshadowed by the realities of practice, exposing the tension between the ethos of healthcare and its often-imperfect execution. Amid this friction, purpose reshapes itself to align with context.

Finally, purpose is not a single truth to be discovered, but an ongoing conversation with ourselves and with each other. It is shaped by every moment, every question, every doubt and every answer. As I ride into the rising light of another day, I trust that it will reveal itself once again, not as a fixed goal, but as a living, breathing force that propels me onward, always evolving, always guiding me forward. ■

Biographical Note

Léa Larochelle is a fourth-year medical student at McGill University, driven by a passion for both medicine and health advocacy. She is committed to using her clinical experiences and writing skills to enhance patient care and spark meaningful conversations in healthcare.

VIRTUAL REALITY: AN EXPLORATION OF STUDENT AND TEACHER PERCEPTIONS OF A VIRTUALLY DELIVERED MINDFULNESS CURRICULUM IN UNDERGRADUATE MEDICAL EDUCATION

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KEYWORDS: Mindfulness, Medical Education

INTRODUCTION

It was well established prior to the pandemic that medical trainees face significant stressors and high rates of depression and burnout.[1,2] Recent surveys have shown even higher rates of stress, anxiety and depression in medical students with the pandemic onset.[3,4] The effects of mindfulness programs in reducing stress, anxiety and depression have been well documented,[5,6] as has their effect on increased empathy and compassion in health professionals and trainees.[7-9]

The University of Ottawa implemented a mindfulness curriculum in 2014;[10,11] the in-person curriculum included a 30-minute introductory session, 7-9 elective one-hour longitudinal sessions throughout pre-clerkship, weekly 30-minute meditation “drop-in” sessions and a half-day workshop delivered in the students’ first year of clerkship. Each longitudinal curriculum session included didactic and experiential exercises based on specific learning objectives. Each session linked a mindfulness concept with a

mindfulness skill (experiential exercise). Concepts included the ego, the 'voice in the head', dealing with emotional pain, stress reduction, resilience and using technology mindfully. Experiential exercises included formal meditations such as breath-awareness, body-awareness, awareness of thoughts, awareness of emotion and communication exercises among others. Time was spent each session in group discussion, debrief and self-reflection about student experience and the application of mindfulness practice both in self-care as well as whole person patient care. Students were given experiential assignments to practice between sessions along with readings from a course book.

Other medical schools have similarly implemented some form of mindfulness teaching into their curricula. At Monash University, there is a course called the "Health Enhancement Program" delivered to students in the first year of medical school.[12] At Rochester University, a course called the "Mindful Practice Program" is delivered in the third year of medical school.[13] At McGill University, a "Mindful Medical Practice" curriculum is taught in the 6 months leading up to clerkship.[14] The structure of our sessions were influenced heavily by the course delivered by the Rochester group.

Although the integration of a mindfulness curriculum has been well received by students, attendance during in-person sessions has been low.[11] There are several possible reasons for this, including the time constraints of medical training and reluctance to participate in face-to-face sessions with peers due to unfamiliarity or uncertainty about mindfulness practice. Online delivery may offer theoretical advantages with respect to accessibility, privacy and some level of anonymity. The feasibility of virtual mindfulness programs in medical schools has been previously demonstrated with promising results,[15,16] however data on the acceptability of this format is limited. A unique opportunity was afforded by the required virtual delivery of this curriculum during the COVID-19 pandemic to further assess perceptions of a virtually delivered mindfulness curriculum.

The primary aim of this study was to explore the benefits and limitations of a wholly virtually delivered curriculum that were identified as important by students and teachers. The goal was to identify key concepts to inform recommendations for improving or implementing mindfulness curricula at the undergraduate medical education level to better support student wellbeing.

METHODS

Study Design

A mixed methods research design was used in this study. All medical students enrolled in their first or second year at The University of Ottawa during the 2020-2021 academic year (n=341) were eligible to participate if they had attended at least one virtual mindfulness curriculum session. All mindfulness teachers that had led at least one virtual mindfulness curriculum session were eligible to participate, excluding the

research team (Total of 10 mindfulness teachers; 3 were involved in the research project and excluded, therefore total eligible teachers was $n=7$).

Eligible students and teachers were invited to complete a short online questionnaire via email and to attend an online focus group. An incentive for eligible students to complete the questionnaire was a draw to win a gift card valued at \$200. Eligible students who chose to participate in the focus group were compensated \$75.

Ethics approval was obtained from The University of Ottawa Research Ethics Board (File number: H-03-21-6334).

Curriculum Participation

The in-person longitudinal mindfulness curriculum was launched at our university in 2014 and continued to be held in-person until March of 2020, at which time the curriculum was modified to its virtual format due to the pandemic. The curriculum remained purely virtual from March 2020 to September 2022 (2.5 years), after which the in-person sessions were resumed.

In both the in-person and the virtual curriculum delivery formats, the 30-minute introduction to mindfulness session was mandatory and delivered as a whole class, large group session. Thereafter, all further mindfulness curriculum sessions were elective small group sessions consisting of less than 12 students. The in-person curriculum had an additional mandatory small group workshop during clerkship (year 3 of study) which consisted of about 15 students. This workshop was suspended during the pandemic. Students were given recognition for their pre-pandemic attendance and participation in the elective in-person mindfulness sessions, which counted towards a Certificate of Medical Humanities. However, this initiative was suspended when the medical school pivoted to the virtual format during the pandemic.

Data Collection

The online questionnaire (Appendix A) was administered to trainees and mindfulness teachers with items related to demographics and a 5-point Likert scale to measure perceptions about accessibility, acceptability and satisfaction of the virtual curriculum.

Two student focus groups and one teacher interview were conducted by an independent research assistant via Microsoft Teams. For each focus group and the teacher interview, pre-set questions and probes (Appendix B) were used to explore the perceptions of participants regarding the virtual curriculum, including benefits, limitations and suggestions for future directions for the mindfulness curriculum. Each interview was recorded and auto transcribed, and transcriptions were reviewed for accuracy.

The current study surveys were collected April – May 2021 and interviews/focus groups were performed remotely in June 2021 (i.e., after more than 1 year of the virtually-delivered format).

DATA ANALYSIS

Descriptive statistics were used to describe the results from the online questionnaire. The textual data from the focus group transcripts were coded and categorized into themes independently by two research team members in accordance with conventional content analysis.[17] The entire research team then met on three separate occasions to ensure theme saturation was reached, to review themes and to address discordance through group consensus. Theme saturation was not relevant for the teacher group as there was only one participant. Participant quotes were edited for grammar.

RESULTS

Questionnaire Data

35 students completed the online questionnaire, which is a 10% response rate (35/341 is the total possible number of eligible students as this is the total number of students who had the opportunity to participate in virtual sessions. The exact number of students who actually participated in at least one virtual session is not available as attendance was not recorded for elective virtual sessions). Most students had prior mindfulness experience: 11% through medical school (in-person curriculum prior to the pandemic) and 57% outside of medical school. Participant demographics are outlined in Table 1.

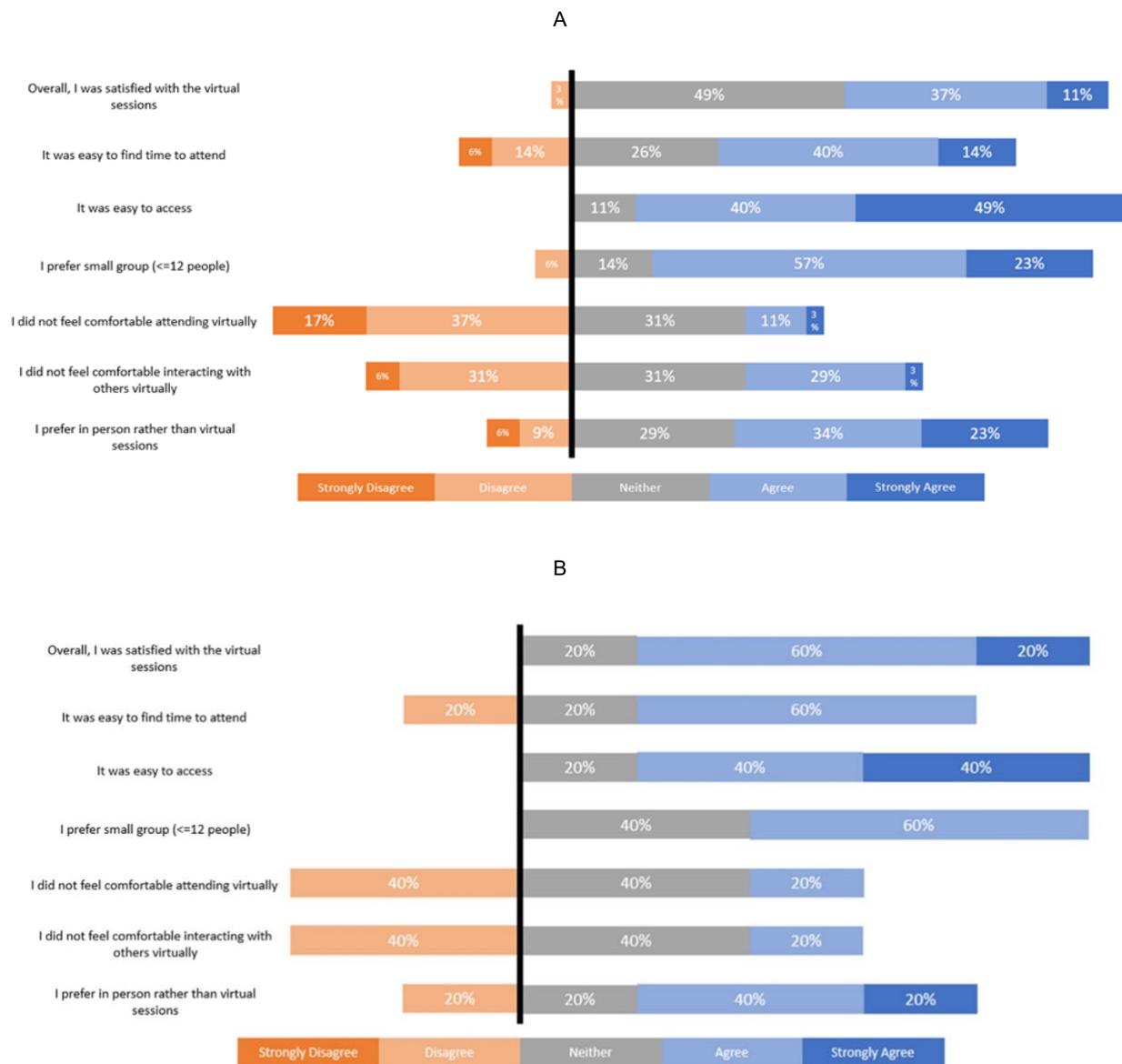
Table 1. Demographic information of student participants.

	Total n (%)
Language	
French	9 (26)
English	26 (74)
Gender	
Female	21 (60)
Male	13 (37)
Prefer not to say	1 (3)
Age	
<22	3 (9)
22-25	26 (74)
26-29	3 (9)
30+	3 (9)
Year	
First	24 (69)
Second	11 (31)
Previous experience with mindfulness	
Yes, medical school in-person curriculum pre-pandemic	4 (11)
Yes, outside medical school	20 (57)
None	11 (31)
Attendance at previous in-person mindfulness sessions	
Yes, drop-in meditation	2 (6)
Yes, longitudinal session	2 (6)
Yes (both sessions)	1 (3)
None	29 (85)
Likelihood of attending future sessions after attending virtually	
More likely	13 (37)
Less likely	4 (11)
It had no effect	18 (51)
Total	35

Figure 1 shows the student questionnaire responses. The majority felt virtual sessions were easy to access (89%). Roughly half of the respondents were satisfied with the virtual sessions (48%). A minority of students did not feel comfortable attending virtual sessions (14%) and about one third did not feel comfortable interacting in the virtual environment (32%). A slight majority of students preferred in-person sessions over virtual (57%).

Five out of the seven eligible teachers (71%) completed the online questionnaire (Figure 1). The majority preferred to teach in person (60%). A minority did not feel comfortable teaching and interacting with students virtually (20%). The majority were satisfied overall with teaching virtually (80%).

Figure 1. (A) Student and (B) teacher Likert scale responses to online questionnaire.



Focus Group Data

A total of 11 students participated in focus groups. One teacher participated; their input was thus treated as an individual interview.

Student Perceptions

Positives of Virtual Delivery

Two major themes emerged from student perceptions regarding the positives of virtual delivery: (1) convenience, accessibility and low commitment and (2) provided anonymity and a less intimidating environment. For example (see Appendix C.1 for further supporting quotes):

P01: "For me, if it were not offered virtually, I probably would not have gone in person.... The convenience of being able to log in and have my camera off and participate or not or just listen passively or not was greatly appreciated. Especially as I was new to this.... I think if it wasn't because of the virtual component, I would not have been as confident to attend."

Negatives of Virtual Delivery

Four major themes emerged from student perceptions regarding the negatives of virtual delivery: (1) lack of dedicated space and susceptibility to distraction, (2) lack of connection and sense of community, (3) less accountability and (4) screen fatigue. For example (see Appendix C.1 for further supporting quotes):

P11: "I feel like there's a connection that you have with others in a space [that is missing] online...[and] the opportunity to talk to people afterwards [is] more natural or organic when that happens in person versus online... [Online,] just as easily as you log on, you can log off."

Motivations and Limitations in Attendance

Students were motivated to attend mindfulness sessions for many reasons, including their prior experience with mindfulness, curiosity to learn, peer recommendations, value placed by faculty and desire to address health concerns and stress reduction. For example (see Appendix C.2 for further supporting quotes):

P02: "[I was] trying to establish what a balanced life in med school looks like [and] seeing that [mindfulness is] an important thing that the faculty sees as important, I think was a big takeaway for me."

Busy schedules, academic demands and the timing of sessions were identified as main reasons for decreased attendance. Students did recognize that periods of busyness and stress were times when mindfulness would be helpful, but it was not viewed as a priority. For example (see Appendix C.2 for further supporting quotes):

P08: "I know it's a bit counterintuitive because we're told when your life's hectic that's the time that you should really be engaging in these [sessions]. These are helpful for precisely those instances but it's also a lot easier said than done when you have a lot of due dates, or you have an exam coming up."

Student Recommendations

The main recommendation proposed by students to address limitations of the mindfulness curriculum was to have a hybrid curriculum with both in-person and virtual sessions. This would provide convenience, a sense of connection/community and a less intimidating environment. For example (see Appendix C.3 for further supporting quotes):

P02: "A hybrid model would be an ideal scenario...when [school] is more hectic, virtual [sessions] are really great. When you have more time...in-person sessions are really nice."

Other suggestions for improvement included more session times, a buddy system to introduce people, an enhanced online platform to improve engagement, theme-based sessions and more continuity with the progression of sessions to build on skills throughout the year.

Teacher Perceptions

Only one teacher accepted to participate and thus was treated as an individual interviewee. They strongly favored in-person delivery as it allows for more engagement, commitment to practice and shared experiences. They viewed virtual delivery as less beneficial and not conducive for mindfulness practice. For example (see Appendix C.4 for further supporting quotes):

"It's much easier to turn on your computer and connect to something, but it's not as beneficial. I feel completely convinced about this. There's no doubt in my mind that being present [in person] makes a huge difference and it makes a huge difference to people's sense of engagement."

DISCUSSION

While many positive features of virtual delivery were highlighted, a slight majority of students who participated in this study reported that they preferred in-person mindfulness sessions. Many students proposed a hybrid model to maximize the benefits of both delivery methods. While students valued the convenience and less intimidating nature of virtual delivery, many identified wanting an in-person element to better fulfill a sense of connection and community. Virtual delivery may be beneficial in attracting and introducing students to the practice of mindfulness, in addition to facilitating maintained practice during busier periods, while in-person sessions may provide the space to deepen and grow their practice. A recent study showed similar effectiveness of both in-person and virtual mindfulness courses in healthcare students,[18] which supports the suggestion for a hybrid model.

Low participation rates in the study limit the generalizability of findings. A partial explanation for low teacher participation was that three of the mindfulness teachers were involved in this research study and, therefore, did not participate due to a potential conflict of interest. A possible explanation for low student participation could be overall low attendance in the elective mindfulness curriculum. This is in line with other studies that have shown lower participation in mindfulness sessions, despite showing feasibility and

receptiveness to inclusions in the curriculum.[11, 15, 19] Common reasons reported for decreased attendance were busy schedules and prioritizing medical content courses over mindfulness when there were time constraints. A similar theme has been identified in previous research.[19] There was an awareness by some students of the paradox that as school stress increased, they were less likely to attend mindfulness sessions even though they perceived it could improve stress.

This study highlights that even students who have an interest in mindfulness to support mental health can struggle to prioritize practice due to the demands of medical training. Future efforts focused on how a hybrid elective curriculum may help improve attendance are warranted. The incorporation of mindfulness sessions into the core curriculum may provide another option to explore engaging medical students in this practice. For example, integrating concepts of mindfulness into interview skill sessions for mindful communication or palliative care and chronic pain management for resilience and compassion teaching may serve to highlight the relevance to medical practice and whole person care.

In this regard, a program at McGill University appears to be heavily focused on mindfulness-related skills believed to be instrumental in delivering effective whole person care (i.e., skills that will be relevant to clerkship, residency and beyond).[14] This curriculum has been well received by students. Furthermore, similar to McGill, weighting the number of sessions closer to clerkship when these skills will be required could be considered.[14] A theme that emerged from the focus group data indicates that students were encouraged when faculty placed value on mindfulness; just by having an optional formal curriculum highlights the importance of leadership in promoting cultural shifts regarding the wellness of medical trainees. Exploring how wellness and mindfulness specifically translate to improved patient care [20-22] may offer further insights into the benefits of such practices.

Only a single teacher participated in an individual interview. Overall, they voiced a strong preference for in-person mindfulness teaching to promote connection, commitment and engagement. However, the implications of this singular perspective are limited. A sample of their quotes is included to offer an example of the teacher perspective. Future study is needed to corroborate and explore teacher perspectives and to evaluate how these align with student perceptions.

CONCLUSION

The pandemic offered a valuable opportunity to evaluate the virtual delivery of sessions promoting wellbeing to the medical student population. While the conclusions from this data are limited, two key insights are proposed to focus future efforts in implementing mindfulness curricula in medical education:

1. There is a role for both virtual and in-person mindfulness teaching as each delivery method offers unique advantages. Virtual delivery may be beneficial for introducing students to mindfulness and to maintain practice during busier periods, while in-person sessions may provide the space to deepen and grow their practice as well as offer a sense of community and connection.
2. Students are less likely to prioritize wellness practices such as mindfulness despite appreciating its benefits. Integrating mindfulness education directly into the core medical curriculum with faculty engagement may mitigate this barrier and foster a cultural shift supporting medical professional wellness, which may contribute to improved patient care. ■

CONFLICTS OF INTEREST

Three members of the research team are mindfulness teachers in the mindfulness curriculum. A member of the research team also published a book on mindfulness [10], however this is a free online book and they do not receive any proceeds from this book.

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APPENDIX A: ONLINE QUESTIONNAIRE

Online Survey Questions for Students

1. Which stream are you currently enrolled in?

- English
- French

2. What is your age?

- <22
- 22-25
- 26-29
- 30+

3. What is your gender?

- Male
- Female
- You don't have an option that applies to me. I identify as (please specify) _____
- Prefer not to say

4. What is your current year of study in medical school?

- 1st year (MD 2024)
- 2nd year (MD 2023)

5. At this time, what is your intended career specialty? (Click all that you are considering)

- Medical
- Surgical
- Diagnostic/Laboratory Medicine
- Pathology
- Anaesthesia
- Psychiatry
- Undifferentiated/don't know

6. How much previous experience do you have in mindfulness principles and practices?

- None
- Very little
- Some
- A lot

7. On average, what amount of home mindfulness practice do you do per week (include formal meditation, informal practice [brief mindfulness insertions in daily activities], yoga, retreats)?

- < 10 minutes
- 10-60 minutes
- 1-2 hours
- 3-5 hours
- 5-7 hours
- 7+ hours

8. How many of the weekly meditation drop-in sessions did you attend this academic year (2020-2021)?

- 0
- 1
- 2-4
- 5-7
- 8-12

9. How many of the lunchtime longitudinal mindfulness curriculum sessions did you attend this academic year (2020-2021)?

- 0
- 1
- 2
- 3
- 4
- 5

10. Did you have previous experience with mindfulness practice before attending sessions this academic year (2020-2021)? Yes (Ottawa curriculum)/Yes (outside of medical school)/No

11. Did you attend any in-person mindfulness sessions last academic year (2019-2020)? Yes (weekly meditation drop-in, lunch-time longitudinal sessions, both)/No

12. Did the virtual format of the curriculum this academic year (2020-2021) influence the likelihood of you attending the sessions? Yes, I was more likely/ Yes, I was less likely to attend/No it had no effect.

13. After attending a virtual session, were you more or less likely to attend future sessions? (1 much less likely, 2 less likely, 3 no change, 4 more likely, 5 much more likely)

Questions 14-20

14. I prefer to attend mindfulness sessions in person rather than virtually

1 – Strongly disagree 2 – Disagree 3 – Neutral 4 – Agree 5 – Strongly agree

15. I prefer small group (<=12 people) virtual mindfulness sessions

1 – Strongly disagree 2 – Disagree 3 – Neutral 4 – Agree 5 – Strongly agree

16. It was easy to access the virtual sessions

1 – Strongly disagree 2 – Disagree 3 – Neutral 4 – Agree 5 – Strongly agree

17. It was easy to find time to attend the virtual sessions

1 – Strongly disagree 2 – Disagree 3 – Neutral 4 – Agree 5 – Strongly agree

18. I did not feel comfortable attending virtual mindfulness sessions

1 – Strongly disagree 2 – Disagree 3 – Neutral 4 – Agree 5 – Strongly agree

19. I did not feel comfortable participating/interacting with others in the virtual mindfulness sessions

1 – Strongly disagree 2 – Disagree 3 – Neutral 4 – Agree 5 – Strongly agree

20. Overall, I was satisfied with the virtual mindfulness sessions

1 – Strongly disagree 2 – Disagree 3 – Neutral 4 – Agree 5 – Strongly agree

21. I would like to participate in a focus group session (Yes/No)

22. Comments:

Online Survey Questions for Teachers

1. Did you teach any in-person mindfulness sessions last academic year (2019-2020)? Yes (weekly meditation drop-in, lunch-time longitudinal sessions, both)/No
2. How many weekly meditation drop-in sessions did you teach this academic year (2020-2021)?
 - 0
 - 1
 - 2
 - 3
 - 4
 - 5
3. How many of the lunchtime longitudinal curriculum sessions did you teach this year (2020-2021)?
 - 0
 - 1
 - 2
 - 3
 - 4

Questions 4-10:

4. I prefer to teach mindfulness sessions in person rather than virtually
1 – Strongly disagree 2 – Disagree 3 – Neutral 4 – Agree 5 – Strongly agree
5. I would prefer to teach a small group (<=12 people) in a virtual mindfulness session
1 – Strongly disagree 2 – Disagree 3 – Neutral 4 – Agree 5 – Strongly agree

6. It was easy to access the sessions
1 – Strongly disagree 2 – Disagree 3 – Neutral 4 – Agree 5 – Strongly agree
7. It was easy to find time to teach the sessions
1 – Strongly disagree 2 – Disagree 3 – Neutral 4 – Agree 5 – Strongly agree
8. I did not feel comfortable teaching virtual mindfulness sessions
1 – Strongly disagree 2 – Disagree 3 – Neutral 4 – Agree 5 – Strongly agree
9. I did not feel comfortable interacting with students in the virtual mindfulness sessions
1 – Strongly disagree 2 – Disagree 3 – Neutral 4 – Agree 5 – Strongly agree
10. Overall, I was satisfied with teaching mindfulness sessions virtually
1 – Strongly disagree 2 – Disagree 3 – Neutral 4 – Agree 5 – Strongly agree
11. I would like to participate in a focus group session. Yes/No
12. Comments:

APPENDIX B: FOCUS GROUP QUESTIONS

Student Focus Group Questions

1. Did you find the virtual mindfulness sessions useful? Probe: How? Why not?
2. What motivated you to attend the virtual mindfulness sessions?
3. What was your previous experience with mindfulness practice? Probe: Do you think being new to or familiar with mindfulness affected your experience with online virtual delivery?
4. What do you feel were some of the benefits of virtual delivery? Probe: Did the virtual drop-in sessions make it easier or more difficult to attend? Do you think it affected the number of sessions you attended?
5. What do you feel were some of the limitations and challenges of virtual delivery? Probe: What solutions would you suggest for these limitations?
6. It was noticed that student attendance in the virtual sessions was high early on in the school year but later declined. What do you think are the reasons for this?
7. Did you attend any in person sessions last year? How did the in person sessions compare to virtual sessions? Probe: Did you prefer one over the other?
8. In the future would you prefer a curriculum that is exclusively virtual, in person or a combination? Probe: Why?
9. Is there anything that you would like to add about your experience with the virtual mindfulness curriculum?

Teacher Focus Group Questions

1. What do you feel were some of the benefits of virtual delivery? Probe: Did you notice a change in the number of students attending sessions online vs in person? Did you notice a change in student participation or engagement in online vs in person?
2. What challenges did you experience with delivering the curriculum virtually? Probe: What solutions could you suggest for these challenges?
3. Did you teach any in person sessions last year? How did the in person sessions compare to virtual sessions? Probe: Did you prefer teaching one over the other?
4. In the future would you prefer teaching a curriculum that is exclusively virtual, in person or a combination? Probe: Why?
5. Is there anything that you would like to add about your experience with virtual mindfulness as a mindfulness teacher?

APPENDIX C: SUPPLEMENTAL PARTICIPATION QUOTES

Table C.1. Supplemental quotes from student focus groups supporting the themes of the positive and negative aspects of virtual delivery.

Themes	Description	Representative Quotations	1 st -Order Concepts
Positive Aspects of Virtual Delivery	Convenient	<p>Requiring little commitment, offering flexibility and easy access</p> <ul style="list-style-type: none"> • P07: "Since it was virtual it didn't matter where we were. So, I did some sessions at my cottage. I did some sessions while I was out on a walk in the morning. So that was definitely a benefit that I found." • P08: "And the nice thing about it was... it wasn't something that you necessarily had to feel like: Oh! I have to go... You didn't feel obligated to do it and I think that flexibility really worked well for me." • P08: "I honestly thought that being able to do it virtually took away a lot of those barriers that I often found myself facing [with the in-person sessions]." • P08: "When it's virtual, after finishing class, you have 10 to 15 minutes to collect your thoughts and set [the] intention that you are going to this. It's a lot easier I think to get into it as opposed to walking into a room panting because you just ran across from wherever. So, I think that was definitely the biggest benefit for me personally." • P09: "Easy to access and easy to kind of drop in even if you are a few minutes late." • P11: "For me [it] definitely increased the number [of sessions] that I attended because of that up front convenience factor... It was easy to drop in because I could have woken up even a few minutes before and then drop into the session. I didn't feel like I had to have a lot of upfront commitment [like I would] to get to an in-person spot." • P11: "[The virtual sessions were] a lot less stressful in a lot of ways in terms of having to rush or to... have to commit to making the time to [get] to another location.... Logging on was definitely low commitment up front." 	<ul style="list-style-type: none"> • Accessibility • Easy to attend • Less rushed • No travel/ Removed physical travel • Online convenient • Any location • Flexibility
	Less intimidating	<p>Welcoming and low-stakes environment, especially for those new to mindfulness</p> <ul style="list-style-type: none"> • P01: "For me, if it were not offered virtually, I probably would not have gone in person.... The convenience of being able to log in and have my camera off and participate or not or just listen passively or not was greatly appreciated. Especially as I was new to this.... I think if it wasn't because of the virtual component, I would not have been as confident to attend." 	<ul style="list-style-type: none"> • Anonymity • Enjoyed camera off • Non-judgmental space

			<ul style="list-style-type: none"> • P03: "If I wanted to continue, I would prefer to do it in person. Take that first step in a low-risk scenario which the online platform is conducive to. But then if I want to continue, I probably wouldn't really want to online. I personally don't enjoy the platform. I'd rather do it in person." 	
Negative Aspects of Virtual Delivery	Practice environment	Lacking dedicated mental and physical space leads to distractibility	<ul style="list-style-type: none"> • P05: "I definitely enjoy the in-person one better just because you're in a controlled environment. I think the problem with being at home or elsewhere in a virtual setting is that you're already so familiar with the environment so... you can kind of cozy in or lie down... maybe fall asleep if it's early in the morning while doing the meditation or simply do other tasks that you had to do in the morning before getting to school." • P07: "I found that sometimes I wasn't able to get as much into the Zen mode compared to when it was in person, and I knew that when I walked into that room [in person] that was my mindfulness area, and I would go in and that's the only thing that I would be doing there." • P11: "It could also be a little bit stressful depending on who's up [in the house] in the morning and trying to find a calm space to be able to just kind of stay present. We have a lot of animals in the house and family running around so sometimes it was hard to keep things [quiet]. That would have been the benefit of doing it in person I suppose is that you have that space to be quiet in." 	<ul style="list-style-type: none"> • Difficult to stay engaged • Easier to focus in controlled environment • Element of distractibility in virtual sessions • Lack of dedicated space • Distractions at home
	Shared practice	Lacking connection to others and sense of community	<ul style="list-style-type: none"> • P03: "If I wanted to practice mindfulness or build that sense of a community...there are other people in my program or my school that are also practicing mindfulness [and in terms of] connecting with them, [virtual sessions] didn't really foster that sort of inclusive environment." • P05: "When I first started practicing mindfulness it felt very awkward to keep my eyes closed for a long time while you're in a room full of other people. But once you get used to it then it's very very rewarding and you build really strong relationships with the other people in the room." • P05: "I started to realize this is something that I enjoy doing especially in a group [in person] because you can share your feelings... I think that was really what motivated me to keep coming back and ultimately really enjoy these mindfulness sessions." • P07: "Specifically in my case since I can compare these virtual sessions with the in-person sessions last year... [in person], I was able to get more into the zone or more Zen and just was more connected to myself and to others as well. So definitely I missed the in-person aspect of it in terms of connection with other people and myself." 	<ul style="list-style-type: none"> • Missing connection • Desire for community • Group practice motivated to return • Lack of connection with virtual • In person builds strong relationships • Connection with self and others

			<ul style="list-style-type: none"> • P11: "I feel like there's a connection that you have with others in a space [that is missing] online...[and] the opportunity to talk to people afterwards [is] more natural or organic when that happens in person versus online... [Online,] just as easily as you log on, you can log off." 	
Accountability	Lacking responsibility about one's mindfulness practice		<ul style="list-style-type: none"> • P08: "I do think I would still prefer the in person [delivery] simply because there's more accountability. I think there's more accountability for yourself... So, I would still prefer in person even though there [are] so many positives with the virtual." • P11: "In person is great [in terms of] being accountable to yourself. It definitely does build accountability." 	<ul style="list-style-type: none"> • More accountability • Motivating on difficult days
Screen fatigue	Lacking energy to attend virtual sessions, but this could be related to the nature of work from home		<ul style="list-style-type: none"> • P02: "I think one factor for me was just getting really tired of staring at my screen all day as the year went on and looking for any opportunity to get away from that and not look at my screen." • P07: "A lot of the issues are the fact that COVID-19 is a pandemic right now and we're all working from home and so things are [all] virtual. So, it's not necessarily the way that the mindfulness sessions were delivered that we have struggles with." 	<ul style="list-style-type: none"> • Screen fatigue • Pandemic related struggles

Table C.2. Student motivations and limitations regarding attendance.

	Themes	Description	Representative Quotations	1 st -Order Concepts
Motivations	Previous experience	Prior knowledge of mindfulness' effects on stress and health motivated some to attend	<ul style="list-style-type: none"> • P06: "I've practiced mindfulness before...and it made a big difference in my life and that was back in undergrad. Since [coming to Ottawa for medical school]... with everything going on in medical school I was starting to feel very overwhelmed and especially with COVID as well." • P02: "I was exposed to mindfulness a little bit before this year during undergrad [during] periods where I was really stressed out and was trying to find ways to manage that." 	<ul style="list-style-type: none"> • Prior practice • Previous experience made a big difference in life
	Curiosity	Students trialed sessions out of interest	<ul style="list-style-type: none"> • P03: "I can't say I've actively practiced mindfulness before. I had been exposed to the concept again in undergrad and I was just interested in learning more and so that was my motivation to attend session." 	<ul style="list-style-type: none"> • No prior experience • Interested in learning more

	Peer recommendation	Increased attendance with peer involvement	<ul style="list-style-type: none"> • P05: “The main motivation...I found that for me it was mainly doing it with other people. So having friends to meditate with you. When med school came around and sharing with friends the stress that overwhelms [you]. One of my friends was actually attending the mindfulness sessions and he said, ‘why don't you give this a try.’” 	<ul style="list-style-type: none"> • Sharing stressful experiences with peers • Recommended by friend
	Value placed by faculty	Students appreciated the focus on mindfulness by faculty and the opportunity and resources provided	<ul style="list-style-type: none"> • P11: “It encouraged me to attend because it was on [our calendar] ...even though it was optional it still felt that it was important enough to be on our calendar so I should attend it.” • P02: “[I was] trying to establish what a balanced life in med school looks like [and] seeing that [mindfulness is] an important thing that the faculty sees as important, I think was a big takeaway for me.” • P09: “I think that [mindfulness is] a really important and healthy habit and I really appreciate that Ottawa has really pushed this in a sense... I hope that [mindfulness] becomes a mainstay across all med schools and hopefully in all future classes. Because I personally did find it very helpful.” 	<ul style="list-style-type: none"> • Important enough to be on calendar • Appreciate resources available • Appreciate faculty's commitment to mindfulness • School sees mindfulness as important
Limitations	Time constraints	<i>Busy schedules and academic demands were factors for decreased attendance at sessions throughout the academic year</i>	<ul style="list-style-type: none"> • P10: “I felt like progressively during the year I got more and more busy... I think it was because the [medical] content got more heavy...so [mindfulness] just started to not be a priority... it just started getting pushed as something that I could do next week.” • P08: “I know it's a bit counterintuitive because we're told when your life's hectic that's the time that you should really be engaging in these [sessions]. These are helpful for precisely those instances but it's also a lot easier said than done when you have a lot of due dates, or you have an exam coming up.” 	<ul style="list-style-type: none"> • When busy lower priority • Disconnect between awareness and behaviour

Table C.3 Recommendations from students for addressing limitations of the mindfulness curriculum.

Theme	Description	Representative Quotations	1 st -Order Concepts
Hybrid Curriculum	Students valued integration of both in-person and virtual sessions	<ul style="list-style-type: none"> • P01: “It would be nice if I saw a platform where you have both a virtual and in-person component so the people who are not as confident to show up in person do the virtual [and] get comfortable with that and then transition to the in person.” • P02: “A hybrid model would be an ideal scenario...when [school] is more hectic, virtual [sessions] are really great. When you have more time...in-person sessions are really nice.” 	<ul style="list-style-type: none"> • Virtual better when busy • Flexibility • In person when more time • Prefers combination

Online Forum	Improved online platform to enhance the online experience and improve engagement	<ul style="list-style-type: none"> • P11: "For building more of a connection with people...some kind of a forum or social media platform that could be used to talk about stuff after a mindfulness session might be helpful." 	<ul style="list-style-type: none"> • Build online community • Share resources online • Improve bonding
Themed Sessions	Sessions relevant to student life which help build a sense of community and motivate attendance	<ul style="list-style-type: none"> • P02: "Maybe something that could potentially help build that sense of community. I'm wondering if more targeted sessions, for example a first-year pre-exam mindfulness session, where... all the first years can attend, and it's geared towards exam stress or something like that... Something that makes people feel like...this is for me specifically! I could see myself feeling: Oh! This is like perfect timing for my exam! I'm going to go, and all my classmates will be there!" 	<ul style="list-style-type: none"> • Targeted sessions • Geared towards student events/experiences
Continuity	Sessions with progression of knowledge and skills to help with motivation	<ul style="list-style-type: none"> • P06: "Personally to me, it kind of felt like each session was stand-alone.... there didn't seem to be much [progression] as the year went on. So, I think if you were able to introduce maybe a system where the mindfulness sessions became "harder" I guess you could say or more advanced. I think that would really [draw] people in and increase engagement or like a sense of [continuity and progression]." 	<ul style="list-style-type: none"> • Lack of continuity • Progressive sessions • Expanding on learned technique

Table C.4. Themes from teacher focus group.

Theme	Description	Representative Quotations	1 st -Order Concepts
In-person allows collective learning	In-person delivery is preferred for more engagement and commitment	<ul style="list-style-type: none"> • "Everybody's sharing this experience...being present together in the same space. I don't know why but it makes that kind of common learning more possible." • "I think the interactivity, the complete presence, the context dependence is much more vibrant in person than remotely." 	<ul style="list-style-type: none"> • Better in person • Shared experiences • Common learning
Virtual delivery convenient, but suboptimal practice	Virtual delivery is viewed as less beneficial for mindfulness practice	<ul style="list-style-type: none"> • "The very nature of the technology, having multiple windows and a computer that allows you to be everywhere and anywhere, encourages multitasking which encourages un-mindfulness basically." 	<ul style="list-style-type: none"> • Not an ideal medium • Technology distracting • Convenience of online does not make up for the benefits of in person

		<ul style="list-style-type: none">• “It’s much easier to turn on your computer and connect to something, but it’s not as beneficial. I feel completely convinced about this. There’s no doubt in my mind that being present [in person] makes a huge difference and it makes a huge difference to people’s sense of engagement.”• “I think basically the bottom line for me is that mediating through technology is not beneficial for your own mindfulness nor for your ability to encourage other people. That’s what it amounts to really.”	
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