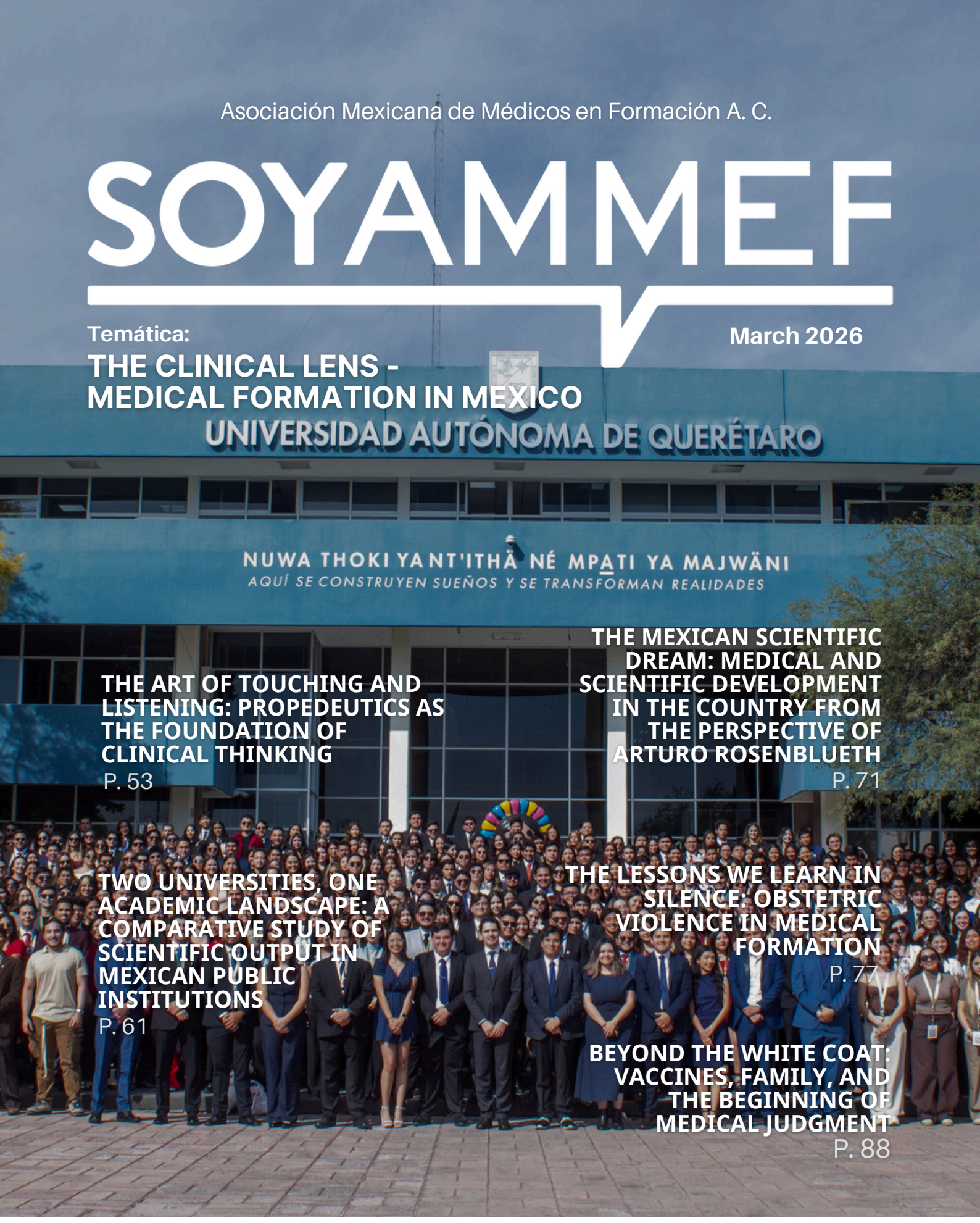
Asociación Mexicana de Médicos en Formación A. C.

SOYAMMEF

Temática:

THE CLINICAL LENS - MEDICAL FORMATION IN MEXICO

March 2026



AMMEF
ASOCIACIÓN MEXICANA DE MÉDICOS EN FORMACIÓN A.C.

Journal of the Mexican Association of Physicians in Training (AMMEF, A.C.)

AMMEF, A.C.

It is an association that brings together more than 70 medical student groups in Mexico. Founded in 1994, AMMEF, A.C., formerly IFMSA-Mexico, is a member of the International Federation of Medical Students' Associations (IFMSA), which represents more than 1.3 million medical trainees in 127 countries across six continents.

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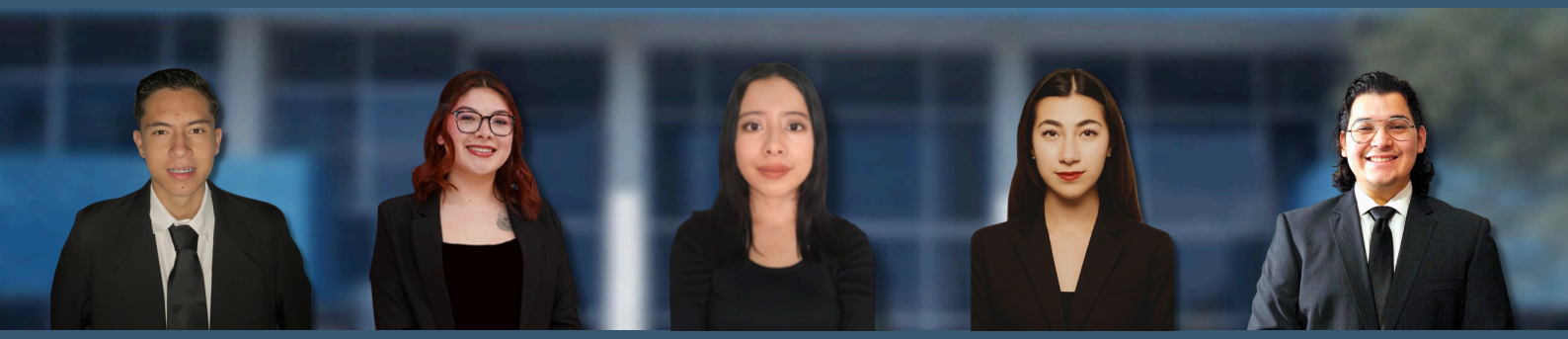

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Editor´s Note

Hello! It is once again an honor for me to greet you as Editor-in-Chief of SoyAMMEF, a magazine born from the heart of SCOMP with the purpose of being a space to write about the most memorable moments of the members of the Mexican Association of Physicians in Training.

We hope you enjoy this edition as much as we enjoyed building every page for you. I have always believed that SoyAMMEF is a fundamental tool to strengthen our identity within this beautiful Association. Research enriches our knowledge, but it is what we feel—what excites us, challenges us, and makes us question ourselves between classes, shifts, and constant challenges—that truly shapes us as medical students. And what better way than to have a space to record it in history and turn an experience into shared learning.

As in our previous edition, I deeply thank every reader and contributor. To my great friends, the LOMPsitos team—thank you for encouraging me from the very beginning to become Editor-in-Chief and for so many shared anecdotes. To the NOMP and the Editorial Director, thank you for training and guiding me throughout this process. And thank you, AMMEF A.C., for so many lessons and friendships that I will carry with me forever, but above all, thank you to my editorial team, with whom I share a deep affection for SoyAMMEF.

To those who write, create, and express themselves in these pages: thank you for building community.
And to those who read: I hope you find here not only information, but also inspiration.

May research help us become physicians worthy of caring for our patients, and may we continue writing the medicine we want to practice.

Hannia Andrea Vera Rodriguez
Editor-in-Chief of SoyAMMEF
2025-2026

Message from the National Officer on Medical Publications

Dear colleagues:

When we talk about medical training in Mexico, we are not only referring to the knowledge acquired, but to the way we learn to observe, analyze, and make decisions in clinical practice. This process is built progressively and is nurtured by both, formal education and experience in different healthcare settings, where theory begins to make sense in reality.

Becoming a doctor involves integrating what has been learned with what has been lived. Every patient, every clinical scenario, and every interaction provides elements that strengthen judgment and confidence in decision-making. Over time, this combination defines not only how we act, but also how we understand medical practice within our environment.

This edition provides the formative process and its impact on daily practice into perspective, recognizing that training is not limited to a single stage, but continues throughout professional practice. Enjoy the reading as much as I did, but before that... delay, have a coffee, and we move forward.

Sincerely,

Jesus Javier Von Maldonado,
National Officer on Medical Publications 25-26, AMMEF Mexico.

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Syndemic of Oral Health and NCDs, The Systemic Failure Affecting Millions: A Public Policy Problem in Mexico

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Oral health in Mexico continues to be treated as a peripheral component of the health system, despite its high burden of disease and its undeniable, well-documented interaction with noncommunicable diseases (NCDs). This omission is not merely clinical or academic, but profoundly political. The coexistence and mutual reinforcement of oral diseases and NCDs constitute a true syndemic, understood as the convergence of multiple health conditions that share social determinants, risk factors, and cumulative adverse effects. In the Mexican context, this oral health–NCD syndemic clearly reveals a structural failure in public policy that affects millions of people and has, regrettably, become normalized within the current regulatory framework.

The General Health Law recognizes NCDs as one of the country's priority public health problems and establishes the obligation of the Mexican State to develop strategies for their control and epidemiological surveillance. However, in Chapter III, which addresses Noncommunicable Diseases, oral health is not mentioned as a strategic axis, although oral diseases are, by definition, chronic, noncommunicable, highly prevalent, and preventable. This absence effectively translates into invisibilization, limiting resource allocation and the genuine integration of dentistry into primary health care models.

Available epidemiological data further reinforce this omission. The National Health and Nutrition Survey (ENSANUT) has documented a high prevalence of dental caries, periodontal disease, and tooth loss across different age groups, with greater impact among socially vulnerable populations (1). Likewise, the Epidemiological Surveillance System for Oral Pathologies (SIVEPAB), in its most recent updates, reports that more than ninety percent of the Mexican population presents some form of oral disease or oral damage, with caries and periodontal disease being the most prevalent conditions (2). These conditions not only cause pain, infections, and functional limitations, but are also closely associated with impaired nutrition, metabolic imbalance, and reduced quality of life, particularly among individuals living with diabetes mellitus, cardiovascular diseases, and other NCDs.

Scientific evidence has also demonstrated that oral pathologies are closely associated with increased systemic inflammation and a higher cardiovascular risk. Tooth loss, in particular, significantly affects nutritional status, especially among older adults. Ignoring this interrelationship perpetuates a fragmented biomedical model that addresses NCDs without considering one of their key inflammatory and behavioral components.

Effectively integrating dentistry into the care of noncommunicable diseases does not merely involve expanding dental services within hospitals, but rather rethinking the model of care from a more comprehensive perspective, one that prioritizes prevention over curative approaches and is grounded in the social determinants of health. Early dental care enables the identification of risk factors that may destabilize individuals living with chronic conditions, helps prevent systemic complications, and reduces costs associated with specialized hospital care. From this perspective, dentistry should not be conceived as an additional expense, but as a strategic and cost-effective investment for NCD control and for fulfilling the right to health protection enshrined in the Constitution.

The lack of explicit recognition of oral health within national strategies for NCDs ultimately represents an expression of structural inequity. While NCDs occupy a central place in health policy discourse, millions of people continue to live with preventable oral diseases that worsen their overall health status and deepen the social inequalities they experience daily. Recognizing the oral health–NCD syndemic requires political will, regulatory adjustments, and a reconfiguration of the health system that places dentistry at the core of primary care and public policies aimed at collective well-being.

As long as oral health remains excluded from health policy, health itself will remain incomplete. Integrating dentistry constitutes an ethical, scientific, and social urgency that can no longer be postponed.

The Map They Didn't Give Us: Navigating Student Incidence through AMMEF

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From the first day we decided to embrace the medical profession to the moment we received our degrees certifying us as professionals, one premise constantly echoed in the halls of our faculties and in the speeches of our mentors: studying medicine alone is not enough. We are warned that limiting ourselves to academic excellence in the basic and clinical sciences is a short-sighted vision if we aspire to make a real impact on the healthcare ecosystem. However, this warning often hangs in the air as an ambiguous imperative. What does “making a difference” really mean? More importantly, for a student immersed in the rigors of clinical rotations, how accessible is it really to start making that mark?

Often, it is precisely this search for a transcendent purpose that allows us to overcome the exhaustion of on-call shifts and the density of textbooks. However, the traditional educational system rarely offers us a clear map of where to start. We find ourselves at a crossroads between the desire to act and the lack of knowledge about the platforms that enable student advocacy.

The Awakening of Organizational Awareness

My first encounter with the structure of a Local Committee (LC) was a turning point. Initially, my perception of a student organization was simplistic; I imagined it as a group of enthusiasts coordinating occasional talks and events.

However, as I delved into the inner workings of a Project Committee and, by extension, the magnitude of the Mexican Association of Doctors in Training (AMMEF), the reality revealed itself to be much more complex and fascinating.

I discovered that behind every community intervention, every symposium, or health campaign, there is a technical planning architecture that the average student tends to ignore. It is not simply a matter of contacting speakers or securing an audience; it involves resource management, social impact assessment, and methodological justification that requires a rigor comparable to that of scientific research. This revelation made me understand that medicine has dimensions that are not visible within the walls of the classroom or the cubicles of the emergency room: medicine is also management, logistics, and, above all, a tool for social transformation through collective organization.

From Obligation to Purpose: The Road to FENAPRO

As is often the case in student life, sometimes the most significant challenges come to us in the guise of an administrative responsibility. My encounter with the National Project Fair (FENAPRO) was not born of a spontaneous epiphany, but of an institutional necessity. As local officers, we were urged to participate to secure our committee's “National Voting Right” (DaV).

At that time, I was already interested in implementing an activity that would merge three pillars that I consider fundamental: research, teaching, and advocacy. Although the initial motivation was to fulfill a requirement, the process of transforming that incipient idea into a formal proposal for the republic changed my perspective. I understood that participating in these fairs is not just a formality; it is an opportunity to replicate internal change on a macroscopic scale. It is the possibility that a concern born at a local desk will resonate with other students across the country, multiplying the impact and fostering a culture of medical proactivity.

Closing the Gap: Debate as a Clinical Tool

Traditional medical training is, by nature, technical and rigorous. We are trained to identify pathologies and execute protocols with surgical precision. However, 21st-century medicine requires us to navigate a sea of complex social determinants, bioethical dilemmas, and human realities that do not always fit into clinical algorithms.

This is where I identified a critical gap: the lack of formal spaces to cultivate critical thinking, public speaking, and argumentation. Medical education tends to be vertical, where knowledge is received but rarely questioned or defended in a peer forum. Under this premise, the “Health Debate” protocol was born.

The goal was not only to discuss medical issues, but also to professionalize controversy. We wanted medical students—and the general public—to be able to address current issues from a dynamic perspective.

Debate forces students to step outside their comfort zone, investigate scientific evidence from multiple angles, and develop the empathy necessary to understand divergent positions. At the end of the day, a doctor who knows how to debate is a doctor who knows how to listen, who knows how to negotiate with their patient, and who can defend public health policies with solid arguments.

The Writing Odyssey: Castles in the Air

Drafting a national protocol from scratch, with no previous experience in regulating such large-scale projects, was an exciting challenge. The writing process is often the biggest obstacle for the visionary student. In this regard, I would like to share some thoughts for those who, like me, feel they have a valuable idea but are overwhelmed by the blank page:

1. Team Synergy: Although an individual can be the driving force behind an idea, working with a colleague who shares the vision is essential. A partner not only lightens the operational load but also acts as a critical mirror that purifies ideas of personal biases and logical weaknesses.
2. The Metaphor of Imaginary Castles: Often, our ideas present themselves in the mind as a series of floating castles, majestic but disordered. The most common mistake is to try to “bring down” all the castles at once onto paper. The result is usually a disjointed and confusing text. My recommendation is to land one castle at a time. Focus on consolidating a structural idea, developing it fully, and leave technical language and style corrections for a final phase. Fluency of thought must precede rigor of syntax.

3. Resilience to Criticism: The protocol underwent multiple revisions. Learning to receive criticism, sometimes harsh, is as vital a professional skill as knowing how to suture. Each comment from an evaluator is not a personal attack, but a chisel that polishes the final work.
4. Romanticizing the Purpose: Amid bureaucracy, forms, and sleepless nights spent writing, it is easy to lose sight of the "why." It is necessary to fall in love again with the initial goal: to make a difference. Romanticizing the process—enjoying the construction of something new—is the fuel that prevents the project from being abandoned.

Conclusion

How affordable is it to leave our mark as students? The answer is: as much as we are willing to make ourselves uncomfortable. The mark is not only left in the hospital, but in the creation of spaces that improve the training of those who come after us.

My experience in creating this debate protocol taught me that medicine is a fertile field for student innovation. We don't need to wait for graduate school or a specialty to be agents of change. The infrastructure exists (such as AMMEF and FENAPRO), but it requires courageous students who dare to bring their "imaginary castles" down to the reality of a protocol, transforming a personal concern into a collective learning tool. In the end, leaving a mark is not about ego, but about building a bridge for others to go further.


Through the clinical lens,
medicine becomes a
story of learning and healing

WE ARE SCOMEDIANS

SCOME
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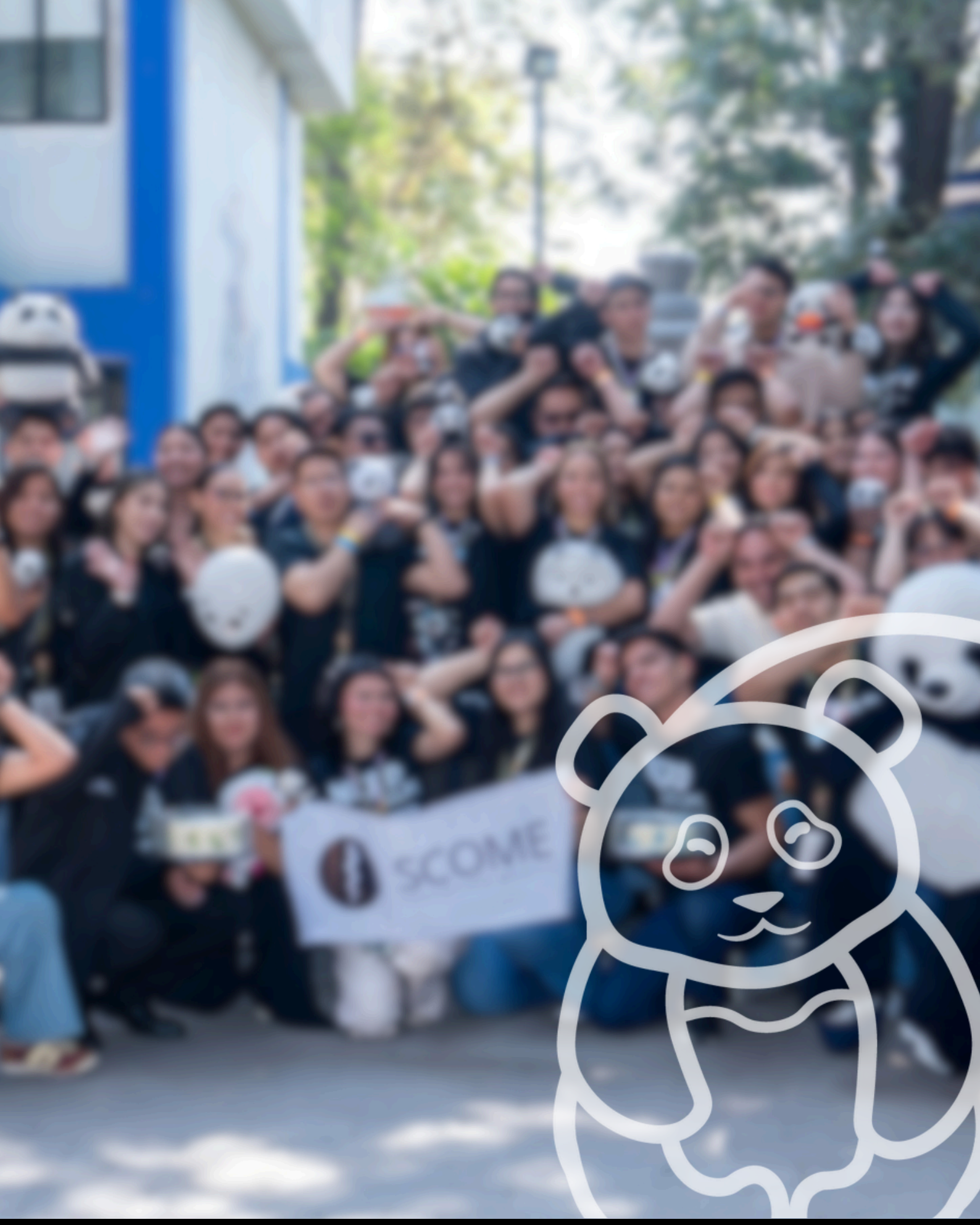

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The Heart Waits Less Than We Think: The Tragedy of Delayed Care for Acute Myocardial Infarction in Mexico

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It was 3:17 a.m. when a 56-year-old man arrived at the emergency department, diaphoretic, with his hand pressed tightly against his chest. “It was just stress… I thought it would pass,” he managed to say as the stretcher rolled toward the monitor. By that moment, his myocardial tissue had already been suffering for more than two hours. Two hours of coronary occlusion without reperfusion, two hours of electrical silence in tissue that could still have been saved. When the electrocardiogram revealed ST-segment elevation, we knew we were no longer competing against disease, but against time. And yet, even before deciding between fibrinolysis or transfer for angioplasty, we sensed that the system had already delayed us. The race had been lost before he crossed the door.

Mexico lives this scene every day. The true enemy is not only the coronary thrombus, but the accumulation of delays, structural barriers, and gaps in care that continue to cost lives that could be saved. Acute myocardial infarction (AMI) remains one of the leading causes of death in the country, and in-hospital mortality often doubles that reported in high-specialty international centers[1].

Much of this difference lies in the fact that most patients do not arrive on time, and when they do, they do not always receive immediate reperfusion.

National data show that more than 60% of patients arrive after the first two hours from pain onset; the median prehospital delay ranges between three and five hours, and only a minority access primary angioplasty within the recommended first ninety minutes[2,3]. In Mexico, more than AMI, we face “delay-AMI”: infarctions defined not only by electrocardiographic findings, but by the cumulative delay from the first symptom to the first appropriate intervention.

The pathophysiology of infarction explains this urgency mercilessly. As soon as an unstable atherosclerotic plaque ruptures and triggers thrombosis, the supplied territory abruptly loses blood flow. In the first minutes, energy is obtained from anaerobic metabolism, lactate accumulates, and contractility is lost. After twenty to thirty minutes, areas of irreversible necrosis appear, and by two hours the infarcted area may become transmural[2]. An infarction is like a blackout in a city: first one neighborhood goes dark, then another, until the entire zone is affected. Reperfusion—whether through fibrinolysis or angioplasty—is like restoring power before the circuits burn permanently.

This is why international guidelines insist on strict time windows: deciding fibrinolysis within thirty minutes, achieving door-to-balloon time under ninety minutes, and complete reperfusion within one hundred twenty minutes from first medical contact[4]. Every lost minute turns viable myocardium into scar tissue.

However, the gap between what is ideal and what is real in Mexico is wide. Not all hospitals have 24/7 access to catheterization laboratories; fibrinolytic agents are not always readily available; interhospital referral networks can prolong critical transfers; cardiovascular triage may fail; and training in rapid ECG interpretation varies widely among institutions. Added to this is patient-related delay, as chest pain is often interpreted as "gastritis," "gas," "fatigue," or "stress," leading individuals to wait, self-medicate, or consult acquaintances before seeking medical care. The result is a larger, more dangerous infarction.

The causes of this problem intertwine at three levels. At the health system level, the absence of clear reperfusion pathways, the unequal distribution of catheterization centers, and the lack of mandatory prehospital protocols are key determinants of delay. At the patient level, cardiovascular health literacy is insufficient, chest pain is normalized, and economic and geographic barriers limit timely access to care. In medical training, education in cardiovascular emergencies is heterogeneous, electrocardiogram mastery is inconsistent, and rapid decision-making is not yet trained systematically. It is not that we do not know how to treat infarction; it is that we do not treat it in time.

Even so, there are concrete, achievable, and sustainable solutions. A first step is the implementation of mandatory prehospital protocols in all ambulances—public and private—including obtaining an electrocardiogram within ten minutes, immediate transmission via telemedicine, and direct activation of the catheterization laboratory from the mobile unit.

In parallel, early fibrinolysis must be empowered in centers without timely access to angioplasty. Fibrinolysis is not a second-rate alternative; it is the correct option when angioplasty cannot be performed within the recommended time frames.

Mexico could greatly benefit from a significantly strengthened "Infarction Code," similar to those used for stroke and trauma care, with standardized protocols, measurable goals, and clear obligations at all levels of care. Widespread, homogeneous, and continuous training in electrocardiography, cardiovascular triage, and rapid decision-making is also essential. No physician should graduate without mastering these three pillars. On the community side, the implementation of simple, direct educational campaigns—such as "If chest pain does not go away in five minutes, call 911"—would have an immediate impact. In rural areas, telecardiology can make the difference between timely fibrinolysis and fatal delay, allowing an ECG sent from a community clinic to receive rapid validation by a cardiologist.

Acute myocardial infarction does not wait, does not negotiate, and does not offer second chances. Every minute without flow is a heartbeat lost forever. In Mexico, the battle against infarction remains a race against the clock, and too often we lose it before we begin. But it does not have to be this way. With clear protocols, timely decisions, and solid medical training, we can transform every minute gained into lives saved. In a scenario where time determines prognosis, perhaps the most human act we can offer as physicians is simply to arrive on time.

Medical On-Call Shifts: Are They Still Effective in Medical Training?

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On-call shifts have been considered an essential component of medical training since the twentieth century, as they provide comprehensive experience within a clinical environment.[1] In Mexico, after completing six to seven years of professional education, including undergraduate internship, many physicians choose to pursue a specialty. According to the parameters established by NOM-001-SSA-2023,[2] work schedules may extend up to 80 hours per week with on-call shifts twice a week. However, these limits are often not respected, and the number of hours spent in the hospital by residents—or even undergraduate medical interns—may be significantly prolonged.

Clinical practice in hospitals or health centers provides physicians and students with a vital opportunity to communicate with patients and their families, as well as to work alongside various healthcare professionals, while also ensuring 24-hour healthcare coverage for the population.[3] It contributes to the development of clinical decision-making, the performance of procedures such as intubation, cardiopulmonary resuscitation, and medication administration through different routes, and the selection of treatments that directly impact patient well-being.[3,4] However, in recent years, a debate has emerged regarding whether medical on-call shifts truly enhance learning or whether, on the contrary, they represent an outdated teaching method that negatively affects the physical and mental health of students.

Prolonged on-call shifts can lead students to experience burnout, defined as a state of physical, mental, and emotional exhaustion caused by chronic work-related stress.[5] Additionally, decreased sleep quality reduces students' levels of attention, impairing both the learning process and patient care.[5]
Furthermore, for an on-call shift to be effective, proper supervision and guided learning are essential. However, due to the fast-paced and constantly changing nature of the healthcare setting, the time dedicated to each intern or resident is often insufficient to provide the feedback necessary for meaningful learning.[6]

It must also be considered that in academic evaluations—such as examinations for entry into a medical specialty or professional certification—there is often insufficient time to study scientific foundations, review updated clinical practice guidelines, or stay current with new surgical techniques, relevant discoveries, or emerging treatments, particularly when work schedules fail to prioritize these activities as essential to ensuring optimal patient care.

Under inadequate conditions, the responsibilities assigned to residents—whose role lies somewhere between that of a worker and a student—may lead to allegations of medical negligence, placing patients, residents' professional reputations, and healthcare institutions at risk.[5]

It is therefore necessary to prioritize both physical and mental rest and integrity for undergraduate medical interns and residents, as well as to assign responsibilities appropriately according to each professional's level of training and specialization.

There is no doubt that working in a clinical environment provides a comprehensive educational experience for any medical student or physician in training. However, this should not come at the expense of healthcare professionals' physical or mental health, nor should it compromise the delivery of complete and up-to-date medical care. The problems associated with extended on-call shifts cannot be examined in isolation without acknowledging that the current healthcare system faces crises related to shortages of supplies, inadequate infrastructure, and insufficient staffing. This is therefore a systemic issue that does not depend solely on a single institution or individual, but rather on national health authorities.

C.21.1. Burnout involves physical and mental exhaustion.

Medicine is a constantly evolving science, marked by ongoing innovations as well as emerging challenges. Practices that were once considered standard may no longer be the most appropriate for today's society or for the education of physicians in training. For this reason, it is essential to critically examine how medical on-call shifts are structured, in order to preserve their educational benefits while eliminating practices that undermine learning and well-being.

C.21.2. Medical training evolves over time; it is important to re-evaluate teaching methods.

Medical Student: Ornament or Decision Maker?

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We live in a world defined by the paradox of immediacy, where, in the healthcare sector, constant updating has ceased to be an advantage and has become a requirement for survival. In this scenario, 21st-century global health is no longer sustainable if it relies solely on the traditional "healer" limited to diagnosis; on the contrary, the current system demands a new lineage of informed, socially responsible professionals capable of influencing decision-making and public policy. In light of this situation, a pressing question arises: how can we, as medical students, adapt our own training to meet these contemporary demands? The answer lies in a concept that is a cornerstone of systemic transformation, although it is often relegated to the theoretical realm: advocacy.

The catalyst: when the curriculum is deficient

Just a few days ago, as part of the close contact we maintain with other local association officers, we received a message that encapsulates the urgency of this debate. A colleague expressed deep concern about his faculty: its curriculum had undergone a series of structural changes, but these were implemented without the consensus or consent of the student body.

This incident is not an isolated case, but rather a symptom of a systemic disconnect. When curriculum design ignores the student's voice, there is a risk of training professionals for a world that no longer exists. The curriculum should not be a rigid document, but one that responds to current demographic needs and integrates new technologies not as an accessory, but as a fundamental tool of modern medical practice.

Ignoring students' voices in educational development is not merely an administrative oversight, but a sentence to professional passivity. By relegating the student to the background, their sense of agency and responsibility is fractured, turning future leaders into mere executors of processes they neither understand nor share. The real consequence is the creation of an insurmountable gap between the classroom and clinical reality: a generation of physicians who are technically competent but politically inert and socially disconnected. Ultimately, the price of this exclusion is paid by the healthcare system as a whole, which ends up inheriting professionals without the critical capacity or the empowerment needed to defend—and transform—their patients' lives.

Defining Social Accountability (SA)

To understand why students must have a voice, we must refer to the World Health Organization's (WHO) definition.

The WHO defines the social accountability (SA) of medical schools as the obligation to direct their educational, research, and service activities toward addressing the priority needs of the community, region, and/or nation that has entrusted them with the mandate to serve [1].

These priority needs are not static. If the faculty has this obligation to society, young people and medical students should be regarded as agents of change, promoting intergenerational collaboration through sustainable participation, with feedback and accountability.

Meaningful Youth Participation (MYP)

One way students can contribute to the faculty's social responsibility is through the MYP.

It's easy to get stuck in symbolic participation without achieving meaningful participation, which is why it's essential to identify them, ensuring our voice is heard and taken into account. There are eight levels of youth participation. Figure 1

- Manipulation
- Decoration
- Assigned but informed
- Consulted and informed
- Initiated by adults, sharing decisions with young people
- Initiated and led by young people
- Initiated by young people, sharing decisions with adults

True participation involves:

- Intergenerational Collaboration: A horizontal dialog where teachers' experience is enriched by technological proficiency and students' fresh perspectives.
- Sustainable Participation: That student consultation mechanisms be institutionalized and not depend on the charisma of a leader in office.
- Accountability and Feedback: Student opinions have a traceable impact on curriculum design and resource management.

Viewing young professionals as true agents of change allows medical education to shift from a process of "information consumption" to one of "value co-creation."

Tools for action: advocacy, public speaking, and debate

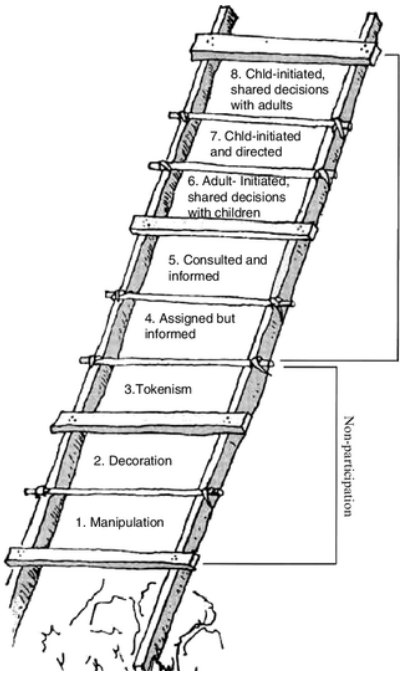
For a student to be able to influence and demand social responsibility, it is not enough to have the intention; technical tools are required. Advocacy is the set of actions aimed at influencing public policies and the allocation of resources within political, economic, and institutional systems. [3] Advocacy is the set of actions aimed at influencing public policies and the allocation of resources within political, economic, and institutional systems. [3]

In our context, we seek to implement activities in which advocacy is expressed through:
Public Speaking and Debate: Not as aesthetic ends, but as clinical and political competencies.

A student who is proficient in debate can dissect an administrative argument, identify fallacies in a curricular proposal, and propose evidence-based alternatives. Debate fosters critical thinking, enabling physicians to advocate not only for their individual patients but also for entire populations before bureaucratic systems.

Open Space Discussions (OSD) and Forums: These dialog methodologies allow individual hallway concerns to be transformed into a collective consensus. The use of new technologies makes these forums inclusive, allowing the voice of a student in a remote area to carry the same weight as that of one in the capital.

Curriculum development within Kern's six-step framework[4]: It is imperative to develop a curriculum in a bilateral, evidence-based, and socially responsible manner; this tool facilitates this inclusive process.

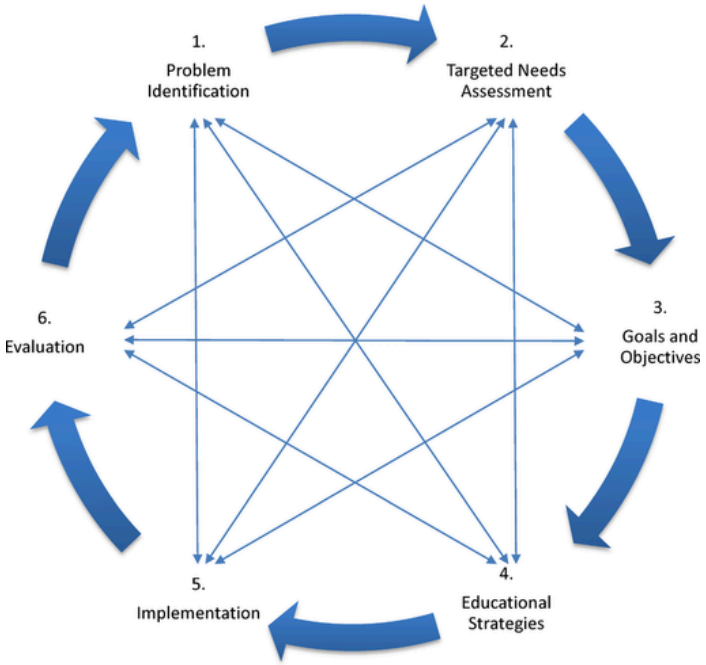


C.28.1. Ladder of levels of meaningful youth participation. Hart, Roger. (2008). Stepping back from "The ladder": Reflections on a model of participatory work with children.

The doctor as an intermediary in a digital world

The globalized world demands that physicians be advocates. In an environment where misinformation spreads faster than evidence, health professionals must occupy decision-making spaces. If, during our training, we are not allowed to participate in designing our own curriculum or in the governance of our faculty, we will hardly have the skills to lead complex health systems in the future.

Medical education must integrate health policy literacy with the same rigor as clinical training. Only in this way can we close the gap between what the university teaches and what society needs.



C.28.2. Kern's 6 steps for Curriculum Development. Wagner, M. & Fischer, Martin & Scaglione, Mariano & Linsenmaier, Ulrich & Schueller, G. & Berger, Ferco & Dick, Elizabeth & Basilico, Raffaella & Stajgis, M. & Calli, C. & Vaidya, S. & Wirth, Stefan. (2017). Subspecialization in Emergency Radiology: Proposal for a harmonized European curriculum. GMS Journal for Medical Education. 34. 10.3205/zma001138.

Conclusion

Global health cannot be sustained solely by "healers" with a technical vision. The contemporary world needs doctors who understand that their work begins long before the consultation and ends long after the prescription. It begins with advocating for quality education and ends with political advocacy to ensure equitable health systems.

C.28.3. Board of Directors of the LEMEP Local Committee at the National Forum "Human Rights of Medical Students, Legislative Proposals for the Vindication of their Rights", July 2025 - Chamber of Deputies

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The Importance of Timely Detection of Risk Factors and Complications in Chronic Kidney Disease in Mexico

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Chronic kidney disease is considered a pathology of multiple etiologies that impairs the patient's overall physical condition by failing to adequately perform its function of filtering, absorbing, and excreting substances entering the body. That is why this disease has been well defined within the healthcare sector for prompt prevention, diagnosis, and treatment.

Chronic kidney disease is defined as structural or functional kidney damage evidenced by diagnostic blood tests (albumin/creatinine ≥ 30 mg/g or albuminuria ≥ 30 mg/g/24 h), urine tests (abnormal urinary sediment such as hematuria, leukocyturia, casts, or tubular epithelial cells), or a period of three months or more accompanied by a glomerular filtration rate (GFR) below 60 mL/min/1.73 m²; it is classified according to the degree of renal function, with both GFR and albuminuria used to stage the disease.

In Mexico, 9,184.9 out of every 100,000 inhabitants suffer from this condition. At its highest concentration within the population, it involves common risk factors that can trigger the onset of the disease. It is estimated that 40% of diabetics are susceptible to developing this condition, in addition to the large proportion of the population who already have other risk factors. As a consequence of impaired renal function, the disease can develop, along with various long-term systemic complications.

Risk factors allow the identification of patients who are more susceptible to the disease. Type 2 diabetes mellitus, arterial hypertension, obesity, dyslipidemia, and hyperuricemia are among the most important factors in our environment; their identification is essential for proper prevention.

Diabetes causes kidney damage through hyperfiltration, which generates advanced glycation end products and/or reactive oxygen species. Among the molecules involved are various cytokines, growth factors, and hormones, which contribute to changes associated with diabetic nephropathy at the glomerular, interstitial, and vascular levels. In the first phase, also known as the preclinical phase, damage is mediated by hyperglycemia, which triggers thickening of the glomerular basement membrane, increased mesangial matrix, vasoconstriction, arterial hyalinosis, and tubulointerstitial fibrosis; these changes result in albuminuria, increased proteinuria, and a progressive decline in glomerular filtration rate.

Arterial hypertension is one of the most common causes (60–80%). Elevated blood pressure causes vasoconstriction of the afferent arteriole as a protective mechanism for the glomerulus; however, this results in glomerular ischemia.

Subsequently, progressive damage occurs with loss of renal mass, and adaptive mechanisms emerge to compensate for the loss of renal function, such as the disappearance of preglomerular vasoconstriction, which increases pressure in the glomerular capillaries, leading to hypertrophy of the intact nephrons and hyperfiltration. This entire set of events leads to the development of glomerular sclerosis and proteinuria.

As in many other diseases, obesity predisposes to systemic damage by inducing hemodynamic changes that lead to hyperfiltration, as well as increasing vasoactive and fibrogenic substances, such as angiotensin II, insulin, leptin, TGF-β, VEGF, and fibronectin. Likewise, the predisposition to proteinuria is greater in this condition, and focal segmental glomerulosclerosis (FSGS) is often a common finding.

Dyslipidemia is a significant risk factor in chronic kidney disease, characterized by normal or slightly elevated LDL cholesterol levels, low HDL cholesterol levels, and elevated triglyceride levels. LDL particles are more atherogenic due to the oxidation and carbamylation they undergo through processes associated with uremia.

The presentation of hyperuricemia in chronic kidney disease (CKD) is characterized by decreased urinary excretion of uric acid, which secondarily leads to reduced renal perfusion due to smooth muscle proliferation in the afferent arteriole. As a consequence of these pathophysiological events, patients are at increased risk of hypertension, development of diabetic nephropathy, and cardiovascular morbidity and mortality, which can accelerate the progression of CKD.

LAnother aspect to consider is the complications associated with this condition: anemia, electrolyte and bone-mineral metabolism disturbances, as well as an increased predisposition to cardiovascular risk.

Their importance lies in the significant impact they have on patients' quality of life, coupled with the increased difficulty in covering necessary expenses, such as the rising cost of medications, the use of hemodialysis or dialysis, and the consideration of a kidney transplant.

Anemia is one of the most common complications in these patients, resulting from a deficiency of erythropoietin, a hormone produced in the kidneys that stimulates erythropoiesis. Anemia is evaluated by measuring ferritin levels below 100 mg/mL and/or transferrin saturation index levels below 20%.

Evidence of electrolyte disturbances in patients with chronic kidney disease is generally less frequent; however, it is often significant due to the presence of metabolic acidosis—secondary to the kidney's reduced ability to excrete non-volatile acids—along with low plasma bicarbonate concentrations.

Although each nephron can increase ammonium synthesis, the reduction in nephron number fails to compensate; therefore, the net fraction of acid excreted as ammonium decreases, leading to elevated tissue ammonium levels with consequent activation of the alternative complement pathway, stimulation of the renin–angiotensin–aldosterone system, and increased endothelin- 1 levels, resulting in greater interstitial inflammation and,

subsequently, more extensive renal tissue fibrosis, which is associated with accelerated disease progression.

Decreased renal function is accompanied by reduced phosphorus excretion due to its deposition in the renal tubules and interstitium, as well as by a deficiency in vitamin D (calcitriol) production, which stimulates the secretion of parathyroid hormone (PTH), leading to secondary hyperparathyroidism with a rapid increase in the synthesis of components of the renin–angiotensin system.

The association between increased cardiovascular risk and chronic kidney disease should not be overlooked, as higher all-cause and cardiovascular mortality has been demonstrated in the population with a glomerular filtration rate < 60 mL/min/1.73 m². This promotes sodium and water retention, equivalent to a volume overload, which is accompanied by activation of the renin–angiotensin–aldosterone system and the sympathetic nervous system, thereby increasing vascular pressure.

Categoría según filtrado glomerular (mL/min/1,73 m²)	Categoría según albuminuria (mg/g)		
	A1 (< 30)	A2 (30-299)	A3 (≥ 300)
G1 (>90)			
G2 (60-89)			
G3a (45-59)			
G3b (30-44)			
G4 (15-29)			
G5 (<15)			

C.2.1. Green: low risk; yellow: moderate risk; orange: high risk; red: very high risk. Adapted from the KDIGO 2012 guidelines.

EIt is not unusual to find a relationship between urea and kidney damage, as the presence of urea and other electrolytes can trigger arrhythmias, especially supraventricular and ventricular arrhythmias, which are most commonly associated with hemodialysis sessions. The increase in cytokines at the vascular level predisposes cardiomyocytes to apoptosis and necrosis, accompanied by the aforementioned complications such as anemia. In the final stages of the disease (stages 4 and 5), with the presence of uremic toxins, left ventricular hypertrophy secondary to volume and pressure overload is commonly observed, with an increased predisposition to the development of congestive heart failure, ischemic heart disease, intradialytic hypotension, and arrhythmias.

It is important to highlight the onset of atherosclerosis, caused by increased pulse pressure combined with an inflammatory process that leads to atheromatous plaques in the intima of medium- and large-sized arteries, along with an occlusive syndrome at various levels that can progress to coronary artery disease, cerebrovascular disease, peripheral vascular disease, and aortic atherosclerosis. In addition, another finding to consider is albuminuria ≥ 30 mg/g, which is associated with an increased risk of mortality.


The clinic teaches
what books cannot

Research as a fundamental tool for students in the health field

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Scientific research, in general, plays an important and indispensable role globally, primarily because it enables the expansion of human knowledge. The research process is a fundamental part of our development.

Through research, we can expand our knowledge, first by identifying needs and problems in our environment, then by discovering and better understanding the issues we face as a population, and ultimately by becoming a resource in solving those problems.

With the current technological advances, higher education institutions face the task of recognizing the need to focus on revitalizing research. Worldwide, it is recognized that research capabilities are inherent in individuals who have completed their higher education and earned a professional degree. Therefore, all universities in Mexico must prioritize research, as some institutions unfortunately do not engage in this investigative process. Health research is not limited to physicians; it is a multidimensional and multidisciplinary endeavor involving other professions within the health system, whose contributions to research would generate significant benefits for healthcare delivery, prevention, and health promotion among the population.

As is well known, the university's mission is to seek, develop, and disseminate knowledge in all fields of learning, thereby establishing itself as a reference point for knowledge and technological development (1). From this point on, research becomes essential in any university degree program in the health sciences.

If we implement research at the university level, we expand our opportunities to better prepare for our future as professionals, enabling us to generate new knowledge, solve problems, conduct reality-based diagnoses, interpret and write scientific reports, and develop abstraction, analytical, and synthesis skills.

Some readings acknowledge that there are limitations in the initiatives undertaken by Latin American universities to develop events or actions that promote a scientific spirit among students and fail to improve their research skills (2).

Currently, the health sector in Mexico faces significant challenges in research. Since 2021, health research in Mexico has been in an exceptionally difficult situation. The National Institutes of Health and public research centers have faced situations that alter the course of research processes, such as budget cuts and increasingly pronounced administrative problems.

“The result of nearly eight decades of continuous efforts to ensure that health improvement programs are grounded in scientific evidence is now in grave danger” (3).

However, as young students in the learning process, we can be a significant support for the future continuation of research efforts.

We must bear in mind that this university-level research learning process will serve as a foundation for our professional practice, since this knowledge will enable us to formulate problems better and add something new to the current body of knowledge, which is the purpose of this research process—namely, to produce high-quality research that contributes to health development.

As a medical student who has understood the necessity of research during my educational journey, I believe it is important to encourage and motivate my fellow students to delve into the world of research, thereby developing analytical skills, critical thinking, and communication—all of which are essential for our professional practice as we transition from students to future researchers.

Without a doubt, research is beneficial for students, researchers, educational institutions, and the country. Progress as a society is crucial. Early integration into this field provides us with greater opportunities to gain experience, strengthen skills, and develop a scientific perspective; it fosters professionals who are better equipped for research, resulting in greater potential for development and innovation, addressing each region’s unique problems and challenges with appropriate approaches and solutions—all achieved through research.

For all these reasons, this process is crucial for health students, as it enables progress in the well-being of the population, provides us with early knowledge to drive innovation and development, and creates a favorable future.

One point to highlight in this essay is the promotion of the importance and participation of us as students in research as a future endeavor, not just as an academic matter, but as a contribution to the advancement and growth of healthcare in our country.

“There is no growth without innovation, nor innovation without learning; that is why research is an essential pillar of educational development.”

Procrastination: The Silent Adversary of Students

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It is widely acknowledged that within student life, particularly at the university level, time is often perceived as a scarce resource, almost a privilege or a luxury, especially within medical training. Long and demanding classes, constant assessments, clinical rotations, and an overwhelming academic workload all require sustained commitment, discipline, and perseverance. Yet, beneath this fast-paced and demanding academic lifestyle lies a frequent, silent, and highly normalized phenomenon: procrastination. This behavior extends beyond a simple issue of poor organization; it reflects the complex relationship between students and their studies, stress, and emotional burden.

Procrastination is defined as the deliberate and unnecessary postponement of an important task, despite full awareness that such delay will result in negative consequences. In the university setting, this behavior becomes evident when students delay the initiation, completion, or both of their academic responsibilities, often replacing them with more pleasurable activities that provide immediate gratification but hold less importance. While procrastination is commonly associated with laziness or a lack of responsibility, recent findings suggest that it is a multifactorial phenomenon closely linked to deficiencies in emotional and cognitive self-regulation.

From a cultural perspective, procrastination has subtly and efficiently embedded itself into students' daily lives, becoming an almost invisible companion. Phrases such as "I'll start tomorrow," "I still have time," or the widely repeated "I work better under pressure" are echoed as collective justifications that normalize this silent adversary. In disciplines where academic performance is often equated with endurance, sacrifice, and exhaustion, such as medicine, admitting difficulty in initiating work may be perceived as a sign of weakness. Consequently, procrastination is rarely discussed openly, functioning as an unspoken taboo, leaving students to bear its consequences in silence, accompanied by guilt, anxiety, and stress.

Numerous studies have shown that procrastination is not merely the result of poor time management but a deeper, unconscious attempt to achieve short-term emotional relief. By postponing stressful or demanding tasks, students experience temporary alleviation; however, this is often followed by heightened levels of stress and anxiety. Over time, this pattern evolves into a vicious cycle, particularly relevant for students in health-related fields, who are consistently expected to maintain high academic performance and meet rigorous standards.

In recent years, the rise of social media and the intensive use of digital devices have introduced a new dimension to this issue.

Fast-paced entertainment platforms, designed to capture and sustain attention, significantly facilitate task avoidance and reinforce procrastination behaviors. These digital spaces serve not only as sources of distraction but also as emotional refuges from academic stress, replacing activities that require sustained cognitive effort.

The effects of procrastination extend beyond academic performance. Evidence demonstrates that procrastination correlates with increased anxiety, academic dissatisfaction, and greater psychological distress. Moreover, recent research has confirmed a link between persistent procrastination and an increased intention to abandon academic studies, a particularly concerning issue in long and demanding programs such as medicine. In this sense, procrastination not only affects students at an individual level but also impacts the educational process itself and, in the long term, the quality of care students will provide as future healthcare professionals.

When addressed from a cultural standpoint, procrastination should be understood not solely as an individual shortcoming, but at times as a response to an educational system that prioritizes productivity over well-being. Medical education is highly demanding, yet it rarely offers structured opportunities to develop self-management skills, emotional regulation, or effective learning strategies. In the absence of such support, many students learn to “survive” academically by postponing tasks until external pressure becomes overwhelming.

Addressing procrastination requires a shift in perspective. Rather than condemning it, it should be interpreted as a warning signal, an invitation to reassess habits, expectations, and educational dynamics. Interventions focused on strengthening self-regulation, time management, and self-management skills have demonstrated positive outcomes in reducing academic procrastination. However, these strategies are only effective when accompanied by an academic culture that acknowledges the human processes underlying learning.

In conclusion, procrastination represents a silent adversary in academic life, particularly within medical education. Although often perceived as commonplace, its presence reveals a profound tension between academic demands, mental well-being, and the pursuit of excellence. Recognizing, addressing, and openly discussing this issue constitutes a crucial step toward fostering a more humane academic environment, one that supports and understands students as whole individuals, rather than one driven solely by competition and performance.

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A letter of intent (I would not send)

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To whom it may concern,
Dear reader, I bring this letter to you, hoping it finds you well. I feel a profound sense of excitement as I write these lines. I haven't known AMMEF for very long, and although I have lived fewer experiences compared to members who have spent almost their entire career here, I am certain you will agree with me on one thing: this is an experience of great intensity.

Sometimes we are asked why we study medicine, and we always give very similar answers; the truth is, many of us still don't have a clear answer. But there is a more curious question: Why join AMMEF? There is no salary, the workload is heavy, we study a demanding degree at the same time, and yet, being here fills us with an inexplicable satisfaction.

As a Local Exchange Officer (LEO), my world revolves around mobility. I surround myself with incredible people: the SCOPEANS. I feel part of an extensive and experienced team, and I aspire to grow much further within it. Guiding a team might seem simple from the outside, but in practice, it is a complex challenge; every person has very different ideas. Along this path, I have learned that my actions no longer affect only me; today, they directly impact someone else's effort and the prestige of our association. I cannot imagine how difficult it must be to hold a higher position, but surely that is where we all aim to go.

I feel that even if I never fully finish knowing this association, I will be very happy with however far I go.

I am part of the Liga Estudiantil Médica Puma (LEMEP), a link in a much larger chain that extends across the entire country. We are part of a system that breathes teamwork, but honestly, I didn't truly understand the magnitude of my role until I experienced my first National Assembly.

Assemblies are events that change your life's path. Suddenly, you understand the "why" behind every sleepless night; you see the fruits of your labor and how it links with everyone else's effort. You meet physicians-in-training from all over the Republic, each with a different context but with the same fire in their eyes. It is a fleeting event, but you carry the memories with you for a long time.

I remember my first assembly vividly, mostly because it was only three months ago and it is the only one I have ever been to. I remember feeling like a foreigner, even among the people of my own local committee, but then I met amazing students who felt exactly like I did (I'm not saying people of my local committee aren't amazing; they were simply minding their own business, and I had to step out of my box to make new friends).

In a way, we were all foreigners there, seeking something more than the many other occupations we already had.

I am afraid some of you will even have the audacity to add even more tasks to your extracurricular activities. I cannot blame you; it's addictive.

Today, I am excited to see the students following in this administration, those who will eventually take my place. I want to express how deeply grateful I am to everyone who once taught me something I didn't know and allowed me to discover this side of medicine.

I write this for you all, but also for myself. I want to always return to these lines and remember my reasons for being in AMMEF, but this is a "letter of intent" that I would never actually send.

C.26.1. The LEMEP in Morelia.

C.26.2. SCOPE's beloved mascot.

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Family Medicine and Chronic Disease Care: A Cornerstone of Healthcare in Mexico

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As physicians in training, it is essential to understand the most prevalent diseases affecting the Mexican population in order to manage them appropriately. Currently, there has been a marked increase in the number of patients living with multiple diseases that are largely preventable. However, various cultural factors—such as gastronomy, physical activity patterns, social gatherings, among others—directly or indirectly contribute to the development of diabetes and hypertension, which are among the most common diseases affecting Mexicans.

Mexican gastronomy is one of the country's most distinctive cultural elements at an international level. Nevertheless, traditional meals frequently contain excessive amounts of carbohydrates, saturated fats, salt, and sugars. These dietary patterns are ingrained from early childhood, particularly in meals consumed after school, including flour tortillas, sweet bread, white rice, tamales, gorditas, sopes, and sugary soft drinks, which are almost ubiquitous. From a physiological standpoint, these habits lead to systemic imbalances that may result in insulin resistance, hyperinsulinemia, increased arterial fatty acid deposition, among other metabolic alterations.

Regarding physical activity, it is not a habit that has been widely instilled in most Mexicans since childhood.

Physical exercise is often perceived as an "optional" or supplementary activity rather than a fundamental requirement for health, when in reality, the opposite is true. Reduced daily energy expenditure leads to inefficient utilization of caloric intake, causing excess energy to be stored as adipose tissue. Over time, this contributes significantly to metabolic deterioration and adverse health outcomes.

When both diet and physical activity are poorly regulated, multiple risk factors intensify, facilitating the development of chronic diseases that were previously less prevalent, such as diabetes and hypertension. These conditions now represent the daily clinical reality for most physicians. Overall, contemporary lifestyles have resulted in a dramatic increase in the incidence of these diseases compared to the prevalence observed when previous generations were of the same age.

The Mexican healthcare system is currently far from adequately meeting the existing demand. It is common for patients to experience prolonged waiting times when attending clinics or hospitals, largely due to shortages of healthcare personnel—particularly physicians—within public institutions. General practitioners and family physicians play a central role at this first level of care, assuming primary diagnostic and therapeutic responsibilities.

As reviewed in medical education, the Mexican healthcare system is structured into three levels of care:

Primary Level of Care:
This level provides exclusively outpatient services, which may be general or specialized. It represents the first point of contact with patients and serves as the principal setting for health promotion, disease prevention, early detection, and longitudinal follow-up of conditions such as those previously mentioned.

Secondary Level of Care:
This level offers hospital-based and emergency services, in addition to health promotion, disease prevention, and specialized outpatient care.

Tertiary Level of Care:
This level provides highly specialized hospital and emergency care. It also serves as a training site for medical specialists and subspecialists and includes research units or centers.

Primary care in Mexico constitutes the cornerstone for both the prevention and treatment of the majority of diseases affecting the population. Despite this, it is increasingly common for medical students and even healthcare professionals to undervalue physicians working at this level, particularly general practitioners and family physicians. This perception has contributed to the devaluation of Family Medicine as a specialty, often considered “less demanding,” as reflected in residency entrance examinations, or viewed as an inadequate career path despite the extensive training required.

Family Medicine offers comprehensive and continuous care throughout the patient’s lifespan, with a strong emphasis on disease prevention, diagnosis, treatment, and health promotion through lifestyle modification and healthy habits. Family physicians also coordinate referrals to specialists when necessary.

They are primarily responsible for the long-term management of chronic diseases, the care of patients across all age groups, and the assessment and treatment of mental health conditions ranging from mild to severe, such as anxiety and depression. Consequently, they play a crucial role in preventing complications, reducing hospital overcrowding, and improving population quality of life.

By the end of 2023, an analysis of Family Medicine Units (FMUs) within the Mexican Social Security Institute (IMSS) reported five million beneficiaries living with diabetes, of whom 69.3% (3,477,136 individuals) received follow-up and control care at FMUs. National mortality from type 2 diabetes among individuals aged 20 years and older showed an upward trend, with a 16.1% increase between 1998 and 2023. Additionally, eight million beneficiaries were reported to be living with arterial hypertension, of whom 5,352,690 (65.8%) received follow-up care at FMUs. Mortality related to hypertension increased by 31.7% during the same period.

The vast majority of these patients are managed by their primary care physician, typically a specialist in Family Medicine. This underscores why family physicians represent a foundational pillar of healthcare in Mexico, serving as first responders in the prevention and management of most diseases nationwide.

In summary, the primary level of care, together with the healthcare professionals who operate within it, constitutes the fundamental backbone of the Mexican healthcare system. At this level, essential actions related to disease prevention, early diagnosis, and treatment of the most prevalent health conditions are carried out. Moreover, it enables early identification of patients requiring specialized care, ensuring timely and appropriate referral.

It is imperative to eliminate the stigma that portrays family physicians and primary care personnel as possessing inferior medical knowledge. On the contrary, their comprehensive training and close engagement with the community position them as key agents in chronic disease control and public health improvement, in addition to providing more humane and empathetic patient care.


Medical formation begins
where curiosity
meets the patient

Learning to age healthily: a clinical look at the blue zones

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In medical school, we quickly learn to identify risk factors, diagnose diseases, and treat complications. However, we are rarely taught to observe with the same attention what keeps a person healthy for decades. At this point in our training—when theory is no longer enough, and clinical practice begins to confront us with complex realities—an inevitable question arises: why do some people age with functionality, autonomy, and purpose, while others go through old age with illness?

The concept of blue zones attempts to answer this question from a perspective that transcends pharmacology and genetics. These are specific regions of the world where life expectancy is significantly higher and, more importantly, where the additional years are lived with quality. Okinawa, Sardinia, Ikaria, Nicoya, and Loma Linda have been described not as magical territories, but as human ecosystems where longevity seems to arise from everyday life.

Beyond the myth: longevity as a social construct.

From a critical medical perspective, it is necessary to clarify that blue zones do not promise immortality or total absence of disease. Their value lies in demonstrating that longevity is not an isolated event, but the result of cumulative decisions influenced by culture, environment, and social ties.

In these regions, aging is not conceived as a pathological stage. Older people continue to play an active role in the community, which reduces social isolation, one of the factors most strongly associated with early mortality. As doctors, accustomed to measuring figures and results, we sometimes forget that purpose in life is as important a determinant of health as blood pressure or serum glucose.

The body in motion and everyday medicine.

One of the most recurring elements in blue zones is natural movement. This does not refer to structured exercise or high-performance routines, but rather physical activity integrated into daily life: walking, gardening, cooking, caring for others. From a physiological point of view, this type of constant movement promotes cardiovascular health, muscle mass, and insulin sensitivity without subjecting the body to excessive stress.

In Mexican clinical practice, where a large part of the population faces barriers to accessing sports facilities or formal prevention programs, this observation is particularly valuable. Longevity, in this context, does not depend on sophisticated resources but on sustainable habits.

Nutrition: moderation rather than restriction.

The diet in blue zones tends to be predominantly plant-based, rich in legumes, fruits, vegetables, and whole grains, with moderate consumption of animal protein. Beyond nutritional composition, the cultural relationship with food stands out: people eat slowly, in company, and until they feel satisfied, not full.

As doctors, we are trained to prescribe therapeutic diets, but we rarely reflect on the emotional and social dimensions of food. In the Blue Zones, eating is not a medical act, but a communal one. Perhaps that is part of its protective effect.

Stress, community, and non-medicalized mental health.

One of the most relevant lessons from the Blue Zones is how stress is managed. It is not eliminated—because that would be unrealistic—but it is contained through rituals, rest, spirituality, or socializing. In a health system that often medicalizes emotional distress, these communities show that social support can be as therapeutic as any pharmacological intervention.
In Mexico, where anxiety and depression disorders are on the rise, this approach invites us to rethink prevention from a more human and less fragmented perspective.

Purpose: a reason to wake up.

Perhaps the most difficult element to measure, but one of the most important, is purpose. In blue zones, people know why they get up every morning. They tend a garden, support their family, and participate in the community.

Having a clear purpose has been associated with a lower risk of depression, cognitive decline, and premature death. Living longer depends not only on the body, but on feeling that life still has meaning.

What can Mexican medical training learn?

Blue zones should not be idealized or copied uncritically. Their true value for medical training lies in reminding us that health is not built solely in the hospital, but also at home, in the community, and in culture.

As doctors immersed in shifts, protocols, and differential diagnoses, this concept confronts us with an uncomfortable truth: many of the diseases we treat could be prevented if the environment fostered a more connected, active, and meaningful life.

The promise of natural longevity offered by the Blue Zones is not a universal recipe, but an invitation to rethink medicine from the perspective of prevention, empathy, and respect for human rhythms.

Conclusion

The Blue Zones do not promise to live longer, but to live better. From the perspective of a medical student in training, they serve as a reminder of why we chose this profession: not only to prolong life, but to preserve its dignity and quality.

Perhaps the real lesson is not in replicating their habits, but in integrating their philosophy into our future practice: a medicine that understands that longevity is not prescribed, it is cultivated.

How has medicine impacted my life?

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First, I would like to introduce myself. I'm a second-semester medical student, and since the very beginning of my studies, I've been deeply passionate about neurology. During the first semester, I met several tutors, upper-year students who support incoming freshmen. Among them, there was one in particular who shared this same interest. Upon noticing my interest in neurology, he told me about an internal exam that was coming up: those who placed first would form the official neuroanatomy team for the 2025 National Morphology Competition.

Without much expectation of qualifying, I decided to sign up. To my surprise, I placed third, which meant I would represent my school at the national neuroanatomy competition. The news filled me with excitement, but also with a sense of responsibility. I knew it couldn't be taken lightly. There were still eight months until the event, so there was a lot to study.

During that time, my team and I met constantly to prepare. It was then that I realized that being a doctor requires tremendous discipline: setting aside certain activities, prioritizing study, and accepting that learning medicine is a complex process that demands effort and perseverance. As the months passed, we honed our knowledge, growing more excited each day about the experience we were about to have. I even bought my first medical textbook—neuroanatomy, of course.

Our tutor became a true master. He shared his previous experiences with us, told us about the difficulty of the competition, and yet he always trusted us. That confidence strengthened ours. Thanks to your guidance and teamwork, we were able to complete the agenda planned months before the event.

Finally, after months of preparation, the moment of the competition arrived. We traveled to the city of Oaxaca, a place I had never been before, and which was a completely new experience for me. There, I met doctors with many more years of training and dedication, who shared their perspectives with me—what drove them to keep studying, what motivates them, and the reasons they chose to become doctors. Many also offered me valuable advice. It was then that I understood the privilege of the moment I was experiencing. I even got to meet Dr. Artiaga Martínez, author of medical books; they all instructed me with their knowledge and advice, and I realized that they're just humans helping humans, that the medical community can be very close-knit, and that, when it is, it's also capable of curing the incurable.

The day of the competition arrived. The exam was similar to a university entrance test, with strict protocols and security measures, but focused entirely on neuroanatomy. While we were waiting in line, I met young doctors from different states across the country: Nuevo León, Mexico City, Coahuila, Sinaloa, among others. We all shared the same goal.

The exam was difficult, but not impossible. I remember the nerves, the deep breaths, and the months of accumulated effort. At the end, I was excited and eager to find out the results. Out of the 17 participating schools, we placed seventh. Although we didn't make it to the final, I felt completely satisfied. Until that moment, it had been the best experience medicine had given me.

I still vividly remember the look of happiness on my parents' faces, even tho my results weren't the best. I'm looking forward to the next year; I hope to go and prove to myself that, year after year, I can become a better doctor. I hope that in the next edition of this magazine I'll be able to tell you about my success, but even so, there was success: knowledge, connections, and new friends came into my life. Above all, I realized that every doctor is, at heart, just someone who wants to change the world. That's why I'm so grateful for medicine. I didn't tell them all the details, but I shared a bit about my beautiful first experience in the world of medicine.

SPECIAL THEME

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THE CLINICAL LENS - MEDICAL FORMATION IN MEXICO

SOYAMMEF

The Art of Touching and Listening: Propedeutics as the Foundation of Clinical Thinking

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SIt is often said that medicine is a science, but those of us who have crossed the threshold from the classroom into the hospital know that, at its core, it is also an art. After completing the first year of medical training, we learn that propedeutics is, precisely, the art of gathering information.

As students in the basic cycles, we spend years memorizing Latarjet's anatomy or Guyton's physiology. However, integrating that knowledge—anatomical, physiological, nosological, biochemical, and even embryological—to decipher the pathophysiological mechanism behind a real patient's symptom is an entirely different challenge.

This conviction emerged from a "full and vibrant" year of medical experience, guided by a physician whose teaching went far beyond traditional lectures. Despite relying on a core bibliography of more than ten textbooks and Clinical Practice Guidelines, his classes posed challenges that the literature alone could not resolve.

The sessions began with anatomy and physiology that were strictly clinical, never merely descriptive. The true intellectual challenge arose when addressing the aggressive mechanisms affecting the organ or system involved.

This information, essential for understanding the damage, was often not clearly explained in textbooks.

It forced us to investigate, deduce, and connect ideas on our own, becoming the most demanding part of the learning process.

Once the mechanism was understood, we approached semiology with the surgical precision that the professor demanded to identify the affected organ. It was not enough to list symptoms; we analyzed three fundamental pillars.

- The origin, defining the location, radiation, and character of the pain or discomfort.
- The causes, exploring the mode of onset, progression, periodicity, modifying factors, and triggers.
- The impact, assessing the degree of damage through intensity and associated symptoms.

The professor always emphasized that integrating this detailed semiology was the key to differentiating the affected organ even before touching the patient. Finally, we confirmed our hypothesis through physical examination or by grouping findings into syndromes, such as nephrotic or nephritic syndromes. In this way, learning ceased to be memorization and became a cognitive skill.

However, translating theory into practice proved challenging. I vividly remember my first real hospital experience, undertaken alongside my activities at CLEMPS (Latin American Center for Medical Education through Simulation).

The task seemed simple: taking a medical history. Reality, however, delivered a lesson in humility. My team and I spent two hours interviewing the patient. We combined our ideas and mentally reviewed every section, yet when it came time to present the case and identify the involved organ, we realized crucial data were missing. It was difficult, exhausting, and frustrating, but it was then that I understood that diagnosis does not arise from a machine, but from human interaction.

Beyond the intellectual challenge, propedeutics taught me something even more valuable: we do not treat diseases, we treat people. This discipline is the first filter through which we learn that medicine requires tolerance, empathy, and full awareness of the other. The patient is not an open book; they are a vulnerable human being who allows a stranger to inquire into their intimacy in search of help.

This is where technique merges with ethics. I learned that protecting our integrity and that of the patient is non-negotiable. Respecting ethical rules is not optional: from the rigorous use of gloves and protective eyewear when necessary—not only for hygiene, but for mutual respect and biosafety—to the golden rule of physical examination: never being alone. The presence of a third person, preferably a family member or nursing staff, is not a sign of distrust; it is a guarantee of safety, respect, and professionalism for both parties. Propedeutics teaches us to be gentle with our hands, but firm with our values.

Today, there is a silent “decline” in hospitals: propedeutic skills are being lost. As one of my professors once mentioned, it is often forgotten that a thorough physical examination, performed with rigor and patience, can provide between 70% and 90% diagnostic certainty. Nevertheless, the current trend is the opposite. We allow laboratory and imaging studies to dictate our decisions, using them to establish differential diagnoses rather than for what they were intended: confirming what clinical evaluation has already suggested.

Physical examination is a universe of maneuvers and variations. When palpating an abdomen or auscultating a chest, we are not merely searching for signs; we are integrating knowledge. We connect pain in the right upper quadrant with the biliary tract studied in anatomy and the jaundice explained in biochemistry.

Within the context of medical education in Mexico, reclaiming propedeutics is essential. We will not always have access to a CT scan in the emergency department of a rural hospital. For this reason, propedeutics is not just another subject in the curriculum; it is the tool that shapes cognitive skills and forges clinical judgment.

Learning to take a detailed medical history is essential to understanding the patient not merely as a collection of diseases, but as a person. Although there are complex conditions that escape purely clinical reasoning, statistics tell us these are the exception. What is common is clinical medicine. Let us learn to take medical histories not to fill out records, but to understand lives. Because even as technology advances, medicine remains—and will always be—a human science.

C.1.1. Confirmation of clinical judgment: integration of knowledge in the surgical field.


The clinic is where
medicine becomes real.

Comparison of hospital contact models in medical student training

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Hospital contact is one of the fundamental pillars of medical education, representing the setting where theoretical knowledge acquired in the classroom is transformed into clinical skills, diagnostic reasoning, and a comprehensive understanding of the patient. The way this contact is structured, as well as when it is introduced into the curriculum, directly influences the academic, technical, and human development of the medical student.

Clinical teaching models vary widely across institutions, from schemes with early exposure and participation to those where entry into the hospital setting is delayed or predominantly observational. These differences not only determine the type of competencies acquired but also the way the student integrates into the healthcare team and develops their professional identity.

In this context, it is pertinent to analyse and compare the various hospital contact models implemented during undergraduate medical training, considering not only the number of hours and activities performed but also the degree of student participation, faculty supervision, and the academic and emotional impact this process entails. This article aims to describe and contrast two distinct educational experiences from the student's perspective, to reflect on the strengths and areas for improvement of each model in preparing future physicians.

At the Universidad Veracruzana, patient contact takes two forms: on the one hand, exposure to community clinical settings begins in the early semesters; courses such as sociodemography, epidemiology and ecology, health education, and communicable and non-communicable diseases enable students to visit communities where interventions are needed for certain vulnerable groups, allowing them to stand before a group of people who will ask them questions and often already identify them as doctors, seeking advice, suggestions, or even guidance as if they were general practitioners. This early exposure to patients who may question students fosters a sense of critical thinking that will be important for their clinical decision-making in a hospital setting; these activities also influence how they interact with real people.

At the same time that clinical rotations are underway, students are also encouraged to practice on simulators with activities appropriate to their semester, such as measuring blood pressure, capillary blood glucose, height, and weight. As students progress through their medical training, they are gradually trained to perform various clinical procedures.

As students progress through the semesters, the time comes when they can attend hospital-based clinical rotations.

At our university, we offer clinical rotations in the core subjects that form the foundation of medicine. Thanks to these rotations, students have the opportunity to integrate all the knowledge from the courses they have previously taken in their training.

There are additional resources that students can access, such as the Comprehensive Student Development Support Program (SDSP), an intensive course that addresses areas of opportunity students may have by combining knowledge with simulator-based practice. Although clinical rotations for students at the Universidad Veracruzana begin around the seventh semester, this is offset by the seven-year duration of the bachelor's program, which gives students more time to interact with patients before their internship or social service.

This type of training provided by the Universidad Veracruzana has enabled students, from the very early stages of their education, to become familiar with a more direct patient environment and, at the same time, to face challenges such as patient care, how to communicate with people, and how to present themselves before an audience. However, these are not the only activities students can undertake; the university also aims to ensure that students can conduct health diagnoses. That's why, in certain courses according to the curriculum, we are sent to communities to conduct a health diagnosis, identifying the health problems affecting that population, and implementing interventions to improve their health.

At the Autonomous University of the State of Quintana Roo, mandatory hospital contact begins in the fifth semester and is closely linked to the theoretical courses taken at the school.

Clinical rotations are aligned with subjects such as nephrology, cardiology, ophthalmology, and neurology, among others, allowing us to rotate directly with the corresponding specialists; this fosters an immediate integration of theory and clinical practice, enabling knowledge acquired in the classroom to take on an applied meaning from the early stages of training.

An active role characterizes the hospital-based contact model. Under supervision, we are allowed to perform basic procedures, such as blood gas analyses and catheter insertions, as well as to participate in simple administrative tasks (writing prescriptions, filling out clinical forms), always with the guidance and validation from the responsible staff foster hands-on learning in a controlled and safe environment.

The student distribution is approximately 10 to 20 students per semester at each hospital, which allows not only interaction with peers at the same academic level but also indirect learning from students in more advanced semesters. Schedules vary by rotation, with morning shifts (7:00 AM to 12:00 PM) or afternoon shifts (2:00 PM to 6:00 PM), amounting to an approximate weekly workload of 20 hours. There is a single day each week dedicated exclusively to academic activities, during which the corresponding theoretical subjects are taught from 7:00 AM to 8:00 PM.

Within the hospital setting, you are expected to examine patients, compile medical histories, and actively participate in the service's operations.

here is no direct legal or caregiving responsibility for the patient, but rather a strictly academic responsibility, which allows learning to depend largely on curiosity, initiative, and individual willingness. A significant strength of this model is the integration of the student as part of the healthcare team; medical and nursing staff typically support us within the service, allowing us to participate in examinations and clinical activities, which reinforces a sense of belonging and collaboration.

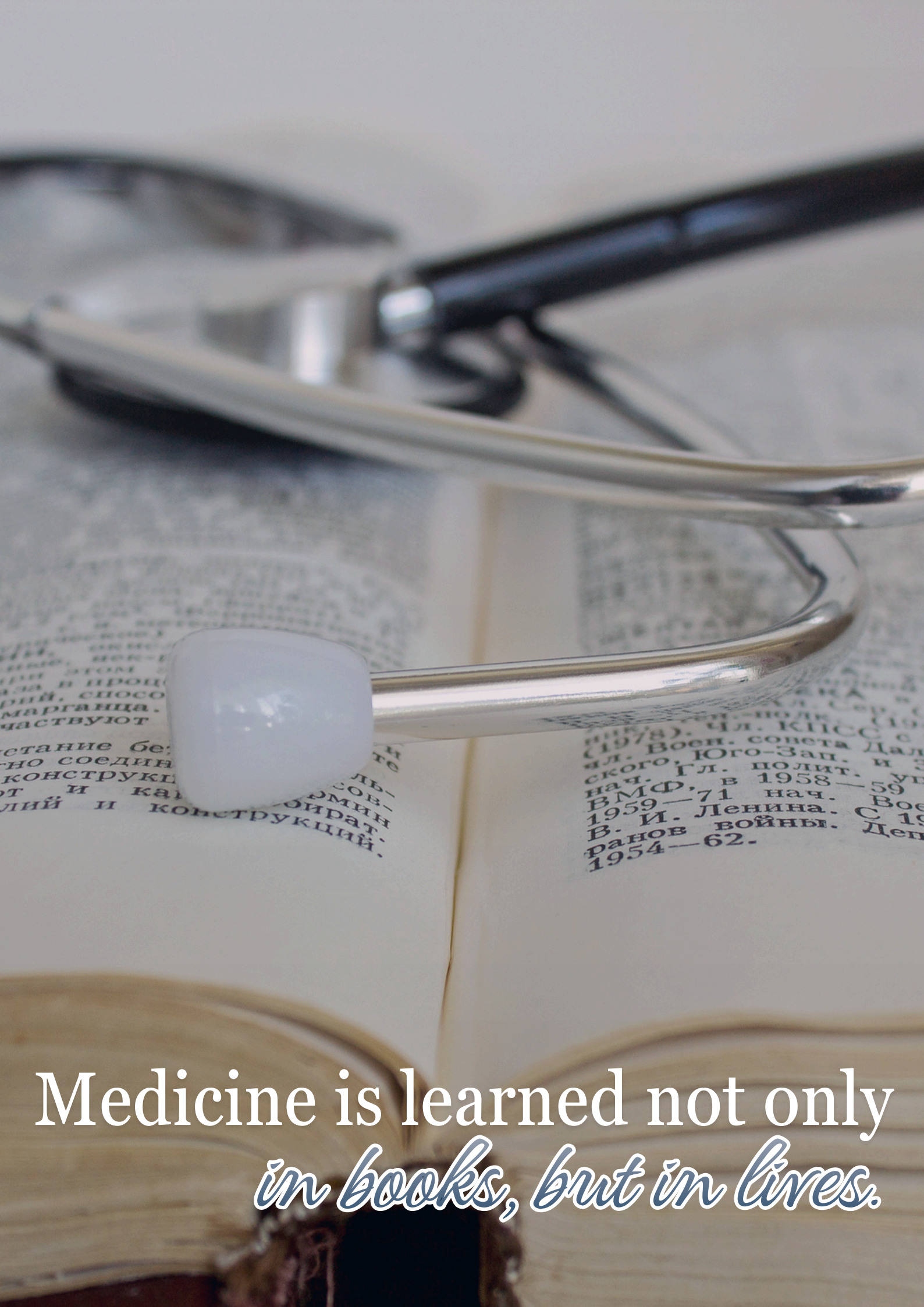
Clinical teaching varies by service; in areas such as internal medicine, where the patient load is high, much of the guidance comes from the interns. In contrast, in specialties such as cardiology, neurology, or ophthalmology, teaching is provided directly by the attending physician, who allows us to accompany them during consultations, procedures, and interconsultations. On occasion, topics are assigned for prior study, followed by explanatory sessions; however, teaching is usually predominantly spontaneous, taking place during rounds and supplemented by subsequent readings assigned by the attending physician.

From an academic standpoint, the impact of hospital exposure has been decisive. From my experience, learning medicine in the hospital accelerates the understanding of theory and makes it meaningful. Memorizing a drug is not the same as observing the patient who needs it, understanding their pathology, and grasping why that treatment is the right one in a real clinical context.

However, being admitted to the hospital also had a significant emotional impact. The start of clinical contact in the fifth semester was abrupt.

The first few days were overwhelming: the feeling of not knowing enough, the fast-paced hospital environment, and the constant exposure to critical situations led to saturation and overstimulation. This is intensified when facing patients with serious illnesses, prolonged hospital stays, deaths, intubated patients, or events such as cardiopulmonary arrests. While theoretical training addresses these scenarios from an academic perspective, there is insufficient emotional preparation to process them fully; this human component of hospital contact is typically learned implicitly through experience, which poses a significant challenge in medical education.

Exposure to clinical settings varies by program and university, with each institution tailoring its approach to meet its students' needs in the most effective way possible. Whether one way or another, clinical exposure is essential for medical students to develop in a clinical environment and to grasp what that entails. Therefore, we urge medical students to seek out clinical opportunities as early as possible, in accordance with their university's curriculum. Should students require earlier exposure than their program provides, they can opt for clinical or preclinical exchanges offered by SCONE, depending on their current semester.



Medicine is learned not only *in books, but in lives.*

Two Universities, One Academic Landscape: A Comparative Study of Scientific Output in Mexican Public Institutions

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Training in research constitutes an essential component of contemporary medical education, as it provides students with tools for the critical analysis of scientific literature, evidence-based decision-making, and the generation of knowledge applied to clinical practice. Beyond academic output, early exposure to research promotes the development of transversal skills such as analytical thinking, scientific curiosity, and an understanding of the scientific method as an integral part of medical practice.

However, the way in which research is incorporated into medical curricula shows considerable variability among institutions. In some models, research is integrated in a structured and progressive manner throughout the degree program; in others, participation in research is conceived as a complementary component that depends largely on the individual initiative of students and the availability of academic spaces for its development.

At the Universidad Veracruzana, research is considered a complementary resource in student training. The first contact students have with research occurs through the subject of Research Methodology, which is an essential requirement for completing their Experiencia Recepcional and producing a final project for graduation. Although research does not have a formally established space within the undergraduate medical curriculum, the university promotes research stays during the winter and summer periods.

These programs help students fulfill the necessary academic credits and, more importantly, open new perspectives that encourage more critical thinking during clinical decision-making, while also exposing them to alternative professional pathways within the medical field.

Students also have the opportunity to participate as research assistants to university-affiliated researchers, and in some cases, they may receive a scholarship, which helps promote academic retention. Students may approach researchers directly and request their supervision. Once accepted, they have the opportunity to learn through participation in clinical or experimental research activities. In either case, students may choose to collaborate with researchers whose lines of inquiry align with their own interests.

The Delfín Summer Program represents another valuable opportunity for students to engage in research. This annual call for applications includes the Universidad Veracruzana as a participating public institution. Through this program, students can complete research stays in different regions of Mexico and even abroad, offering a unique opportunity for students from various disciplines, including medicine.

The different modalities offered by the Universidad Veracruzana and its associated institutions are of vital importance in facilitating early exposure to research and allowing students to explore areas that are not commonly encountered during medical training. Through research participation, students can strengthen their curriculum vitae and apply for new opportunities that require prior research experience.

Additional research opportunities for students include participation in various academic associations, which provide platforms for presenting posters, conducting literature reviews, submitting abstracts, or offering students the necessary tools to develop the academic product of their choice.

At the Universidad Autónoma del Estado de Quintana Roo, exposure to research is perceived primarily as a complementary component of the medical degree. Although opportunities for scientific initiation exist, they are not always part of a clearly defined or widely known pathway among the student body. As a result, participation in research activities is often linked to the individual interest and proactive engagement of the student.

The curriculum includes a course focused on research methodology, aimed at providing theoretical foundations of the scientific process. This subject plays an important introductory role, although its approach is mainly conceptual. Access to research opportunities is generally identified through individual initiative, direct contact with faculty members, or engagement with specific academic spaces.

Information regarding calls for applications or ongoing projects is not always centralized in a single channel, which may limit awareness among interested students.

Previous research experience can facilitate integration into research projects and collaborative teams, as it allows students to become familiar with scientific dynamics and methodological processes. In contrast, students without prior exposure may perceive research as a complex or distant field, even when motivation exists. In such cases, early guidance and mentorship are particularly important.

It is important to note that more recent academic curricula show a trend toward placing greater emphasis on research training through the inclusion of a higher number of research-related courses. This approach reflects institutional recognition of the importance of research in medical education and represents an opportunity to strengthen early and structured engagement with scientific activity.

Although the ways in which each university promotes research may differ, they share a common goal: to strengthen student training by providing new opportunities that broaden perspectives on the medical profession and complement clinical education. Today, it is indisputable that medical students cannot limit their training solely to clinical practice. Medicine is continuously evolving, and in order to evolve alongside new advances, it is essential for students to learn how research is conducted from the earliest semesters of medical school.

Beyond the white coat: propaedeutics as the axis of clinical thinking in Mexico

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Throughout medical training in Mexico, from the earliest years of undergraduate education, we are taught the foundational principles necessary to aspire to clinical training. In this process, medical propedeutics occupies a fundamentally structural role: a focused medical interview aimed at gathering relevant information, a physical examination directed toward identifying signs, and finally, the integration of these findings through clinical reasoning that is refined with practice.

In a country characterized by wide social and epidemiological diversity and multiple healthcare settings, this set of skills represents one of the most valuable tools for the physician in training. However, it is limiting to assume that medical propaedeutics, and everything learned both theoretically and practically, has a single purpose or only one setting of application, namely the hospital environment. Today, medicine is not exclusively white; these competencies do not belong to a single sector but rather transcend into other areas of practice where clinical thinking remains indispensable.

From this perspective, it is essential to propose that the modern physician should not only be trained to treat disease, but also to anticipate it. Meaning that, a physician does not wait for propaedeutics to shout the diagnosis, but perceives it when it whispers.

The diversification of medical practice does not imply a fragmentation of the profession, but rather an expansion of its scope that is achieved particularly through clinical reasoning, which continues to serve as a central axis.

In the field of public health, especially in a country like Mexico, which is strongly oriented toward areas such as epidemiology, clinical reasoning allows us to identify patterns, risk factors, and social determinants of health that influence the development of both infectious and chronic diseases. Analytical capacity transforms the ability to reach an accurate and precise diagnosis into a tool that supports collective prevention.

Similarly, in medical research, clinical reasoning is translated into the formulation of relevant, critical, and context-sensitive questions capable of contributing new concepts, ideas, and perspectives, even in topics that have been previously studied. The clinical curiosity inherent to propaedeutics, far from being confined to the consulting room, drives a new generation of physicians toward knowledge with real impact on medical practice.

Likewise, areas such as teaching, management, and technological development require physicians who are capable of understanding disease beyond the immediate symptom.

Physicians must be able to interpret population needs and be involved in decision-making processes that affect the quality of medical care and comprehensive approaches to health, even when direct patient contact is not present.

Viewed in this way, the early diagnosis sought through medical propaedeutics ceases to be merely a clinical act and becomes a solid argument that supports a philosophy of medical practice. It begins with attentive listening to discomfort, a directed physical examination, and clinical judgment shaped by propaedeutics. A physician trained in this approach learns to recognize illness when it barely whispers, even in contexts where direct patient contact is absent, as often occurs across different levels of care within the Mexican health system.

Throughout our medical training, we are often taught that a “good physician” practices exclusively behind a consulting room desk and that success is measured by hierarchy, the number of on-call shifts, or the specialty chosen. However, this notion is mistaken.

The value of a physician does not lie in the setting in which they choose to practice, but in the consistency of their clinical reasoning, which is built upon medical propaedeutics. A solid education allows physicians to choose different paths from which to impact health across various fronts, without losing the professional essence of what it means to practice medicine with responsibility and humanity. Medicine does not lose value when it diversifies; it loses value when it is practiced without clinical reasoning.

During training, the influence of an educator committed to teaching clinical thinking is indispensable to learning and practicing medicine. Beyond teaching a sequence of steps or maneuvers, this approach focuses on learning how to observe, listen, and integrate patient information with sound judgment. From this teaching, it became clear that propaedeutics was not an academic requirement or a mechanical exercise, but rather a formative tool that allows us, as physicians, to practice medicine with depth, humanity, responsibility, and respect; regardless of the professional path chosen.

Finally, in a context such as Mexico’s, where medicine need not be measured by settings, hierarchies, or singular career trajectories, it is essential to return to the foundations of medical training: propaedeutics and clinical reasoning. Clinical judgment enables physicians to anticipate disease and consciously choose the path from which they wish to impact health. Medicine is not limited to the white of a lab coat or to a single professional model; it comes in many colors, all equally valuable when grounded in clinical thinking. Training physicians who are capable of observing, listening, and integrating information not only strengthens clinical practice, but also broadens the reach of the profession into diverse areas of opportunity. That is why it is not where medicine is practiced that defines the physician, but how they confront disease.

Demand until breaking: Are we educating resilient physicians or just teaching them to survive?

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Medical training has turned exhaustion into a requirement and suffering into routine. Today, rather than educating physicians, the system teaches endurance until breaking. No one enters medical school thinking they might lose themselves along the way. Yet extreme fatigue, constant pressure, and silence in the face of suffering have become so common that they no longer surprise us. If becoming a physician requires breaking yourself first, then the problem is not you—it is the system.

In recent years, society and academia have associated medicine with extreme sacrifice, prolonged work hours, and a culture that normalizes exhaustion as an unavoidable part of the process. For years, we have confused vocation with wear and tear, and resilience with suffering. Today, however, it is unavoidable to ask who truly benefits from this model: are we training resilient physicians, or merely exhausted ones?

Two ways of understanding what it means to "be a good doctor" coexist. The first—one many of us know deeply—prioritizes academic overload, constant competition among peers, and the minimization of personal well-being.

The second, more attuned to the current context, proposes something different: it demands excellence, yes, but without neglecting comprehensive education that recognizes mental health, rest, and support as essential components of learning.

Because we cannot ignore that those in training are also people, with limits, emotions, and basic needs.

We have grown within a traditional medical model centered on limitless demands, a reality that has shown alarming consequences. Numerous studies have documented high rates of anxiety, depression, and burnout syndrome among medical students and trainees. Within this framework, exhaustion is not only normalized—it is praised. The implicit message is clear: those who cannot endure the pressure "are not made for medicine."

In Mexico, the continued use of this educational model has already exacted a cost we can no longer afford. Recent cases of suicide among medical residents are neither isolated nor inevitable; they reflect a system that pushes those in training to the brink. Behind each case are students enduring endless shifts, normalized humiliation, and constant pressure from supervising physicians, all accompanied by an institutional silence heavier than any exam.

These are young physicians who learned that asking for help is seen as weakness, and that fatigue is dismissed with phrases like "that's just how medicine is." Students who kept working when they could no longer go on, because stopping was not an option. Because no one taught them that their mental health also matters.

Talking about suicide is uncomfortable; it remains a taboo subject. But silence is far more dangerous. This is not only about individual decisions, but about environments that wear people down, isolate them, and dehumanize them. When mistreatment is justified as training and rest is punished, damage accumulates. And sometimes, that damage becomes unbearable. Accepting these deaths as part of medical training is not vocation—it is negligence. A medical system that loses its students to exhaustion and despair is a system that has forgotten its essence.

Conversely, those students who manage to endure this model—the ones often labeled as "strong"—are not necessarily strengthened by it. Rather than building character, this approach erodes empathy, fosters cynicism, and increases the risk of clinical errors, affecting not only the future physician but also the patients they will care for.

In contrast, there is a model grounded in the understanding that resilience does not arise from constant suffering, but from balance between academic rigor and personal well-being. This approach promotes skills such as teamwork, emotional regulation, asking for help in a timely manner, and recognizing that no one can handle everything all the time.

Schools and hospitals that have invested in wellness programs, mentorship, and more reasonable schedules do not produce weaker physicians, but professionals more committed to their vocation.

The difference between these models is clear. One produces physicians who may function in the short term but are emotionally depleted. The other forms physicians capable of sustaining their vocation throughout their lives. And in a world marked by collapsed health systems, pandemics, and ongoing crises, what we need least are physicians who are broken inside.

Continuing to justify the traditional model under the argument that "this is how it has always been" is no longer acceptable. Normalizing suffering does not make us better physicians; it only makes us more vulnerable. Caring for those in training, on the other hand, is a public health strategy, because mentally healthy physicians provide more humane, ethical, and safe care.

At this point, organizations such as AMMEF cannot remain at the level of discourse alone. As an association representing medical students, it has a real opportunity to drive change: opening spaces to discuss mental health and remove it from taboo status, promoting peer support programs, and demanding that student well-being be taken seriously within schools and hospitals. It can also make visible the exhaustion students experience, listen to their stories, and transform them into concrete proposals. The goal is not to do everything at once, but to begin changing a culture that has long normalized fatigue and silence.

Those of us training to become physicians are not asking for less rigor; we are asking for an education that does not destroy us. Truly human medicine begins in classrooms and hospitals.

For that reason, it is urgent to recognize that a physician in training needs, at a minimum:

1. Decent rest
2. Mental health taken seriously
3. Training free of humiliation
4. Support and community
5. Respect for human dignity

This text does not seek pity, nor does it remain in complaint—it is a demand. We demand that the well-being of physicians in training stop being treated as a matter of "individual resilience" or self-help and be recognized for what it truly is: a public health issue. Educational and hospital institutions must assume their responsibility and stop training physicians at the cost of exhaustion, fear, and silence. Every exhausted student, every resident who breaks, every life lost is a sign that something is failing. Calling suffering "vocation" does not make us better physicians; it only perpetuates a harmful system. The question is no longer whether we need to change the model of medical education, but how many more physicians we are willing to lose before we do.

Mental health cannot remain a secondary issue in medical training. It must translate into clear policies, dignified conditions for study and work, and real systems of support. Because training exhausted physicians is not part of learning—it is a structural failure. And until it is corrected, the cost will continue to be human.

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Afirmación	Nunca (0)	Rara vez (1)	A veces (2)	Frecuentemente (3)	Casi siempre (4)
Me siento emocionalmente agotado incluso antes de iniciar el día.	☐	☐	☐	☐	☐
Siento que haga lo que haga, nunca es suficiente.	☐	☐	☐	☐	☐
Me cuesta concentrarme o aprender cosas que antes entendía con facilidad.	☐	☐	☐	☐	☐
He perdido motivación o entusiasmo por la carrera o la residencia.	☐	☐	☐	☐	☐
Me desconecto emocionalmente para poder seguir funcionando.	☐	☐	☐	☐	☐
Me siento incompetente o con culpa, aunque objetivamente no lo sea.	☐	☐	☐	☐	☐
Estoy más irritable, distante o cínico con pacientes, compañeros o familia.	☐	☐	☐	☐	☐
Dormir o descansar ya no me hace sentir recuperado.	☐	☐	☐	☐	☐
He pensado que dejar la carrera o la residencia sería un alivio.	☐	☐	☐	☐	☐
Siento que mi bienestar no importa dentro del sistema donde me formo.	☐	☐	☐	☐	☐

Resultados orientativos

0–10 puntos: Cansancio esperado, vigila tus límites.

11–20 puntos: Señales de alerta.

21–30 puntos: Alto riesgo de burnout.

31–40 puntos: Burnout severo. Buscar ayuda profesional es importante.

C.11.1. Self-assessment test for burnout syndrome

The Value of Complementary Studies in Hospital Care

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Medical training is not limited to classrooms or books; much of the learning takes place in clinical settings where theory becomes practice, and each patient represents an opportunity for growth. Hospital rotations and clinical clerkships allow students to confront the reality of medical care, understand the importance of clinical studies, and appreciate the role of the medical history in diagnosis and treatment. In this context, the experience I had during my end-of-year vacation provided me with a broader perspective on medicine, illustrating how every detail—from a lab test to informed consent—can significantly impact patient safety and well-being.

During the end-of-year holidays, I had the opportunity to do a hospital internship thanks to one of my university professors, who taught our clinical courses and invited us to accompany him on his rounds. For me, it was a unique experience, as it was the first time I was on my own in a large institution with multiple departments and its own dynamics. This experience allowed me to gain a better understanding of the clinical environment in my region and reinforce knowledge I had already acquired at university through exams, assignments, and presentations.

During consultations, I observed that most patients arrived with the requested tests, which facilitated an accurate diagnosis and appropriate treatment.

However, I also noticed that some patients didn't have the required tests, which forced medical decisions to be postponed until the next appointment. It was then that I realized that tests aren't just simple numbers or statistics, but fundamental tools for both the doctor and the patient.

At school, we're always reminded of the importance of studying, but sometimes, as students, we fail to grasp its true value. When faced with real patients, I realized that tests enable us to confirm diagnostic suspicions, rule out pathologies, and select the safest treatment. Without them, the doctor faces an incomplete picture that can delay care or increase risks.

On the last day of my internship, I had the opportunity to enter an operating room and accompany an anesthesiologist during a biopsy on a patient who was approximately 50 years old. What surprised me was that the patient had no prior tests, since the procedure was performed urgently.

The doctor asked her about her medical history, and the patient mentioned that she had been diabetic for three months, had an enlarged heart (cardiomegaly), and was missing some teeth. The anesthesiologist explained to me the importance of each question and of the informed consent form that the patient and her companion had to sign.

Due to the lack of studies, the doctor had to be very cautious with medications, as many of them directly affect the heart. Additionally, the lack of teeth posed a risk if ventilation was needed, as any loose tooth could obstruct the esophagus. During anesthesia, I observed the patient's blood pressure fluctuate, reaching 149/90 mmHg, which suggested hypertension. Fortunately, the procedure was performed without any serious complications.

This case taught me an invaluable lesson: clinical studies and analyses are essential in any hospital setting, from a consultation to surgery. I realized that behind every result lies vital information that can change the course of medical care and ensure patient safety.

Before this experience, studies seemed to me to be nothing more than numbers and statistics. However, I now understand that each number reflects a person's actual condition and that ignoring it can have serious consequences. The practice allowed me to see how theory translates into clinical decisions and how a lack of information can increase risks.

I also learned the value of the medical history. The doctor showed me that, even without tests, a good interview can provide crucial information to guide care. Asking about past illnesses, habits, and symptoms is a tool that should never be underestimated.

This experience reinforced my commitment as a medical student. It made me aware that it's not enough to memorize concepts or pass exams; you need to understand how every detail affects patients' lives humanely.

The practice motivated me to study more responsibly, to value laboratory and imaging studies, and to give the medical history the importance it deserves.

Additionally, it allowed me to observe the interdisciplinary work within the hospital. Seeing how doctors, anesthesiologists, and nursing staff collaborate to ensure patient safety taught me that medicine is a collective effort. Each professional contributes their knowledge and experience, and everyone relies on reliable information to make decisions.

I am deeply grateful to my teacher for giving me the opportunity to learn beyond the classroom, and to the doctor for showing me the importance of a comprehensive medical history and the value of diagnostic tests in medical practice. This experience not only taught me to value lab tests and clinical information but also motivated me to continue preparing myself with responsibility and dedication.

Today, I know that every figure, every result, and every piece of background information is a piece of a puzzle that, when properly interpreted, can save lives. This lesson will stay with me throughout my training and my professional future, always reminding me that medicine is not just about knowledge, but about applying it with sensitivity, precision, and respect for each patient.

The Mexican scientific dream: medical and scientific development in the country from the perspective of Arturo Rosenblueth

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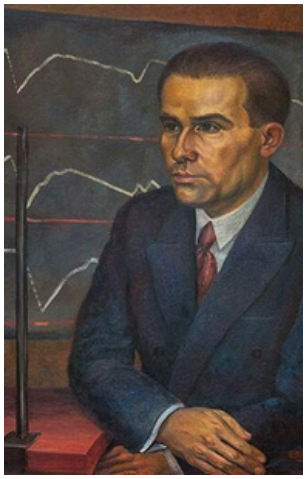
It is impossible to overlook the evident institutional, economic, and political gap surrounding scientific reforms when comparing Mexico with its northern neighbor. This gap does not trigger a war, but it does generate an educational dependency, expressed in the country's universities' inability to achieve top-tier research with solid federal support. As a result, professionals leave the country in search of opportunities they cannot find at home, due to the lack of sufficient institutional backing, as illustrated in the case described. In addition, statistical data will be presented to demonstrate the urgent need for a stronger higher education system, one in which science and technology advance autonomously, supported by high-quality international collaboration rather than dependence. This has repercussions not only on the country's social development, but also on the training of the Mexican physician as a scientist-humanist, particularly in the context of declining public investment in education and research, as discussed throughout the text.



C.15.1. Emilio Rosenblueth. Portrait of Arturo Rosenblueth, 1937. Oil on masonite. Collection: El Colegio Nacional. Photograph: J Hinojosa

Beginning with a historical example, in 1968, when the capital's atmosphere hung heavy with humidity and tension fueled by constant student protests, and a government eager to present a favorable international image during the Olympic Games—Dr. Arturo Rosenblueth Stearns, one of the most important scientific figures in the country's history, witnessed how his seven-year project to establish what would later become the CIEA and eventually CINVESTAV was blocked by the administration of President Gustavo Díaz Ordaz (1). Despite Mexico having established the world's first hospital dedicated to medical specialties, the Ignacio Chávez National Institute of Cardiology, the country has historically shown clear difficulties in daily medical practice, problems in medical training, and an evident collapse of the public health system, which has shown no significant improvement.

Rosenblueth faced obstacles in the past that differed from those currently experienced in a country that barely allocates enough budget to ensure the survival of scientific and technological advancement, compounded by a decline in investment in higher education and research. This directly affects all physicians in training nationwide, particularly considering that Mexico does not even reach the 3.7 physicians per 1,000 inhabitants recommended by the OECD.

Furthermore, Buendía's analysis (2) explains that in 2019 federal spending on higher education was 0.54% of GDP, the lowest level in twenty years, while spending on higher education, science, and technology stood at 0.74%, the same level as in 2001. Regarding investment in research and development, according to the World Scorecard (3), after reaching 0.47% of GDP in 2010, funding declined markedly in subsequent years, reaching only 0.27% in 2023.

When observing this statistical landscape, achieving the 1% of GDP demanded by various national researchers (4) appears to be little more than an administrative illusion, a futile dream. Remaining near 0.3% of GDP condemns national science to mere survival. Even more alarming, according to UNESCO data, Mexico's expenditure on Research and Experimental Development is primarily executed by universities, which accounted for 50.6% in 2018. This indicates that nearly half of the country's research is financed by public universities, while only the other half receives private funding. This sharply contrasts with the United States, where universities account for only 12.8% of such expenditure, and which in 2023 allocated 3.4% of its GDP to science and technology (5).

Although comparing Mexico with global powers may seem disproportionate, this is not a matter of simple statistical comparison, but rather a real economic gap that drags the nation down like ballast. From a medical perspective, this issue is not limited to technology-driven economic development, but also directly affects the quality of healthcare services and, consequently, university medical education.

It is well known that physicians in training in Mexico require not only access to high-quality information generated abroad, but also, urgently, a solid scientific and clinical education that enables them to practice evidence-based medicine, accompanied by an inherent humanistic approach.

The data presented here are not intended as a direct critique of current budgets, but rather serve as numerical support to promote improvement efforts within educational institutions, which are fundamental pillars in the training of the physician-scientist. While the health program initiated by President Claudia Sheinbaum represents progress, through the hiring of thousands of physicians and nurses and the opening of new hospitals and health centers, without a solid educational foundation to support these professionals, without science and humanity cultivated during the university stage, there is a risk of promoting mass medicine rather than quality medicine. Indeed, poorly applied medicine causes greater harm than medicine that is never practiced at all.

Today more than ever, women and men are needed who understand, out of necessity and hope, the importance of building a robust medical education; individuals capable of moving beyond political obstacles and forming teams committed to the collective development of medical excellence.

C.15.2. Arturo Rosenblueth and Norbert Wiener, considered the father of cybernetics, with whom he collaborated. Image taken in Mexico City.

It is within this context that the central figure of this text emerges: the archetype of the physician-researcher who served as a bridge for national scientific advancement—Dr. Arturo Rosenblueth, a Mexican neurophysiologist born on October 2, 1900, in Ciudad Guerrero, Chihuahua. His father, Julio Rosenblueth Gutmann, of Hungarian origin and Jewish faith, immigrated to Mexico, where he met María Augusta Stearns (1).

Initially, Rosenblueth aspired to pursue mathematics; however, his father's insistence, motivated by the limited employment opportunities of the time, led him to enroll in medical school at the National Autonomous University of Mexico (UNAM). At one point, he was forced to suspend his studies due to a lack of financial resources, but he was able to continue thanks to institutional support, even obtaining a scholarship to study at the University of Berlin in 1923, and later completing his education at the Sorbonne in Paris. With a deep interest in neuropsychiatry, the field in which he specialized, he later practiced medicine in Mexico. He also earned a doctorate in Medicine from the University of Paris.

This period in France was decisive in his training, as he studied under figures such as Joseph Babinski, credited with the clinical sign that bears his name, and Charles Richet, who was awarded the 1913 Nobel Prize for his research on anaphylaxis.

In 1930, together with mathematician Alfonso Nápoles, Rosenblueth became one of the first Latin Americans to receive a Guggenheim Fellowship, aimed at promoting studies in physiology and mathematics.

He later joined Harvard University, where he worked with physiologist Walter B. Cannon, renowned for his contributions to medicine, including the concept of homeostasis and the development of the milieu intérieur postulate. He also conducted research on the fight-or-flight response. Due to unfavorable working conditions, the refusal to grant him a permanent position, and documented antisemitic attitudes reflected in correspondence, Rosenblueth returned to Mexico. He had the proposal to establish a physiology laboratory at the then newly founded National Institute of Cardiology.

Ruth Guzik cites physician and historian José Joaquín Izquierdo, who notes that this stage represented a key turning point in Rosenblueth's life, as he became the country's first full-time researcher.

By the late 1950s, he assumed leadership of a new postgraduate project at the National Polytechnic Institute, which he named the Center for Research and Advanced Studies. In 1970, following its institutional consolidation, it adopted the name by which it is known today: CINVESTAV (1).

This research center became a national benchmark and continues to lead, alongside UNAM, a significant portion of the country's scientific output. However, during its early years it faced multiple difficulties, with initial support during the López Mateos administration followed by the withdrawal of funding under Daz Ordaz. Then Secretary of Finance Antonio Ortiz Mena suspended public resources after classifying it as a private institution. Fortunately, this decision was later reversed, allowing the survival of what was then the CIEA.

Mexico has made internationally recognized artistic contributions; however, in the scientific arena it has historically been relegated to a marginal role, with a low contribution to global development, despite having figures who represent genuine national brilliance, such as Dr. Rosenblueth (1). To conclude, the following excerpt is cited from the speech delivered during the ceremony for the National Science Award in 1966, in the presence of President Gustavo Díaz Ordaz, to whom Rosenblueth's criticisms were implicitly directed:

"The intellectual capacity of Mexicans is not inferior to that of any human group. If web manage to prepare a sufficient number of teachers and researchers in the various scientific disciplines, if we create positions that allow them to live with dignity without having to seek additional income, and if we provide them with the necessary means to carry out their research, I am absolutely certain that our country will also gain international recognition in this field."

Unfortunately, this speech continues to resonate in the scientific and medical life of the country, sustaining the persistent hope for an intellectual awakening for which Rosenblueth worked for decades.

C.15.3. Photograph of the inauguration of the CIEA in 1961. President Adolfo López Mateos and Arturo Rosenblueth.

Beyond the Prescription: DOTS (TAES) and the real work of curing tuberculosis in Mexico

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Medical training in Mexico is shaped by what our public health system confronts every day. Tuberculosis makes that lesson unavoidable: clinical success is not determined solely by drug susceptibility, but by patients' ability to complete treatment consistently. Directly observed treatment, short-course "DOTS" (TAES in Mexico) reveals an uncomfortable truth: the most powerful intervention is not a molecule, but a system that makes adherence possible.

Globally, tuberculosis (TB) remains one of the most lethal infectious diseases. The World Health Organization estimates approximately 1.25 million TB-related deaths worldwide in 2023, including 160,000 among people living with HIV. In Mexico, tuberculosis is not a disease of the past; it remains a priority within the public health system. Mexico's National Institute of Public Health estimates an incidence of 23 cases per 100,000 inhabitants; 27% of cases occur in patients with diabetes mellitus and 12% in people living with HIV. Patients with diabetes mellitus have a threefold higher risk of developing TB, experience more severe complications, and show higher rates of treatment failure, relapse, reinfection, and drug resistance.

TB outcomes depend on treatment completion; interruptions drive relapse, ongoing transmission, and drug resistance. Mexico's DOTS program addresses this by verifying medication ingestion under trained supervision.

This definition matters because it clarifies DOTS's true target: not dispensing medication, but ensuring the dose is actually taken. Strictly supervised treatment has been associated with high cure rates.

Yet DOTS is also where TB management in Mexico most often collides with reality. The regimen may be standardized on paper, but the patient journey rarely is. IMSS guidelines describe the DOTS primary regimen with an intensive phase administered daily (Monday to Saturday) for 10 weeks to complete 60 doses, followed by a continuation phase to complete the course, using first-line drugs including rifampicin and isoniazid, among others. In a perfect world, where everyone can attend a clinic daily, this approach appears effective; but in real life, it may mean missing workdays, transportation costs, lost wages, childcare challenges, long waiting times, and repeated exposure to stigma. "Free" medication can still be costly when the price is time and income.

This is where DOTS can either be a bridge to cure or, if implemented rigidly, an unintended barrier. If supervision is treated as a gatekeeping ritual—"no attendance, no dose"—without flexible scheduling, community-based options, or supportive problem-solving, the program may disproportionately burden patients at highest risk, including those with unstable housing, long travel distances, or low income.

Every interruption increases the likelihood of relapse and ongoing transmission, while also raising the risk of drug resistance—an outcome that is longer, more complex, and more costly to treat. The World Health Organization has noted that only two in five people with drug-resistant TB access treatment, highlighting that adherence and service delivery remain critical bottlenecks beyond diagnostics or drug availability. A strong DOTS model must therefore be adaptable across contexts, including community follow-up, outpatient clinics, and high-risk congregate settings, with clear pathways for rapid evaluation when treatment response is inadequate or resistance is suspected.

Modernizing DOTS in Mexico does not mean abandoning supervision; rather, it requires recognizing that the clinic itself is not the intervention. Verification, follow-up, and timely responses to side effects and social barriers are the core components of effective care. These can be delivered through hybrid models that combine in-person supervision with community-based support or other assisted approaches once patient stability is demonstrated. WHO TB resources emphasize the ongoing need for effective treatment delivery to meet TB control goals, reinforcing the need for programs to adapt to real-world adherence constraints instead of expecting patients to conform to rigid systems.

In the end, DOTS is not a building, a checklist, or a rule. It is a form of clinical infrastructure —the bridge between microbiology and real-world cure. When supervision is respectful, flexible, and adequately resourced, it prevents treatment abandonment, transmission, and progression toward drug resistance.

The simplest innovation may also be the most humane one: designing care systems that allow every patient who starts treatment to finish it.

The lessons we learn in silence: Obstetric violence in medical formation

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Obstetric violence is an important issue, it affects and violates the dignity of women during childbirth. Many women experience unpleasant treatment, lack of respect, and verbal abuse during labor, making this a deeply concerning problem within healthcare systems. Despite efforts to promote respectful and humane maternity care, these practices remain present in everyday clinical settings.

For medical students, learning about these situations highlights the gap between what is taught in classrooms and what is observed in medical practice. While medical education emphasizes empathy, ethics, and patient-centered care; real-life experiences often reveal behaviors that contradict these principles. Confronting this reality, whether directly or through the experiences of peers, becomes a formative moment that shapes our professional identity and challenges our understanding of what it truly means to practice medicine.

A First Encounter with Reality in the Delivery Room

As part of the evaluation requirements for one of our medical courses, we were required to attend night guards and assist physicians whenever needed. On one of those days, a pregnant woman arrived at the emergency department at 39 weeks of gestation after her membranes had ruptured. It was my first time witnessing a childbirth.

I was genuinely excited about everything I was about to learn, as becoming a gynecologist and obstetrician has always been my dream. However, that day completely changed my perspective on medicine.

As preparations for delivery began, anesthesia was administered, instruments were arranged, and the medical staff put on their surgical gowns. At no point was the patient asked her name. She cried out in pain, repeatedly stating that the anesthesia was insufficient, yet her concerns were ignored. As a student, I felt powerless, aware that I could not intervene or question the actions of those above me within the medical hierarchy.

What deeply unsettled me were the comments made by some members of the staff. Derogatory remarks were voiced, mocking her pain, followed by laughter. The patient continued to scream until she eventually lost consciousness. Only then the staff became concerned, acknowledging that perhaps she had indeed required additional anesthesia.

The delivery was completed without any physical complications, and the baby was born healthy. However, once the newborn arrived, he was immediately taken away without being shown or handed to the mother. She was not allowed to hold her child, even briefly. At that moment, I found myself questioning where humanity had been lost within the clinical process.

When did suffering become normalized? At what point did sensitivity toward patients disappear?

Reflecting on Obstetric Violence and Medical Training

This experience reflects obstetric violence not through overt physical aggression, but through the absence of respect, empathy, and dignified care. Obstetric violence often manifests in subtle yet harmful ways: dismissing pain, ignoring consent, using humiliating language, and treating patients as passive subjects rather than individuals deserving of compassion. These behaviors are frequently normalized in overstressed healthcare environments, particularly in public hospitals where resources are limited and workloads are overwhelming.

For medical students, witnessing or learning about these situations creates a profound ethical conflict. We are taught that patient-centered care is fundamental, yet clinical practice sometimes contradicts these teachings. The hierarchical structure of medical training further complicates this reality, as students often feel silenced and unable to speak up, even when they recognize that something is wrong. This silence, although unintentional, becomes part of the learning process.

The Responsibility We Carry as Future Physicians

Reflecting on this experience made me realize the importance of my role as a future physician. It reminded me that medical knowledge alone is not sufficient. Technical skills and clinical expertise lose their value when they are not accompanied by humanity and compassion.

Patients place immense trust in healthcare professionals during their most vulnerable moments, and it is our ethical responsibility to honor that trust.

As medical students, we must recognize that we are not merely observers within the healthcare system. Each experience shapes the kind of professionals we will become. Situations like this compel us to question harmful practices and to commit ourselves to being agents of change. Respectful care should not be conditional, nor should empathy be treated as an optional consideration.

Conclusion

Obstetric violence remains a deeply rooted issue within healthcare systems, often hidden behind routine practices and normalized behaviors. For medical students, encountering these realities marks a critical moment in their professional formation. It forces us to confront the discrepancies between what medicine is meant to represent and what is sometimes practiced in clinical settings.

This reflection is not intended to assign blame, but to emphasize the importance of awareness, accountability, and transformation within medical education. Medicine cannot exist without humanity. If we forget that our primary purpose is to alleviate suffering, we risk becoming part of the problem rather than part of the solution. The lessons we learn in silence must ultimately guide us toward a more compassionate and ethical practice of medicine.

The Life of an Out-of-Town Medical Student: No Instruction Manual

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On my first night in a new city I barely knew, I sat in my room surrounded by suitcases and boxes. The silence felt different. Without the familiar sounds of home, it echoed in my mind like a persistent reminder of where I was. The air smelled of fresh paint and loneliness. That was the moment I realized that being an out-of-town student comes with no instruction manual; every mistake and every success would be mine, and that idea certainty would stay with me from the very first day.

In medicine, especially in a country like Mexico, being an out-of-town student means much more than simply studying far from home. It means learning to support yourself in a new environment while facing one of the most demanding careers there is. It means daring to start from scratch and turning every challenge into an opportunity for growth. Distance forces you to mature, to organize your daily life, and to find strength in solitude. Talking about this experience is essential, because medical training is not limited to textbooks and hospitals; it is also shaped by the personal experiences that mold the future physician.

This new stage of my life represented a complete 180-degree change. Academically, adapting required discipline and consistency like never before. I had to discover which study methods worked best for me and learn not to let the competitiveness within the program consume me.

At the same time, the financial adjustment pushed me to become more organized with my expenses and to develop better saving habits, understanding that every financial decision was part of my stability. Emotionally, I learned how to be alone, how to cultivate self-love, and how to let go of people who had already fulfilled their role in my life, while welcoming new friendships that now accompany me through this journey.

It was not easy. There were moments when I wondered if I was good enough for this career; times when anxiety consumed me and depression seemed to knock at my door. I even thought about giving up. However, despite spending entire nights studying without sleep and fearing that I would fail an exam, I eventually understood that all of it is part of the process: today's sacrifices become tomorrow's rewards, organization is essential, and mental health must always be a priority.

I also learned that medical school is not only about studying; it is about enjoying the journey, valuing each lesson, and recognizing that medicine, with its vocation and emotional weight, offers one of the greatest rewards: the ability to help others.

During every clinical practice and hospital shift, academic stress blended with the pressure of applying knowledge in real-life situations while constantly exhausted.

Standing in front of real patients, while the distance made me long even more for the people I love, helped me understand that learning medicine is not only about memorizing information, it is also about learning how to remain steady in the middle of fatigue.

Adapting to a new city as a medical student meant much more than learning how to move between classrooms and hospitals. At first, I had to figure out how to navigate the public transportation system, calculate how much I could spend on private transportation, and organize my schedule according to the distance between home and the hospital. That planning quickly became essential, because in medical training every minute counts and arriving late is not an option. On more than one occasion, my trip home after a hospital shift happened late at night, and those quiet rides became moments for reflection.

At the same time, the financial aspect represented another major challenge. In order to cover my expenses, I began working on weekends, which forced me to organize my time even more carefully and learn how to balance studying, resting, and working. I also found a creative way to support myself financially by selling sushi at the university. That experience not only helped me cover some of my expenses, but it also taught me the value of daily effort and the importance of finding solutions when circumstances demand it. All of this became part of a kind of learning that goes far beyond textbooks, an essential part of my personal and professional growth.

Being far from home and living with the absence of my family taught me to appreciate every gesture of support from friends and classmates, as well as every word of encouragement from a grateful patient. That sensitivity made me realize that behind every patient there is a story, a human being who is also facing their own struggles. Being an out-of-town student taught me a lesson that no textbook explains: empathy is born when you recognize your own fragility and still choose to stand beside the fragility of others.

This stage of my life has given me far more lessons than I could have imagined at the beginning. It has been an extraordinary experience along a path I continue to walk with resilience and constant discipline. Through it, I have become a more empathetic person and have been able to see the personal growth I have achieved over the years. It makes me believe in the physician I am becoming day by day, and it reminds me that the dream I once had is slowly taking shape through my medical training.

In the end, being an out-of-town student is not only about distance, it is about transformation.

C.19.1. After an exam, being able to go to the beach and just enjoy the sunset.

C.19.2. Participate in prevention and vaccination days.

C.19.3. End of semester and delivery of final projects.

NMDP Mexico: A hug for the heart

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One of the most significant and impactful campaigns within the local committees and the Standing Committee on Public Health (SCOPH) of AMMEF A.C. is the one carried out with NMDP, a nonprofit organization that, according to its website, “connects patients who need a stem cell transplant with their potential unrelated donor, giving them a chance at life.”

To learn a bit more about this organization, NMDP was founded after Dr. Robert Graves’s 10-year-old daughter was diagnosed with leukemia; he and his wife embarked on a search for therapeutic alternatives to treat the disease. So, after an exhaustive search for various treatments, in 1979, they gained access to a significant therapy that enabled the first bone marrow transplant from an unrelated donor, a procedure that offered hope not only to their daughter but also to many other families facing similar situations.

Thanks to this event and the collaborative efforts of Congress, the U.S. Navy, families of other patients, and medical personnel, a national registry of volunteers for bone marrow donation was established. In 1987, the first transplant was formalized through the National Marrow Donor Program (NMDP). Over time, this initiative was replicated in various countries, reaching Mexico in 2017 under the name Be The Match México, founded thanks to the altruistic efforts of the Neumann family. In 2024, the organization adopted the name by which it is now known: NMDP Mexico.

Speaking from my personal experience as part of this campaign, and as of the date this article is being written—December 19, 2025—I am a member of a local committee within AMMEF A.C., serving as Vice President of External Affairs, better known by its acronym VAE. This role has allowed me to understand the value of the initiatives our association promotes and the real impact they can have on society—something that has undoubtedly been achieved through AMMEF A.C.’s agreement with NMDP.

To provide the reader with a bit more context, from an early age, I have felt a deep inclination to participate in altruistic activities and serve others. I believe that this interest has been one of the fundamental reasons why I decided to study medicine, so being part of this association has strengthened my vocation. I firmly believe that AMMEF A.C. not only provides us with academic training as medical students but also enables us to develop a broader, more empathetic, and socially conscious perspective on what it means to be a doctor in training and to aspire to become agents of change in our community. Many times, we believe that to achieve this, we must hold a significant position or wait until we have more knowledge or work experience, but the reality is that we don’t, and this campaign was a clear example of that throughout its development.

Within the National Group of the Vice Presidency for External Affairs, where those of us serving in this role on various committees across the country come together, the importance of the NMDP campaign has always been emphasized, since it undoubtedly represents a high-impact external issue directly linked to our work as VAEs. Therefore, when my Local Public Health Officer (LPO) informed me that the campaign would be carried out by our committee, I felt a deep sense of responsibility. From that moment on, I took charge of coordinating various aspects of the campaign, such as brainstorming and distributing marketing materials, liaising directly with NMDP representatives alongside the LPO, and, especially, managing the volunteer efforts, which was the part that left the deepest personal impression on me.

While I find it difficult to choose just one campaign as my favorite within our local committee, since they have all in some way had a significant impact on our student community, I believe that this particular one I undertook with special commitment and formality, owing to the responsibility involved in being part of the process of finding a potentially compatible donor for someone who depends on a stem cell transplant to treat their illness.

Sample collection took place on November 12, 13, and 14 at two different facilities: the Language Center of the Autonomous University of Sinaloa and the Faculty of Medicine, both located in the city of Mazatlán, Sinaloa. At the end of the campaign, the entire community responded positively, resulting in a total of 225 samples submitted correctly.

As physicians in training, it is essential to familiarize ourselves with the various therapeutic options available for treating a range of diseases that will undoubtedly be encountered in our clinical practice, such as those of hematological origin. Therefore, it is imperative that, from this stage of our training, we actively raise our awareness by participating in volunteer activities that enable us to grasp the importance of these treatments and their impact on patients' lives. Understanding the rationale behind each action fosters greater responsibility and commitment, strengthening the desire to help save a life.

In Mexico, the culture of donation remains limited, especially when it comes to bone marrow transplantation. During the campaign, it was necessary to raise awareness and educate the public, confronting numerous taboos and misconceptions, even among health sciences students. According to El Heraldo de México, one of the main obstacles related to this is misinformation, distrust in the healthcare system, and limited access to health education. In an interview with Excélsior, Sergio Medrano, general director of NMDP Mexico, pointed out that there are numerous myths surrounding stem cell donation, such as the fear of becoming paralyzed or the belief that a person can be cloned from saliva —both of which are completely false.

According to the Mexican Social Security Institute (IMSS), leukemia is the most common cancer in the pediatric population, accounting for approximately half of all childhood neoplasms and serving as the primary indication for stem cell transplantation.

One fact that struck me as particularly impactful, shared during the sample collection training, is that out of approximately 200 registered individuals, only one becomes a compatible donor—something that undoubtedly makes me reflect on the importance of this initiative as a fundamental part of continuing to provide these treatments to those who need them.

Another obstacle facing these types of alternatives, also mentioned by the CEO of the NMDP, is the high cost of hematopoietic stem cell transplantation, which represents an economically high-impact intervention. A 2024 study reports that the approximate cost of an autologous transplant is around €66,000 per patient in Europe, and although these figures cannot be generalized to the Mexican context, they serve as a point of reference, since, according to data from El Imparcial, in 2021, a stem cell transplant in Mexico could cost between one and three million pesos.

C.22.1. José Hernández (LPO AMFOMUAS), Bryan Rodriguez (Presidency AMFOMUAS) and Luz María Astorga (VAE AMFOMUAS) representing our student community in the sample collection.

It is in this context that the importance of initiatives such as NMDP Mexico becomes evident—a nonprofit organization whose mission is to educate the public, promote donation, and facilitate access to these types of treatments. Today, reflecting on this experience, I feel deeply proud to have been part of this campaign. I recognize that every link—volunteers, donors, benefactors, family members, and medical staff—is indispensable, and that carrying out this work within AMMEF A.C. reinforces my gratitude and my conviction that, as medical students, we are contributing to building a more just healthcare system in our country, where prevention, solidarity, and access to quality care are fundamental pillars, always remembering that "hero" is an adjective for an ordinary person doing something extraordinary—something we all who are part of this undoubtedly do.

C.22.1. As part of the volunteer work at the Language Center of the Autonomous University of Sinaloa, in Mazatlán, Sinaloa.


Clinical training transforms
knowledge into care.

Translating prevention: the impact of linguistic gaps on the early detection of breast cancer

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Breast cancer prevention is often presented as a technical matter: mammograms, clinical guidelines, and awareness campaigns visible in public spaces. However, this narrative ignores a fundamental dimension of care: language. In Mexico, where millions of women speak an indigenous language as their first or only form of communication, prevention fails not for lack of science, but because the health system is unable to translate its message in a way that is comprehensible, culturally sensitive, and humanly approachable.

Primary care represents the most frequent point of contact between women and health services. It is there that key messages about self-examination, risk factors, and early detection of breast cancer are conveyed. However, when healthcare personnel lack linguistic training in indigenous languages, that encounter becomes a space of miscommunication. Technical jargon, rushed explanations, and the absence of appropriate educational materials create an invisible yet powerful barrier that leaves many women outside the threshold of prevention.

Language is not just a means of communication; it is a vehicle for conveying meaning, fostering identity, and establishing trust. When an Indigenous woman visits a health unit and cannot understand what is being explained to her, prevention ceases to be a right. It becomes an alien, confusing, and even intimidating experience. In this context, concepts such as “mammography,” “screening,” or “early detection” lose their meaning, and the medical consultation is reduced to a one-way interaction.

Breast cancer prevention campaigns are often designed under a homogeneous, urban, Spanish-language model that erroneously assumes the message is universal. Posters, brochures, and mass media advertisements use technical or simplified Spanish, without considering the linguistic realities of indigenous communities. Thus, even tho the campaigns exist, they do not reach vulnerable populations. Untranslated information is inaccessible, and prevention that isn’t understood cannot bring about behavioral changes or prompt timely care-seeking.

The lack of linguistic training for healthcare personnel in indigenous languages is not merely a training omission, but a structural form of exclusion. In many cases, primary care staff lack the basic tools to communicate in the local language. This lack perpetuates an asymmetrical relationship in which the Indigenous patient is perceived as “difficult,” “uncooperative,” or “disinterested,” when in reality she faces a system that neither speaks her language nor understands her cultural context.

The impact of this barrier is reflected in delayed diagnosis. Many Indigenous women seek health services when breast cancer is already at an advanced stage, not because they are unaware of their bodies, but because they have never received a clear explanation of the warning signs or the importance of early detection. Lack of understanding generates fear, distrust, and, in some cases, abandonment of medical follow-up. Prevention, then, fails not because of a lack of resources but because of a lack of effective communication.

Humanizing prevention means recognizing that it is not enough to translate words; it is necessary to translate meanings. Talking about breast cancer in indigenous contexts requires understanding beliefs about the body, illness, and modesty, as well as respecting local ways of naming pain and disease. Without this sensitivity, even a technically correct explanation can be incomprehensible or unacceptable to the patient.

Primary healthcare personnel training must urgently incorporate linguistic and cultural education as an essential, not optional, competency. Learning a basic indigenous language, working with community health promoters, and developing bilingual educational materials are strategies that can radically transform the reach of prevention campaigns. When a woman hears health information in her own language, she not only understands it better: she feels included, recognized, and worthy of care.

Ultimately, translating prevention is an act of social justice. Every woman who does not have access to timely breast cancer screening due to a language barrier represents an avoidable failure of the health system. Overcoming these barriers is not merely a technical or administrative matter, but an ethical commitment to equity, life, and the right to health for Indigenous women in Mexico.

As long as the system continues to speak a language that many do not understand, prevention will remain a privilege and not a universal right. Only when language ceases to be a barrier can early detection become a reality for all.

Beyond the white coat: Vaccines, family, and the beginning of medical judgment

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Entering medical school in Mexico involves far more than beginning to study anatomy, physiology, or histology. From the outset, it requires confronting personal beliefs, family habits, and everyday ways of understanding health (1). One of the first topics that led me to this critical reflection was vaccination, not through hospital practice or a clinical case, but through family conversations that reflect situations commonly encountered in different contexts across the country.

The COVID-19 pandemic profoundly altered the way prevention, risk, and trust in health systems are perceived (1). In this context, vaccination ceased to be an abstract concept and became a subject charged with experiences, doubts, and fears. This text seeks to explore how medical judgment begins to take shape at the intersection of scientific evidence, personal experience, and the social environment.

Before starting medical school, vaccines did not occupy a central place in my life. In my family, there was no overt rejection of medicine; however, preventive vaccination, particularly seasonal vaccination, was not part of a consistent habit. Rather than a conscious decision, it was a practice that was rarely questioned.

During the first semester, in the course Introduction to Health Sciences, we reviewed the vaccination schedules recommended throughout the life course.

This content sparked a personal concern: how was it possible that, as a health sciences student, I did not have a complete vaccination schedule?

I then understood that, as a medical student in Mexico, having a complete vaccination schedule is not only a measure of self-care but also a requirement for access to hospitals within the public health system. The information I had acquired ceased to be merely theoretical. When I mentioned at home my intention to get vaccinated, questions and doubts emerged: Why do it now? What if I got sick before an upcoming trip? These reactions reflect a common fear of potential side effects, even when the risk of preventable diseases is not perceived as immediate (1). For me, this conversation marked the beginning of a reflection on the role I would assume as a future physician.

Days later, during a family meal, the topic resurfaced. My uncle recounted that after receiving a COVID-19 vaccine, he developed vitiligo, an experience he directly associated with the immunization. Hearing his testimony confronted me with an uncomfortable reality: I did not know how to respond. I felt uncertainty and, at the same time, an emerging sense of responsibility to better understand what I was hearing.

That moment allowed me to recognize something fundamental in my training: it is not always easy to distinguish between personal experience and a direct cause-and-effect relationship. As a student in training, I understood that fear often intensifies when there are no safe spaces to ask questions or when information is not communicated clearly. Rather than refuting, it was necessary to listen and to understand where that concern originated.

In some contexts within the country, vaccination continues to be a widely accepted practice. After the pandemic, a significant proportion of the adult population completed their COVID-19 vaccination schedule (1), suggesting that when clear campaigns and a perception of urgency exist, the social response can be positive. However, this acceptance is not uniform. In the case of childhood vaccination, setbacks have been observed after the pandemic, with coverage levels below recommended targets and marked regional differences (2). These contrasts appear to be largely related to issues of access and continuity of health services.

This information, together with my personal experience, has led me to understand that medical training begins before the first patient encounter. It is not only about knowing the evidence, but about learning to explain without imposing, to listen without disqualifying, and to contextualize each decision within the social reality of the person in front of us. In a country like Mexico, the challenge is not only to inform, but to generate trust.

This initial debate surrounding vaccines represents, for me, the beginning of a medical identity under construction. It is not about having definitive answers, but about learning to accompany processes shaped by fear, doubt, and personal experience. Becoming a physician implies recognizing that health education is not about imposing decisions, but about opening spaces for dialogue.

One of the most important lessons at the start of medical school does not occur in the classroom, but in everyday conversations. How can one explain without imposing? What will I do when someone is afraid? These still-unanswered questions are part of the medical judgment that is only just beginning to take shape.

The Depersonalization of the Physician: Between Vocation and the Social Expectation of Total Availability

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In contemporary society, the figure of the physician remains almost automatically associated with values such as sacrifice, vocation, and absolute dedication to serving others. In the collective imagination, physicians are conceived as individuals who are always willing to put the well-being of their patients before any personal needs, even when this involves considerable physical, emotional, or social costs. This conception, deeply rooted in medical and social culture, has contributed to the construction of an implicit expectation: that both medical students and qualified doctors must be constantly available, almost without interruption, to meet the population's health demands.

While the medical vocation implies an ethical commitment to caring for others, this idealization has evolved into a demanding model that blurs the lines between professional responsibility and personal sacrifice. The expectation of permanent availability—often expressed in the notion of being “always on call”—is no longer the exception reserved for emergencies but has become, in many contexts, an unspoken norm. This phenomenon is not harmless: the constant pressure to meet unlimited healthcare demands has led to the development of processes of depersonalization and emotional exhaustion that significantly affect the mental health of medical professionals and, indirectly, the quality of care provided (1,2).

The social expectation that physicians be available 24 hours a day, seven days a week, is a central cause of the progressive dehumanization of healthcare professionals. This demand not only negatively impacts the psychological well-being of physicians and students but also has ethical and healthcare consequences that compromise patient safety and the sustainability of healthcare systems (1,2).

Social expectation as a cause

Society often interprets the medical vocation as an implicit renunciation of personal life. Under this logic, it is considered socially acceptable—and even desirable—for physicians to work long hours without adequate rest, answer calls or consultations outside of working hours, and always prioritize the needs of patients, even when this means neglecting their own physical and mental health. This reasoning is based on a dangerous premise: that vocation justifies any level of demand.

This expectation does not arise in isolation, but is reinforced on multiple fronts. On the one hand, patients and their families, driven by the distress and urgency that often accompany illness, expect immediate answers, constant availability, and quick solutions. On the other hand, healthcare institutions, faced with a shortage of human resources and high demand for care, tend to normalize work overload as an inherent part of medical practice.

Finally, the medical culture itself contributes to perpetuating this view by glorifying “endurance,” silent sacrifice, and resistance to fatigue as professional virtues.

In the field of medical training, this expectation is internalized from an early stage. Medical students learn, often implicitly, that resting, having fun, or establishing clear boundaries between personal and professional life is incompatible with the image of a “good doctor.” Long academic and hospital hours, the normalization of hierarchical abuse, and the lack of space for self-care reinforce the idea that suffering is an inevitable—and even necessary—part of the training process. Thus, the social expectation of permanent availability becomes an internalized norm that accompanies physicians throughout their careers.

Depersonalization as a psychological effect

As a result of this constant pressure, many doctors develop depersonalization, one of the central components of burnout syndrome (2). Depersonalization manifests itself as emotional distancing from the patient, impersonal or mechanized treatment, and a progressive loss of empathy. Far from being a moral failing or an individual shortcoming, this phenomenon can be understood as an adaptive response to excessive emotional and work-related stress (1).

Paradoxically, the same society that demands sensitivity, closeness, and emotional commitment from doctors contributes to eroding these qualities by denying them their humanity.

By not recognizing the professional's right to rest, to disconnect, and to a personal life, they are deprived of the emotional resources necessary to sustain a genuine therapeutic relationship. Emotional detachment then emerges as a defense mechanism: a way to protect oneself from chronic exhaustion and overexposure to the suffering of others.

However, this defensive strategy comes at a high cost. Depersonalization damages the doctor-patient relationship, affects clinical communication, and can lead to feelings of guilt, cynicism, or professional emptiness. In the long term, physicians cease to see themselves as caregivers and begin to perceive themselves as just another cog in a system that makes unlimited demands. In this way, the social expectation of permanent availability produces exactly the opposite effect to that desired: instead of more humane and committed physicians, it creates emotionally distant and exhausted professionals.

Differential impact on students and qualified physicians

In medical students, the cause-and-effect relationship between social expectations and emotional exhaustion is particularly evident. During training, the normalization of overwork, lack of rest, and constant exposure to stressful situations creates an environment conducive to the early development of anxiety, depression, and emotional exhaustion. Many students learn to invalidate their own physical and emotional needs, convinced that doing so is part of the process of becoming competent physicians. This training model produces professionals who accept burnout as an inevitable part of their career, making it difficult to build a healthy professional identity (3).

The absence of clear boundaries during the training stage subsequently translates into difficulty in establishing them in clinical practice, perpetuating a cycle of overwork and self-exploitation.

In the case of licensed physicians, social expectations manifest themselves differently, but are no less harmful. The constant invasion of personal space—through calls, messages, informal consultations, or prolonged shifts—creates a persistent feeling of always being "available." This inability to disconnect from the professional role promotes chronic exhaustion and reinforces depersonalization as a defense mechanism. Doctors, trapped in a dynamic of continuous responsibility, see their capacity for emotional recovery and their quality of life reduced.

Ethical and healthcare consequences

The impact of this dehumanization is not limited to physicians. An exhausted professional is more likely to make clinical errors, make hasty decisions, or show less listening skills and empathy (1,2).

From an ethical perspective, denying physicians the right to rest and a personal life represents a fundamental contradiction. Medical ethics are based on principles such as beneficence, non-maleficence, and respect for human dignity. However, these principles are incomplete if they do not also apply to healthcare professionals themselves. Demanding permanent availability without considering the human limits of physicians is not only unfair but also incompatible with safe and responsible clinical practice.

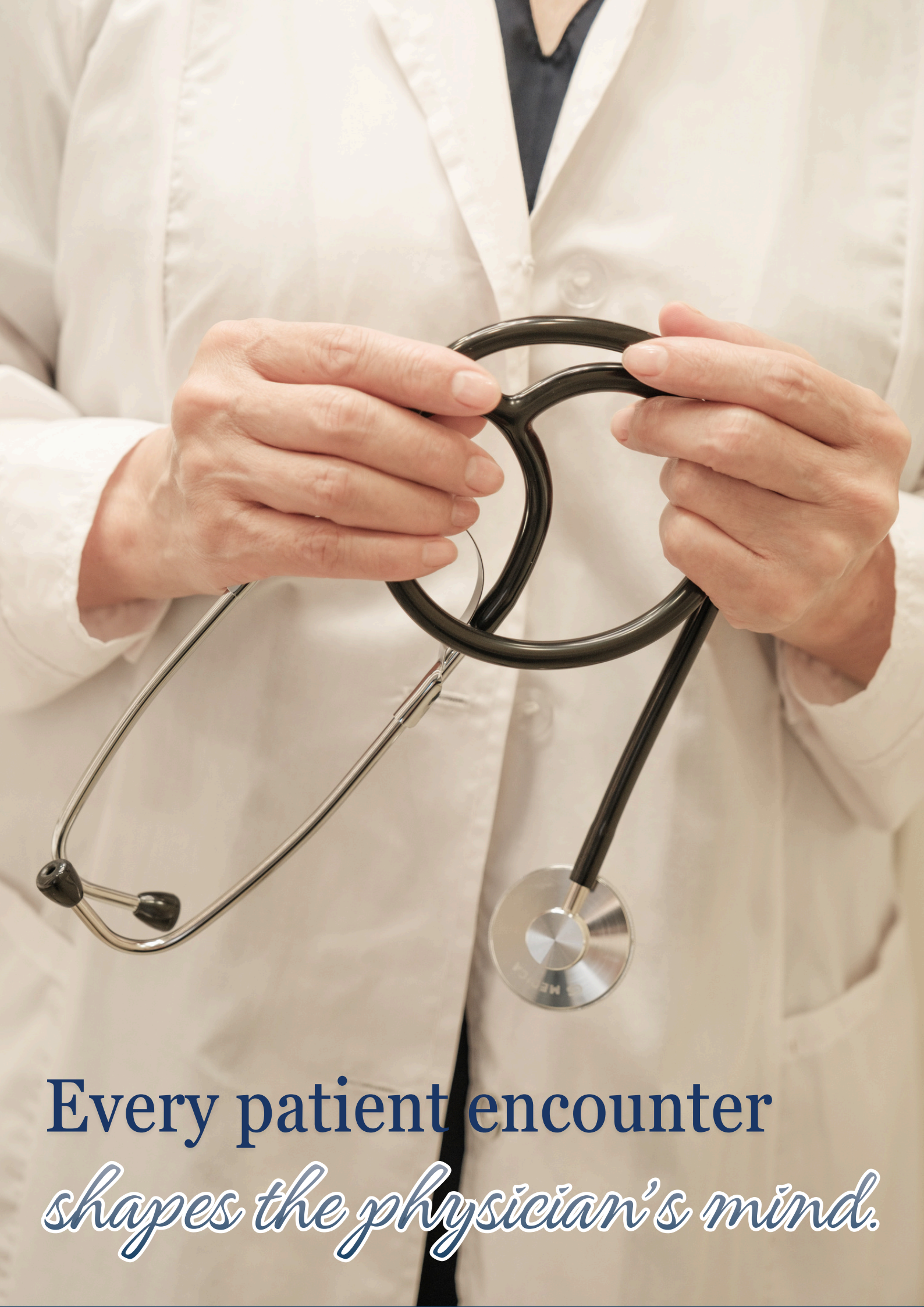
Caring for physicians should not be seen as a privilege, but as a necessary condition for ensuring quality medical care.

The well-being of professionals is a crucial component of patient safety and the effective functioning of healthcare systems (2).

Conclusion

The social expectation that medical students and licensed physicians be available 24 hours a day is a significant contributor to depersonalization and burnout in the medical profession. This dehumanizing view transforms vocation into compulsory sacrifice and weakens both the professional and the health system as a whole. Recognizing that physicians are, above all, people with limits, rights, and needs does not diminish their commitment to patient care; on the contrary, it strengthens it.

Only through respect for physicians' rest, personal lives, and mental health is it possible to build a more ethical, humane, and sustainable clinical practice. Rethinking social expectations around physician availability is not a concession, but a collective responsibility aimed at preserving the quality of care and the dignity of those who provide it.



Every patient encounter

shapes the physician's mind.

Between Books and Suitcases: Internal Migration and Its Effects on the Medical Student

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Leaving your hometown is never easy. Leaving everything you know, where you grew up, the schools where you studied, and the friends you met along the way is always a challenge for anyone.

Every day thousands of people have to migrate in order to fulfill their dreams; no matter how small the journey may be, it never stops being significant.

The centralization of universities limits educational options in small communities and turns student migration into a necessity rather than a choice. This displacement not only implies a physical change, but also a profound transformation of daily life: new schedules, greater emotional exhaustion, less time to rest, and a constant feeling of going against the current. It is within this context that my personal experience takes place, which begins in a small town city of fewer than 30,000 inhabitants called Encarnación de Díaz, “La Chona,” located on the border between Jalisco and Aguascalientes.

Since my first semester, I have traveled every day from one state to another to begin my training as a physician. My routine begins at 4:30 in the morning; after getting ready, at 5:45 I leave to take the transportation that allows me to arrive before 7:00 a.m.

Fortunately, I have a transportation scholarship that takes me to the entrance of the university. However, this support does not eliminate the accumulated fatigue nor the impact of starting the day when it is still dark outside.

On the days when I do not use the scholarship bus, either because my schedule starts in the afternoon or because we are in exam season, I have to travel to the bus station, wait for the bus to Aguascalientes, and then take another route to reach the university. This process implies dedicating between four and five hours daily to transportation, as long as there are no unforeseen events such as traffic accidents, demonstrations blocking the highways, or delays caused by traffic. Over time, the journey stops being just a physical route and becomes a constant source of exhaustion.

At night one might think that the journey is simply completed in reverse; however, it is not as easy as leaving class and heading home, since the scholarship bus only has one return schedule, 9:00 p.m., which means arriving home around 10:30, if there were no delays. After that, a mental roulette begins to decide how to use the little time left between studying for one last hour, taking a shower, or sleeping.

Throughout my degree, I have faced different challenges. Some were expected, such as adapting to a new sleep rhythm and reducing my hours of rest. Others have been more complex, such as experiencing anxiety attacks, facing impostor syndrome, and dealing, for the first time, with low grades that only turn everything mentioned above into a vicious cycle. The combination of these experiences led me to demand too much from myself until reaching burnout, a stage common among medical students but rarely made visible, since as future healthcare personnel we are expected to adapt to this rhythm of life full of stress, perfectionism, and work addiction. Passing from feeling that everything is under control to recognizing one's own exhaustion implies a deep rupture with the image one has of oneself.

Academic overload, long schedules, little rest, and the constant pressure to perform have been identified as factors that contribute to emotional exhaustion, anxiety, and feelings of insufficiency, even in students with good academic performance. Although stress is a necessary response to adapt to academic demands and achieve goals, when it is maintained for prolonged periods and without adequate spaces for recovery, it can become a risk factor for mental health.

Over time, I have managed to improve different aspects of my life. I have learned to communicate better, to recognize my emotions, and to face them with greater awareness.

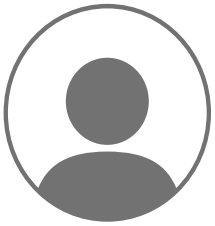
I have also understood that what I am achieving is significant: a woman from a rural environment who left her home in order to grow personally and professionally.

Time management has been key, but so has learning to identify my limits, recognizing when the workload is excessive and when it is necessary to stop, even when doing so confronts the ego.

Recognizing the limits of my current abilities has allowed me to perform better and avoid doing things halfway. As my father has always told me: "you are not mediocre." However, I have also understood that it is not possible to do everything at the same time. It is about identifying priorities, respecting one's own processes, and preventing the career from completely consuming one's personal life, without this meaning renouncing the desire to excel.

Finally, it is important to recognize that this experience is narrated from a position of privilege. There are people who face longer journeys, fewer supports, and even more complex conditions, and their effort deserves deep admiration. Sharing this experience seeks to make visible a common reality among medical students in Mexico: the forced migration caused by educational centralization, the emotional exhaustion it implies, and the need to recognize that caring for mental health is also part of the training process. Any achievement, regardless of its size, is valuable, and every step taken confirms that if you can dream it, you can achieve it.

Stress, Insomnia, and Exhaustion: What Is Not Seen in the Medical Student



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The beginning of a new semester in medical school is often accompanied by expectations, motivation, and, in many cases, warnings about the difficulty of the period ahead. Faced with these comments, it is common to adopt an optimistic attitude and assume that studying from the very first day will be the best strategy to cope with the academic workload.

However, this approach can become a double-edged sword. Constant and prolonged studying without adequate rest often leads to insomnia, directly affecting concentration, learning, and the ability to perform multiple tasks. As the weeks go by, memory lapses and a persistent sense of mental exhaustion may appear, generating frustration and uncertainty about one's academic performance.

When a pre-existing condition such as ADHD is present, these symptoms may intensify, even if in previous semesters they did not represent a significant limitation. As well-being progressively deteriorates, many students decide to seek professional help, turning to psychiatric and/or psychological care, as well as adopting new study strategies. Nevertheless, even with these interventions, discomfort may persist or even worsen.

Sustained insomnia is often accompanied by anxiety, irritability, and extreme fatigue. Added to this is a constant sense of guilt associated with resting—the feeling that stopping equals failure—which further complicates falling asleep. In this way, a vicious cycle is established, affecting both academic performance and mental health.

After partial evaluations or moments of forced pause, an inevitable question arises: what truly triggered this situation? The answer is rarely a single factor. Academic workload, family pressure, self-imposed demands, constant comparison with peers and with past versions of oneself, fear of failure, and clinical experiences all intertwine silently but persistently. The mind begins to ruminate on thoughts of inadequacy and perfectionism that interfere with daily functioning.

This scenario is often compounded by extracurricular activities such as research projects, leadership roles, or additional academic commitments which, although formative, can become further sources of exhaustion. Fear of failure grows as physical and emotional energy declines, until both body and mind demand a stop.

At this point, it becomes necessary to rethink the approach. Taking a break does not mean giving up, but rather recognizing personal limits, prioritizing rest, improving nutrition, resuming physical activity, and changing one's attitude toward adversity, allowing lost balance to be rebuilt. From this process emerges resilience, understood not as the absence of pain, but as the ability to face it, learn from it, and grow stronger.

Resilience is an indispensable skill in medical training. It is not about avoiding the inherent difficulties of the career, but about developing the tools to adapt, recover, and continue moving forward without sacrificing personal well-being. Based on this experience, it is important to highlight several strategies that may help address academic stress and protect mental health.

Normalizing rest: it is not a waste of time, but a physiological and cognitive necessity that improves performance and memory. Recognizing personal limits is equally important, accepting that not everything can be done at once and thereby avoiding overload and burnout. Seeking professional help in a timely manner is also essential; consulting psychology or psychiatry is not a sign of weakness, but of personal responsibility. Finally, avoiding constant comparison is key: each educational process is different, and continuous comparison often generates unnecessary frustration.

Ultimately, it is important to remember that no academic situation, no matter how complex it may seem, defines a person's worth. Mental health must occupy a priority place in medical education, because only by taking care of oneself is it truly possible to care for others.


The art of medicine lives
in the clinical encounter.

On the Other Side of the Desk: Reflections on Humanity and Medicine

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When we begin medical school, or even before that, when the dream of becoming a doctor fills you with excitement, that's when your heart envelops you in a kind of emotion that drives you against the tide, to decide that you want to be different from what you already know, and to ask yourself: How can I balance the technical and the human aspects of practicing medicine?

There was something in me that marked a before and after in my vision of the future, which not only made me rethink the social, economic, and professional aspects, but also search for my true calling and find how my soul would move to save others alongside it. This event, although painful, broke me down to reveal the true meaning of my life: to serve others. And here, medicine comes in.

During my childhood and adolescence, I had various medical experiences, some of which I would classify as normal and others even pleasant, with touches of enjoyment and curiosity on my part. But everything was radically different when the patient being treated was someone important to me, whom I cared for because of their illness. Some doctors were carefree and ironically mechanical, giving the impression that they were not treating a person with a life and a destiny, but rather focusing on solving a problem so they could move on to the next one.

The hardest part was when I was present at one of her oncology appointments. The doctor gave her the news that she had a terminal illness, coldly mentioning that she had better take care of the paperwork before anything else, without gesturing, without emotion, with total indifference to her patient's obvious sadness and despair at hearing the worst news of her life.

I felt very sorry, and unfortunately, negative feelings towards such unempathetic attitudes, because sometimes we forget that we are more than just a career or profession; we are people whose actions have an impact on others. I don't believe that everything that causes pain is done with ill will, as sometimes it is unconsciousness or an “automatic” state of being, due to pressure, stress, or other unfavorable situations. I don't justify it; however, I recognize that it is an area to consider for growth.

All of this gave me the necessary understanding to recognize what I do NOT want to be, what I do NOT want to emanate, and I discovered the place where I want to serve. Because in adversity, I also learned what I DO want to represent; I witnessed beautiful things in the healthcare field, the empathy of a stranger, the dark circles under the eyes of a nurse who stays awake caring for you, the strength a paramedic builds to lift you, or the tireless study of a doctor, reflecting their interest in maintaining your well-being.

This duality is my great inspiration to improve every day as a person, student, and future professional; it is my reminder that the hours of study and the tiring syllabi are not just that, they are the future of my patients.

I have a lot to change and build, as the road is winding and unpredictable, but I have one goal: to witness that adversity is not a reason to be defeated or to move to the side of pessimism, but that the bad is a reason for inspiration to change, and the good is a reason for admiration; that failures are steps toward virtue.

The exercise of thinking about being on the other side of the desk can make you question whether, even when you have done your duty in relation to a patient's health, you can contribute something more to their life. A warm smile, an attentive look; whether it is a lot or a little, at the end of the day, it is doing something and creating awareness that you can leave a mark: one of love and charity, or one of much, much pain.

Always keep in mind that, in any setting, you can be part of a momentous event in someone's life, that kindness transforms your heart, and that you can do good out of conviction even when no one is watching.

The white coat under threat

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Drug trafficking has spread beyond Mexican territory, transforming medicine into a high-risk profession with threats, kidnappings, and constant fear among students, doctors, and healthcare workers. Organized crime has gone from trafficking alcohol to the US to the present day, where the Mexican government is unable to stop it and is even suspected of colluding with the cartels, affecting the political, economic, and social life of the Mexican people.

States such as Sinaloa, Chihuahua, Jalisco, and Tamaulipas are known as narco-states, where the risk of being kidnapped is constant, but medical students and doctors are a special case; we run the risk of being "picked up" to treat a member of the cartel.

Teachers recount anecdotes of how hospitals and private clinics not only receive victims of these organizations, but also members of these organizations seeking treatment and care from the doctors on duty, armed and threatening to kill them if they fail to save the criminal's life. Hospitals should not be high-risk areas; they should be well guarded and protected to maintain patient safety and provide medical services, especially in so-called "narco-states" where these situations are more frequent.

During the period of greatest unrest and confrontation in my city, health students were warned not to go to hospital rotations in the afternoons or evenings, as they ran the risk of being "kidnapped" to treat a member of the cartel. These organizations are so powerful that the government cannot keep its inhabitants safe, and everyday situations in our lives can end in tragedy. An example of this happened in Celaya, Guanajuato, where the bodies of five medical students from the Universidad Latina de México were found, all with signs of torture.

At some point, we all have to choose a location for our internship and social service. There can be many reasons for choosing a specific hospital or city, from the quality of education at the location to staying close to your family, but we don't talk about the reasons why we don't choose or avoid certain locations. Insecurity can vary between municipalities in the same state, some more unsafe than others. In the most violent municipalities, armed clashes often take place between the police and armed groups, and even between different cartels. This can create different risk situations for all residents, as in Reynosa, Tamaulipas, where there were 129 armed clashes in 10 months, some lasting six hours. Leaving your home to fulfill your dream of becoming a doctor can cost you your life and make you a victim of crossfire between police and criminals.

If I have a low grade point average and must go to a rural community for my social service, I should not be put at risk. The SS was established to bring medical services to these communities at a time when there were few doctors. Almost 90 years after this law was passed, newly graduated doctors are still being sent to cover the needs that the state does not want to pay for, in clinics with decaying infrastructure and few medicines, where a young and inexperienced doctor is in charge of the health of an entire town. Here, doctors are at constant risk. If a patient dies, the doctor runs the risk of being lynched by the community, and if the community is controlled by organized crime, there will be constant threats against him to treat and care for these criminals. You are not safe in the city or in a community. In one, you can be caught in the crossfire, and in the other, they can come looking for you and attack you directly in your clinic or your home. One example is the case of Dr. Erick David Andrade Ramírez, who was about to complete his social service at a hospital in Pueblo Nuevo, Durango, when a group of nine individuals entered the hospital to treat two injured individuals, one of whom shot Dr. Erick Andrade eight times in the head, ending his life.

The fear is not limited solely to the possibility of being killed by armed groups; there is also the “pago de piso” (protection money), a practice by organized crime where you have to pay them a fee to open and operate your business. Although the actual number is unknown, and it is estimated that 97% of extortion cases go unreported, official figures show that 6,800 victims were recorded in the first six months of 2025. These extortions have not been limited to ordinary businesses, but have also affected the health sector. Friends and acquaintances with family businesses in the pharmaceutical industry have had to give in to these groups to continue operating. This problem has escalated beyond the payment of fees. In addition, there have been reports of them forcing people to sell cloned or stolen medicines. Although there are no official figures on “protection money” payments to doctors' offices or clinics, it would not be surprising if this exists or comes to exist in the future, since medicine is, in a way, a business that, like other businesses, crime will seek to control. It is worrying to think that to safely practice the career you studied for six years or more, in the case of specialists, you will have to pay a fee to these groups to practice “safely.”

The problem is too big, but it is not a sign to give up. We are the future generation of doctors in Mexico, and we cannot sit idly by. We must demand safety for students, MIPs, and PSSs from both politicians and university administrators. A town controlled by organized crime should not be the site of social services. Going to your rotations should not generate fear. A lower-level doctor should not put me at risk, and the reward for our efforts should not be conditioned by criminals.

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