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Editorial

Over the past few months, the Artemis II mission captured a powerful view of Earth from lunar orbit, underscoring the interconnectedness of our planet's ecosystems and the importance of environmental stewardship. Simultaneously, the global health community has navigated a complex landscape shaped by emerging outbreaks of avian influenza, Ebola virus disease, hantavirus, and measles, alongside constrained health funding, geopolitical conflicts, and climate risks such as El Niño–Southern Oscillation (ENSO). Preparations for major international events, including the 2026 Olympic Winter Games and FIFA World Cup, have further emphasised the critical role of health security planning and resilient local health systems. Amid these challenges, the World Medical Association (WMA) issued five press releases advocating for the protection of health personnel and facilities in conflict settings, increased investment in the health workforce, and stronger ethical governance of health data and biobanks.

Climate action and pandemic preparedness remain central to the global agenda. At the 79th World Health Assembly (WHA) in May 2026, Member States renewed commitments to accelerate the elimination of malaria and neglected tropical diseases, strengthen pharmacovigilance systems, and advance key global health initiatives, including the Global Action Plan on Antimicrobial Resistance (2026–2036), the Immunization Agenda 2030, and the Belém Health Action Plan. At the 93rd General Session of the World Organization of Animal Health (WOAH), also held in May 2026, delegates approved the WOAH's 8th Strategic Plan (2027–2030), reaffirming animal health as a global priority and acknowledging the veterinary profession's role in addressing interconnected challenges across food systems, public health, and sustainability. Furthermore, the *World Health Statistics 2026* report highlighted substantial progress in infectious disease control and maternal and child health, including a 40% reduction in HIV incidence (2010–2024), a 12% decline in tuberculosis incidence (2015–2024), and 40% and 51% reductions in maternal and under-five mortality, respectively (2000–2024). However, it warned that many health indicators remain off track to meet the 2030 targets, due to workforce shortages, climate-related risks, and persistent gaps in healthcare access. The *State of World's Animal Health 2026* report also noted that animal health receives 0.6% of global health expenditure, despite increasing risks of zoonotic disease and antimicrobial resistance, as well as veterinary workforce shortages that undermine surveillance and prevention efforts.

The WMA represents 118 national medical associations, who continue to advance medical excellence and provide leadership in national and global health discourse. Its

members contribute to primary care and education campaigns, inform health policy development (including mental health and medical education topics), and support global health observances (e.g., World Health Day on 7 April, World Environment Day on 5 June). These leadership experiences are illustrated through John Quincy Adam's words: *"If your actions inspire others to dream more, learn more, do more and become more, you are a leader."* Key issues including antimicrobial stewardship, pandemic preparedness, and advances in artificial intelligence will shape discussions at the 77th General Assembly in Rotterdam, the Netherlands, from 7–10 October 2026.

In this issue, Ms. Magda Mihaila prepared a comprehensive summary of the WMA proceedings, including two adopted resolutions. Dr. Joana Savva-Bordalo highlighted complex workforce challenges facing physicians in Portugal's National Health Service. Dr. Viktorija Žnidaršič Skubic examined the liability challenges in Slovenia's healthcare system. Dr. Hamideh Frühwein emphasised the need for health systems to shift toward precision health to improve prevention and equity in ageing societies. Ms. Clarinda Cerejo and Ms. Caitlin Rich, hosts of the "Not Just Patients" podcast, explored ways physicians can strengthen physician–patient rapport, shared decision-making, and quality of care.

As additional bioethics and medical education topics, Dr. Marta Perin and colleagues highlighted Constitutional Court and administrative approaches to physician-assisted suicide in Italy. Dr. María Isabel Moya and Dr. Álvaro Cerame shared findings from the II International Comprehensive Care Programme for Sick Doctors (PAIME) Meeting in Spain, which provided a platform to discuss evidence on physicians' mental health in a global dimension. Ms. Maria Gatzoflia examined the bioethical considerations of surrogacy in Greece. Dr. Abebe Bekele and colleagues presented key outcomes from MedEdAfrica 2025 and reflections on the current state and future of African medical education. Dr. Bodela Sree Vidhya and Dr. Prem Kumar A. described the Surgical Society of Bangalore's Sustainability Initiative in India. Finally, Dr. Bruce Kaplan and colleagues synthesised analytical perspectives in a book review on the ethical implementation of the One Health concept.

We are enthusiastic to join discussions and networking at the 77th WMA General Assembly in Rotterdam!

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WMA Council Report

Belgrade, Serbia, 23–25 April 2026



Magda Mibaila

The 232nd Council Session of the World Medical Association (WMA) convened at the Metropol Palace Hotel in Belgrade, Serbia, from 23–25 April 2026, hosted by the Serbian Medical Chamber (Photo 1).

A Welcome from the Serbian Hosts

The session was opened by the WMA Chair of Council, Dr. Jack Resneck (American Medical Association), who thanked the Serbian hosts, including the Chamber's President, Dr. Miodrag Stanić, for their hospitality. Against a backdrop of escalating conflict and mounting pressure on health systems worldwide, Dr. Resneck called on members to continue embracing the common values, ethics and mission that bind the global medical profession together.

Wednesday, 22 April

Junior Doctors Network

Ahead of the Council Session, the WMA leadership joined the Junior Doctors Network (JDN) at its 2026 Spring Meeting in Belgrade. Held in hybrid format, the meeting brought together

junior doctors from around the world and centred on universal health coverage and the future of equitable health systems, one of global health's defining priorities. Beyond its thematic focus, the gathering created valuable space for exchange with WMA leadership and for collaboration across the global medical community, reaffirming the WMA's commitment to supporting the leadership and voices of junior doctors as they help shape the future of medicine and healthcare worldwide. Delegates also joined the JDN for the "Walk the Talk" initiative in Tašmajdan Park, which brought colleagues together in an informal setting to connect, move, and reinforce the importance of physical activity and well-being. Members of the JDN were interviewed by Serbian media about the initiative.

Environment Caucus

On the evening of 22 April, the WMA Workgroup on Environment convened the WMA Environment Caucus in Belgrade, conducted in a hybrid format, allowing both on-site and remote participation. The meeting featured a presentation on false information related to climate change and health, and welcomed guest speaker, Dr. Marina Romanello, Executive Director of the Lancet Countdown: Tracking Progress on Health and Climate Change. The session offered delegates and observers a space to examine the intersection of environmental policy and human health ahead of the Council's deliberations on key climate and health policies.

RTS 1 Interview with President Kitulu

Ahead of the Council Session, WMA President, Dr. Jacqueline Kitulu was interviewed by Serbia's national broadcaster, RTS 1, for its Health Journal programme. The discussion focused on the major challenges facing health systems worldwide, the growing importance of cross-border cooperation and solidarity, and the value of international medical leaders coming together in Serbia to exchange solutions and strengthen global health partnerships. The interview helped bring the work of the WMA and the significance of the Council Session to a wider public audience, reflecting the strong engagement of the Serbian Medical Chamber in bringing these conversations to a broader audience.

Thursday, 23 April

Associate Members

The WMA Associate Members held their plenary meeting under the leadership of Dr. Julie Bacqué, Chair of the Associate Members. The meeting reviewed membership developments, the activities of the Associate Members Steering Committee, and the growing contribution of Associate Members to the work of the WMA. Members received updates from the JDN, the Past Presidents and Chairs of Council Network (PPCN), and several WMA workgroups in which they play an active role, including those on Environment, Medical Neutrality, Procedure Development of Policy on Health-related Crises, the Declaration of Lisbon, the Declaration of Taipei,

and Gender Equality within the WMA. No new workgroups were established in Belgrade, with the existing workgroups continuing their mandates. Looking ahead, Associate Members were encouraged to continue contributing to forthcoming policy consultations.

Junior Doctors Network Report

The Junior Doctors Network (JDN) presented its mid-term report under the leadership of its 2025–2026 Management Team, chaired by Dr. Pablo Estrella-Porter. With 1,236 active junior doctors registered, the Network reported on a busy period of external representation, including the World Health Summit in Berlin, European Junior Doctors meetings in Vienna and Copenhagen, the 158th World Health Organization (WHO) Executive Board, the IFMSA March Meeting, and the UNODC Commission on Narcotic Drugs. A major milestone was the launch of the Global Working Time Study of Junior Doctors in November 2025, which had gathered 561 responses across three languages by March 2026. The JDN also highlighted the work of its eight thematic working groups, spanning antimicrobial resistance, planetary health, primary healthcare, medical ethics, pandemic preparedness, global surgery, non-communicable diseases, and medical education. The Network expressed its gratitude to the WMA and the Taiwan Medical Association for their continued support.

Past Presidents and Chairs of Council Network

The Past Presidents and Chairs of Council Network (PPCN), chaired by Dr. Kati Myllymäki with Deputy Chair, Dr. Wonchat Subhachaturas, and Secretary,

Dr. Jón Snædal, reported on its activities as an advisory group within the Associate Members. The Network held its first-ever in-person meeting at this Council Session in Belgrade. It presented a revised set of Terms of Reference (the first revision since the Network's establishment in 2013) introducing a former Secretary General and term limits for the Chair. Individual members remained active across WMA initiatives, including the Ukraine Medical Help Fund and the workgroups on Medical Neutrality and the revision of the Declaration of Taipei. The Network extended its sincere thanks to outgoing Secretary General Dr. Otmar Kloiber for his longstanding support.

Council Session

The 232nd Council Session was called to order by the Chair of Council, Dr. Jack Resneck. He welcomed newly attending Council members: Dr. Alika Lafontaine (Canadian Medical Association), Dr. Pedram Emami (German Medical Association), and Dr. Jeong Seong Seo (Korean Medical Association).

President's Interim Report

The WMA President, Dr. Jacqueline Kitulu presented her report on presidential activities from October 2025 to March 2026, a mandate that began with a successful General Assembly in Porto. In October, she attended the Canadian Conference on Global Health in Halifax, serving as a panelist on global health governance, financing and trust at the opening plenary. In November, she delivered the keynote address at the Uganda Medical Association's 9th Grand Doctors Conference, where she was

honoured with the Dr. Margaret Mungherera Award for Leadership in Health, named for the late Past WMA President. In December, together with Dr. Jack Resneck and Dr. Otmar Kloiber, she attended the International Symposium on Transforming Healthcare, co-organised by the WMA and the Taiwan Medical Association and honoured by the presence of the President of Taiwan, who presented Dr. Kloiber with a Medal of Honour for his service; the symposium was followed by the First Open Expert Meeting on the Revision of the WMA Declaration of Taipei. She also took part in a debrief on the latest Lancet Countdown on Health and Climate Change, and delivered opening remarks at the Panhellenic Medical Association's centenary celebration in Athens.

Additionally, in January, she gave the keynote address on "Medicine, Music and the Human Spirit" at the 23rd Vienna Congress. In February, she represented the WMA at the 6th One Health International Forum in Fukuoka, Japan. In March, she contributed to the Validation Workshop for the Africa Health Professions Education Quality Standards in Potchefstroom, South Africa. She closed by thanking the WMA secretariat, the Executive Committee, and the membership for their support during the first half of her mandate.

Secretary General's Report

The Council received the WMA Activity Report, highlighting the Association's extensive work in ethics, advocacy, global health policy, human rights and international collaboration during the reporting period. Among the key priorities was the ongoing revision of the

Declaration of Taipei, which seeks to address the ethical challenges posed by rapidly evolving technologies, artificial intelligence, health databases and biobanks. The report also outlined the WMA's continued advocacy on the protection of patients and physicians in conflict settings, including actions related to violence against healthcare personnel and violations of medical neutrality in several countries.

Significant attention was devoted to public health priorities, including non-communicable diseases, immunisation, antimicrobial resistance, climate change, universal health coverage, and health workforce sustainability. The report highlighted the WMA's growing engagement with international partners, including the WHO, the World Health Professions Alliance (WHPA), and United Nations agencies, as well as its contributions to global discussions on pandemic preparedness, artificial intelligence in healthcare and environmental health. Dr. Otmar Kloiber also called on members to extend the same trust to the incoming WMA Secretary General, Dr. Ramin Parsa-Parsi, as they had shown him when he assumed the role in 2005.

Report of the Chair of Council

The Chair of Council, Dr. Jack Resneck, Jr., reflected on a period of significant transition and activity for the Association. He welcomed the appointment of Dr. Ramin Parsa-Parsi as the next Secretary General following an extensive international search process and expressed gratitude to Dr. Otmar Kloiber for more than two decades of leadership and service to the WMA. Dr. Resneck also

highlighted the ongoing revision of the Declaration of Taipei, noting the important contributions made by experts during recent Open Expert Meetings on the Revision of the WMA Declaration of Taipei in Taipei and São Paulo, as the workgroup addresses the ethical challenges posed by the rapidly evolving use of health data and emerging technologies. Against a backdrop of continuing global conflicts, humanitarian crises and growing pressures on healthcare systems, he reaffirmed the WMA's commitment to advancing policies on medical neutrality, climate change, health data governance, workforce sustainability, mental health and ethical medical practice. Looking ahead, Dr. Resneck expressed confidence in the future of the WMA as it enters a new chapter of leadership while continuing its mission to support physicians and improve health worldwide.

World Medical Journal

The *World Medical Journal's* December 2025 and March 2026 issues merged contributions from authors in 29 countries, with thematic coverage marking the International Day of Persons with Disabilities in December 2025 and World Tuberculosis Day in March 2026. These editions also featured WMA resolutions and statements, summary reports on regional and international meetings, interviews with leading experts, and critical analyses on medical education and ethics. As a novelty during this session, Editor-in-Chief, Dr. Helena Chapman, and Assistant Editor, Maira Sudraba-Sangoviča, hosted a "Meet the Editors" booth during the Council coffee breaks, where delegates could meet the editorial team in person and share their

article ideas.

Urgent Resolution: Global Armed Conflict

The proposed WMA Council Resolution on Escalating Global Armed Conflict and Violence and Restoring Peace was accepted as a matter of urgency and adopted, as amended, for immediate publication.

Friday, 24 April

The Standing Committees (Medical Ethics Committee, Finance and Planning Committee, and Socio-Medical Affairs Committee) held their meetings. The committees' recommendations were brought to the Council for consideration the following day.

Women in Medicine Lunch

Delegates gathered for the Women in Medicine Lunch, a forum dedicated to advancing leadership, inclusion and practical action across the global medical profession. Opened by the WMA President, Dr. Jacqueline Kitulu, the luncheon was held under the theme of male allyship, exploring how active, consistent, and intentional support from men can help promote gender equity, challenge systemic barriers, and amplify women's voices in medicine. The programme featured a fireside chat with Dr. Branka Lazić, a distinguished leader in Serbian and European medicine, who reflected on stepping into leadership, navigating visible and invisible barriers, and the importance of family, mentorship, and institutional support throughout her journey. Building on the Women in Medicine working lunch first launched in Porto, delegates then took part in table

discussions introduced by Dr. Caline Mattar, focused on turning dialogue into action and examining how male allies can positively influence careers, support women in organised medicine, and strengthen participation within the WMA.

Saturday, 25 April

Medical Ethics Committee

The Council considered the report of the Medical Ethics Committee, reaching the following decisions. The proposed revision of the WMA Statement on Medical Neutrality was approved for circulation within the membership for comments, with the workgroup continuing its work towards an initial draft over the summer. The WMA Statement on Ethical Issues Concerning Patients with Mental Illness was approved for re-circulation within the membership for comments.

As part of the 2026 policy review, the Council reaffirmed the WMA Declaration of Sydney on the Determination of Death and the Recovery of Organs. It reaffirmed with minor revision the WMA Declaration of Tokyo on torture and other cruel treatment in detention, the WMA Statement on Body Searches of Prisoners, and the WMA Resolution on the Non-Commercialisation of Human Reproductive Material. The WMA Statement on Female Genital Mutilation and the WMA Statement on Animal Use in Biomedical Research were approved for major revision.

Finance and Planning Committee

The Council approved the pre-audited Financial Statement for 2025 and authorised the

continuation of the audit process. In a show of solidarity with associations facing financial and operational challenges, dues waivers and adjustments were approved for the Royal Dutch, Australian, Myanmar, and Indian medical associations. The Council confirmed future statutory meetings, including the 244th Council Session (2030), the 80th General Assembly in Antwerp, Belgium (2029), and the 81st General Assembly in Canada (2030), and approved the “Towards Zero Nicotine Society” theme for the Scientific Session of the 2027 General Assembly in Bangkok, Thailand.

On gender equality, the Council adopted several measures to strengthen representation within WMA structures: inviting constituent members to complete a member survey to inform evidence-based recommendations; introducing systematic tracking of gender participation through gender-disaggregated data in Council and General Assembly participant lists; presenting gender participation statistics as a visual indicator at the opening of sessions; and encouraging voluntary reporting of gender composition in WMA workgroups and committees.

Socio-Medical Affairs Committee

The Council considered the report of the Socio-Medical Affairs Committee, which addressed a wide range of public health, humanitarian, and healthcare policy issues.

Resolutions Adopted by the Council

The WMA Council Resolution on Childhood Vaccination Schedules was adopted for immediate

release, reaffirming vaccination as a cornerstone of global public health amid concerns over declining immunisation coverage and renewed outbreaks of vaccine-preventable diseases. The minor revision of the WMA Statement on Medical Care for Migrants was adopted and forwarded to the General Assembly for information, reaffirming that access to healthcare should be based on clinical need and delivered without discrimination.

Collaboration with the WHO

The WMA Advisor, Dr. Caline Mattar, referred to the side events being planned by the WMA and the WHPA during the 79th World Health Assembly (WHA) in May 2026. These included events on financing the health workforce for economic resilience and universal health coverage, the value of investing in health professionals, sustaining the global health and care workforce agenda (hosted with the German government), and accelerating trusted digital health transformation, co-organised with multiple countries. She highlighted the WHA agenda items of particular relevance to the WMA, including non-communicable diseases, international ethical recruitment of health personnel, primary healthcare, immunisation, mental health, and the governance of data, digital health, and artificial intelligence. Some side events would be livestreamed.

The WMA Secretary General, Dr. Otmar Kloiber, noted that the forthcoming WHA would be one of the most remarkable in the history of the WHO. A pandemic treaty, after three years of negotiations on how to share resources and information, was expected to be signed, representing

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an important symbol and historic landmark for the organisation. He also referred to the significant funding gap facing the WHO following the departure of the United States, which could impact staff and operations including the potential closure of departments, and raised concern that progress on the health workforce and ethical issues could be lost, a reminder, he said, that the rest of the world needs to contribute more to humanitarian aid.

Other Business

Dr. Jacques de Haller reported that Turkish courts had dropped their case against board members of the Turkish Medical Association, who had been condemned to imprisonment for protesting

against the war in Kurdistan, noting that it is appropriate and useful for the WMA to support colleagues and to maintain policies that reinforce this work.

The Past WMA Chair, Dr. Mukesh Haikerwal (Australia), raised awareness of traumatic brain injury, which is not currently recognised as a chronic non-communicable disease, emphasising the need to ensure such injuries are reported so they can be properly treated.

As the session drew to a close, the WMA Secretary General, Dr. Otmar Kloiber, announced his retirement following the 232nd Council Session in Belgrade, marking the beginning of a major leadership transition for the Association after 21 years of service. He expressed his

appreciation to the Serbian Medical Chamber, including President, Dr. Miodrag Stanić, their team and staff; to guests and observers from partner organisations; to national medical association delegates and colleagues working in the Associate Members, JDN, and PPCN; to the editorial team of the *World Medical Journal*; to the technicians, photographer, and interpreters; to the facilitator, legal advisor, and financial advisor; and to all WMA officers and the office staff in Ferney-Voltaire.

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Photo 1. Group photo at the Metropol Palace Hotel during the 232nd Council Session in Belgrade. Credit: WMA

WMA COUNCIL RESOLUTION ON ESCALATING GLOBAL ARMED CONFLICT AND VIOLENCE AND RESTORING PEACE

Adopted by the 232nd WMA Council session, Belgrade, Serbia, April 2026

PREAMBLE

The WMA rearms its '[Statement in Times of Armed Conflict and Other Situations of Violence](#)' and expresses its grave concern regarding current international developments characterised by the escalation of multiple violent and protracted armed conflicts, foreign policy actions and other situations of violence either ongoing or potential, in affected regions – including the Middle East, Asia, Eastern Europe, the Americas, the Caribbean and Africa – with profound and persistent humanitarian consequences for civilian populations.

It further notes with alarm the reported systematic breaches of international law and the growing climate of impunity that undermines global peace, security, and protections afforded to health personnel and civilian populations.

Defending life, protecting those who provide care, and promoting peace are ethical imperatives inherent to the medical profession.

RECOMMENDATIONS

The World Medical Association:

1. Condemns the impact of escalating armed conflicts, foreign policy actions, and other situations of violence on civilian populations in affected regions. This includes the loss of human life, physical and psychological injuries, forced displacement, and the degradation of the conditions necessary for a life of dignity.
2. Condemns attacks, threats, restrictions and any form of violence against health personnel and facilities, as well as violations of medical neutrality.
3. Calls for adherence to international humanitarian and human rights law as

essential tools for protecting human life and limiting suffering and urges actors to fully cooperate with international courts to strengthen accountability and end impunity.

4. Calls for dialogue, diplomacy and multilateral cooperation that constitute the most legitimate, responsible and sustainable means for the resolution of conflicts. Therefore, the WMA urges countries with greater political, economic or military power to exercise their influence and actions in strict adherence to international law, acting with restraint and with due consideration for the effects that their decisions may have on countries, people and populations in situations of greater vulnerability.
5. Calls on United Nations agencies and their member states to call on actors to urgently de-escalate armed conflict and violence and to cease attacks on health personnel, healthcare and civilian infrastructure.

WMA COUNCIL RESOLUTION ON CHILDHOOD VACCINATION SCHEDULES

Adopted by the 232nd WMA Council session, Belgrade, Serbia, April 2026

PREAMBLE

The World Medical Association is concerned by changes to childhood vaccination schedules that are not evidence-based.

Although we recognise each country's independence in health matters, history has shown us time and again how decisions on epidemiological matters can

affect the entire world, and even more so in today's globalised context.

Changes to childhood vaccination schedules that are not evidence-based can lead to the resurgence of diseases previously on the verge of extinction, compromising global health and threatening the future of the children worldwide. An outbreak of measles or meningitis endangers the most vulnerable populations and can spread to other nearby countries, especially those with very limited response capacity.

RECOMMENDATIONS

Recalling its [Statement on the Priority of Immunisation](#), the WMA warns against changes to childhood vaccination schedules that are not evidence-based and emphasises the WMA's commitment to universal vaccination and its importance as a cornerstone of progress in a globalised world.

Information about the 77th WMA General Assembly Rotterdam 2026

Dear colleagues of the World Medical Association,

On behalf of the Royal Dutch Medical Association (RDMA), we cordially invite you to participate in the [77th General Assembly](#) of the World Medical Association (WMA), to be held on 7-10 October 2026, in Rotterdam, the Netherlands. The RDMA, founded in 1849, is proud to host this [event](#).

Together with the WMA, we have organised a program that we hope will both challenge and inspire participants, with sessions on themes that matter most to our profession today. We have also planned activities to explore Rotterdam – its world-famous architecture, its vibrant cultural scene, and the international character of Europe's largest port.

Please mark your calendar and join us in Rotterdam for this exciting event.

Jurriaan Penders, MD
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Portugal's National Health Service: Workforce Crisis, Burnout, and the Urgent Need to Support Doctors



Joana Savva-Bordalo

Since its establishment in 1979, the Portuguese National Health Service (*Serviço Nacional de Saúde, SNS*) has served as a cornerstone of equitable healthcare, ensuring universal access regardless of socioeconomic status [1]. In the past decade, however, increasing systemic pressures have exposed structural weaknesses that threaten its long-term sustainability. The SNS currently faces a convergence of challenges, including shortages of healthcare professionals, declining attractiveness of medical careers, increasing reliance on private providers, and growing dissatisfaction among doctors. These issues are further compounded by inadequate workforce planning and policy decisions that fail to address long-standing structural deficiencies.

These challenges are unfolding at a time when health systems across Europe are struggling to retain healthcare professionals and adapt to increasing demand driven by population ageing and the growing burden of chronic disease [2]. Furthermore, the experience of the coronavirus disease 2019 (COVID-19) pandemic highlighted the importance of maintaining a resilient public health workforce capable of responding to future

health emergencies and unforeseen system shocks [3]. This commentary explores the realities faced by Portuguese doctors and the SNS, emphasising that without decisive reform, the SNS risks entering a cycle of progressive deterioration and being unprepared to manage emerging health risks.

Emergency Services Under Strain

Emergency care has become one of the most visible indicators of the crisis affecting the SNS. During the summers of 2024 and 2025, multiple emergency departments experienced partial or complete closures due to a shortage of doctors, particularly in obstetrics and pediatric care, leading to serious consequences for patient safety [4,5]. Data from the National Institute of Medical Emergency (*Instituto Nacional de Emergência Médica, INEM*) indicate a sustained increase in pre-hospital emergency births since 2022 [6]. In 2025 alone, 60 births occurred in ambulances, 23 in the streets, 153 at home, and two in primary care centers, without access to the level of safety and specialised care available in hospital settings [6]. Such events are symptomatic of systemic fragility, as emergency departments are increasingly dependent on overtime work and temporary staffing arrangements that are neither sustainable nor conducive to the delivery of high-quality care [2].

Primary Care Gaps and Unequal Access

Although primary care remains a fundamental pillar of effective healthcare services, however,

Portugal is currently facing a significant shortage of family doctors. Approximately 1.6 million citizens (16% of the population) do not have an assigned general practitioner, a gap that undermines continuity of care, increases reliance on emergency services for non-urgent conditions, and exacerbates health inequalities [7]. Regional disparities further intensify the problem, with underserved areas experiencing greater difficulties in recruiting and retaining doctors [8]. Although training capacity has increased, retention remains a major challenge, as many newly qualified specialists opt for the private sector or opportunities abroad, limiting the SNS's ability to meet population needs [9].

Burnout among Medical Residents

Burnout is driven by excessive workloads, long working hours, insufficient supervision, and inadequate organisational support, which negatively impact both physician well-being and patient safety [10]. A 2023 report by the Portuguese Medical Association (*Ordem dos Médicos*) identified alarming levels of emotional exhaustion, depersonalization, and reduced personal accomplishment among medical trainees, closely linked to the demanding working conditions experienced during residency [11]. The study revealed that 84.8% of respondents performed overtime work (with an average weekly workload of 52.8 hours), 55.1% reported monthly shifts longer than 12 hours, and 62.1% engaged in night work. Work-life balance was significantly affected, with 55.9% of trainees reporting having two or fewer

weekends off per month, 54.4% rating their work-life balance as poor or very poor, and 35.3% admitting initiation of psychological or psychiatric support during their training.

The cumulative burden of long working hours, combined with independent study requirements and the pressure to meet curricular objectives, was confirmed as a major contributor to stress and burnout. These findings illustrate the scale and structural determinants of burnout among medical residents in Portugal, underscoring the urgent need for interventions addressing working conditions, overall workload, and institutional support services. As burnout contributes to attrition within the profession, physicians exposed to these conditions early in their careers are more likely to leave the SNS or seek opportunities abroad, exacerbating workforce shortages [12].

Shift Toward the Private Sector

Recent policy decisions have accelerated the transfer of healthcare provision and public funding from the SNS to the private and social (e.g., non-profit, religious or charitable organisations) sectors. Instead of prioritizing investment in healthcare professionals, infrastructure, and organisational capacity within the public service, governments have increasingly resorted to outsourcing consultations and surgical procedures to private providers when maximum waiting time guarantees are exceeded. This trend has been accompanied by attempts to reintroduce private management models in healthcare facilities, the transfer of some public services to local charitable organisations (e.g., [Misericórdias](#)). Public funds

for vaccination programs have been directed to pharmacies that could otherwise be delivered within primary care centers [13].

The SNS24 online [portal](#), which offers real-time communication with patients to schedule appointments, access prescriptions and test results, and manage health information, serves as a gateway to healthcare services [14]. This portal grants access to external providers, raising questions about whether available public sector capacity is being fully utilised. While public-private collaboration may have a role, such practices can lead to inefficiencies, fragmentation of care, and the gradual weakening of the SNS infrastructure. These challenges have been identified at both national and regional levels, including the increasing reliance on alternative service delivery models and the potential underutilisation of existing public healthcare capacity [6].

Workforce Exodus and Retention Challenges

Portugal has experienced a steady outflow of physicians to the private sector and to other countries offering better working conditions and remuneration, reflecting structural issues such as high workloads, comparatively low salaries, and limited career progression opportunities [15]. Policy responses have largely relied on short-term measures, such as increased overtime, rather than addressing root causes, creating a self-reinforcing cycle in which workforce shortages intensify workloads, leading to burnout and further attrition. This trend is particularly concerning given the ageing of the medical workforce and the

increasing difficulty in attracting and retaining younger physicians within the SNS, especially in underserved regions and in medical specialties facing workforce shortages.

The Role of FNAM in Defending Doctors and the SNS

The National Federation of Doctors (Federação Nacional dos Médicos, FNAM), as the trade union structure representing the largest number of doctors within the SNS, has played a central role in defending the medical profession and advocating for a strong public health service. The FNAM has actively promoted measures to strengthen medical careers and reinforce the SNS, while safeguarding collective labor agreements and workers' rights. Key achievements include maintaining collective agreements without setbacks, preserving age limits for night shifts (age 50) and emergency duties (age 55), guaranteeing compensatory rest for shifts during nights, weekends, and public holidays, and prohibiting time-bank schemes and other detrimental shift work arrangements.

Faced with limited progress in negotiations, the FNAM has used all available legal and trade union mechanisms, including strikes and public demonstrations, to advance its demands, particularly in response to government-led labour reform perceived as a setback. Proposed measures include extending standard working hours to up to 50 hours per week, increasing schedule deregulation, introducing imposed time-bank systems, expanding precarious employment arrangements, and weakening protections related to parental rights, collective

bargaining, the right to strike, and trade union activity. The FNAM maintains its independence, representing both medical professionals and the public interest, and continues to advocate for structural reforms, improved working conditions, and better healthcare delivery.

Conclusion

Portugal's SNS stands at a critical juncture, facing workforce shortages, burnout, and policy misalignment that threaten high-quality care delivery and sustainability. These structural challenges require comprehensive responses, including long-term workforce planning and retention strategies, strengthened primary care access, reduced burnout through improved salaries and working conditions, and better resource allocation within a reinforced public service. Without such measures, the SNS risks losing its defining characteristics as a universal and equitable healthcare service. Supporting Portuguese doctors is essential for promoting professional well-being and sustaining a functioning healthcare service, making the strengthening of medical careers, working conditions, and the SNS as crucial steps to safeguard healthcare for future generations.

AI Disclosure Statement

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Legal Challenges of Liability for Damages in Healthcare Systems: The Case of Slovenia



Viktorija Žnidaršič Skubic

An appropriate legal framework governing liability for damages incurred by healthcare professionals and organizations is a key component of a high-quality healthcare system, as it establishes that no human activity is free from error. The healthcare sector is particularly sensitive in this regard, as any irregularities can have severe or even fatal consequences for patients. Therefore, for every patient who has suffered harm to their health (or for their relatives, in cases where the patient has died) as a result of a medical error, access to appropriate compensation is a fundamental, and potentially existential concern. The need to provide fair compensation has extended beyond the strict civil law boundaries.

In theory, long-standing debate persists over whether classical tort liability systems adequately address contemporary challenges, and whether they should be reformed in a narrow or broad sense, potentially including more radical shifts toward no-fault compensation schemes. Comparative law offers a wide range of solutions, from traditional compensation systems, which are gradually reformed through legislative amendments

or evolving judicial practice, to models introducing targeted no-fault compensation schemes in selected healthcare areas (e.g., mandatory vaccination), and to systems that extend no-fault compensation across the entire healthcare sector. In the latter case, a fundamental shift occurs (mainly for serious injury claims), as the system moves away from establishing blame and proving fault on part of the medical practitioner, and instead on compensating individuals who have suffered avoidable harm. It usually means that patients must only demonstrate that they experienced a preventable adverse event, without needing to prove fault on the part of the medical practitioner.

Liability for damages in the healthcare sector, which is already a complex and multifaceted issue, has been further complicated by the emergence and growing use of artificial intelligence (AI) in medical practice. While determining liability for damages in healthcare has long posed legal and practical difficulties, the integration of AI systems has significantly further complicated the attribution of responsibility for patient harm. As a result, some legal experts argue that traditional fault-based liability may be inadequate in cases of AI-related medical harm, prompting the consideration of a no-fault compensation system to ensure patient compensation.

In Slovenia, the new act on healthcare quality assurance was adopted at the end of 2024, with the primary aim of regulating the healthcare quality system and establishing the Public Agency of the Republic of Slovenia for

Healthcare Quality. As part of this reform process, the legal framework governing liability for damages in healthcare is also expected to be revised. This article therefore examines various considerations regarding possible approaches for regulating this area. These considerations may also be useful for other national legal systems seeking to modernize traditional regulation of liability for damages in healthcare.

Current Legal Framework

Slovenia, a Central European nation of 2.1 million residents, belongs to a group of jurisdictions with a classic fault-based liability system for damages, where healthcare professionals or institutions may be held liable in accordance with the general rules of contract law. Liability for damages is based either on breach of the treatment contract or on tort, where no contractual relationship exists between the patient and the healthcare institution (e.g., in cases of emergency treatment where the patient is unable to give consent). In this system, unless an agreement is reached, patients must pursue compensation through civil litigation against healthcare providers in court. As in many other countries with similar systems, the procedure can be stressful, lengthy, and burdensome for patients – physically, mentally, and financially – given the need for legal assistance and costs of expert evidence and related expenses. It has also been noted that the number of compensation claims against healthcare institutions is increasing, placing a significant strain on public healthcare funds.

The Slovenian legislature has so far made only limited responses to the aforementioned issues. The only notable exceptions are two provisions in the *Patient Rights Act* [1], with one provision requiring courts to give priority to cases involving serious bodily injury or death occurring during medical treatment, and another provision obligating the Ministry of Health to monitor developments in such cases and intervene appropriately. The latter provision, however, has never been implemented in practice.

Slovenian jurisprudence has addressed the vulnerable position of patients as injured parties in litigation by adopting certain measures [2]:

1. Informative medical expert evidence (contrary to the general rule) is admissible. Its purpose is to determine whether the patient's harm resulted from medical malpractice or a medical complication.
2. Factual allegations may be supplemented after receiving an expert opinion, as lay plaintiffs are generally unable to make such assessments independently.
3. The standard of proof has been relaxed. In establishing a causal link between the physician's conduct and the harmful outcome, the balance of probabilities is accepted as sufficient, rather than the stricter standard of clear and convincing evidence.

Reform Efforts

In Slovenia, during the current government's term (2022–2026) and as part of broader efforts to ensure quality in healthcare,

consideration has also been given to reforming the area of tort liability. In this context, a working group was established to review the field and propose *de lege ferenda* solutions. Although the working group has not yet completed its work, it has identified two potential directions for reform:

1. The reform could be relatively limited in scope, following the approach of countries that have introduced targeted amendments and updates to the existing classical tort system. In this context, it is possible to consider:

a) reform in a narrower sense, involving the modernisation and simplification of legislation with the aim of facilitating patients' access to compensation, similar to approaches adopted in Germany and England; and

b) reform in a broader sense, where the above-mentioned measures (under a) could be complemented by a specific form of no-fault compensation scheme or a scheme that operates alongside a fault-based compensation system, similar to approaches adopted in France, Belgium, and Wales [3–6].

2. The reform could entail a more radical solution, as seen in countries that have introduced a no-fault compensation system covering the entire healthcare sector (e.g., Norway, Denmark, Finland, Sweden, New Zealand) [7].

In order to reach a meaningful conclusion on the most appropriate approach for Slovenia, it is not sufficient merely to compare the advantages and disadvantages of different solutions. The potential impact of reforms

must be assessed in light of specific circumstances of contemporary society. The Slovenian healthcare system faces various challenges, such as physician shortages, long waiting times, and increasing privatisation, while the state budget appears to have limited capacity to further increase healthcare expenditure. It is important to recognise that the direct transposition of legal solutions from comparative law contexts, where the political, economic, and legal conditions differ significantly from our own, is not appropriate.

A more radical reform, such as the introduction of a no-fault compensation system, could undoubtedly yield numerous positive effects, including:

1. These systems are, in principle, designed primarily to benefit injured patients, as they offer a "patient-friendly" procedure for obtaining compensation that is informal, fast, and cost-effective.
2. Healthcare staff are generally willing to assist patients in claiming compensation, and patients do not, in principle, require costly legal assistance.
3. Compensation amounts are generally standardised or tariff-based and therefore lower than what an individual patient could obtain through litigation under a full compensation approach. However, in practice, patients are generally satisfied with this solution, as compensation is paid more quickly and through a far more accessible and straightforward procedure.
4. The system is perceived as more socially just than traditional models, as more victims report

harm and compensation is actually awarded to more people.

5. The system helps preserve a strong doctor-patient relationship, encourages physicians to openly report their own or systemic errors, and also reduces the practice of defensive medicine.

The advantages of a less radical reform proposal, namely, the introduction of amendments and additions to the traditional tort liability system, are as follows:

1. It is a proven system of gradual improvements that has yielded positive results in practice in countries with similar tort law systems (e.g., Germany).
2. Such a reform is less demanding in terms of time, organisation, and financial resources than more radical changes and better addresses the relatively complex current situation in the Slovenian healthcare system.
3. It involves the implementation of a set of targeted measures across specific areas, including improvements to both substantive and procedural rules, primarily aimed at strengthening the patient's position through a simplified, affordable, and rapid decision-making process for compensation claims.
4. Such a reform could be implemented in two phases: a) after the initial changes are introduced, their effects would be closely monitored over a defined period; and b) depending on the outcomes, more radical changes could be adopted.
5. It is largely supported by experience and comparative legal data, as relatively few countries

worldwide have opted to introduce a no-fault compensation system covering the entire healthcare sector.

AI in Medical Practice and Liability for Damages

When reforming liability for damages in healthcare, the specific features of liability arising from the use of AI cannot be overlooked. While AI offers significant potential for innovation and efficiency, it also raises distinct legal challenges, particularly regarding accountability and compensation for harm caused by AI systems. As the use of AI systems becomes increasingly widespread, the number of cases involving harm in which establishing fault is difficult or nearly impossible is likely to increase. For this reason, many legal experts view the introduction of no-fault compensation systems as a potential solution to this problem.

The use of AI in medical practice has introduced numerous challenges, including the need to redefine the duty to inform, informed consent, and professional standards of care (*lege artis*). The key requirements for the responsible use of AI in medical decision-making process place a significant burden of responsibility on physicians, entailing a range of corresponding duties. A physician should therefore: 1) protect health data and respect medical confidentiality; 2) obtain informed consent regarding the use of AI; 3) acquire sufficient technical knowledge; 4) appropriately use the output generated by AI systems; and 5) detect and address bias.

Both at the national and international levels, a wide range of binding and non-binding legal acts have been adopted to date that address the use of AI in healthcare. In the European Union (EU), the most important legal source is the *Artificial Intelligence Act* (hereinafter, the *AI Act*), whose primary objective is to promote human-centric and trustworthy AI, while ensuring a high level of protection for health, safety, and fundamental rights [8]. The *AI Act* operates on the principle of risk classification, whereby the level of regulatory requirements depends on the degree of risk posed in each specific context. AI systems used to support decision-making in healthcare are classified as high-risk, where the strictest safeguards and highest level of protection are required. This primarily means that a risk assessment must be conducted before their deployment, and that the use of reliable and non-discriminatory input data is crucial. Key elements also include ensuring traceability, human oversight, and a high level of cybersecurity.

In relation to liability for damages in the field of AI, two directives have been developed. First, the Revised Product Liability Directive (hereinafter, rPLD), adopted in October 2024, establishes strict liability for defective products, and now clarifies that the directive also applies to software (including AI systems) [9]. Specifically, patients who can prove that they have suffered harm caused by a defective AI system are entitled to compensation. The Directive changes the definition of a defect, which arises where the safety of the product does not meet the expectations of the general public,

and requires manufacturers to disclose relevant evidence of any defective product. It follows that, in cases where a product uses machine learning, a failure to meet reasonable expectations that its underlying algorithm is designed to prevent dangerous behaviour may be considered a safety defect. The Directive also expands the range of factors that courts must consider when determining whether a product is defective, including the self-learning capabilities of products. In certain complex cases, it reduces the burden of proof on the injured party by introducing rebuttable presumptions of defectiveness or causation.

Second, the AI Liability Directive (hereinafter, AILD), the proposal of which the European Commission decided to withdraw in February 2025 due to a lack of agreement among stakeholders, sought to harmonise national fault-based liability systems by reducing the burden of proof for injured parties [10]. In particular, it proposed the application of rules on the disclosure of evidence and a rebuttable presumption of causation. Under the rules on the disclosure, courts could order the disclosure of evidence relating specific high-risk AI systems suspected of having caused harm. The request should be addressed to the provider or user of the AI system. If the defendant fails to comply with the disclosure request, a presumption of breach of the duty of care would arise.

The rebuttable presumption of causation was designed to address the plaintiffs' difficulties in proving a causal link between a breach of the duty of care and the output generated by the AI system, or between the absence

of such output and the resulting damage. To establish a (rebuttable) presumption of causation, the following three conditions should be met:

1. The plaintiff has proven a breach of the duty of care, or the court has established fault arising from a breach of the duty of care, regarding the duty to disclose evidence.
2. Based on the circumstances of the case, it can reasonably be inferred that the wrongful conduct influenced the output generated by the AI system.
3. The plaintiff has demonstrated that the output generated by the AI system caused the damage. In the case of high-risk AI systems, an exception to the presumption of causation would be permissible only if the defendant proves that the plaintiff had sufficient evidence and expertise to establish causation. If the case does not involve a high-risk AI system, the presumption of causation applies only if the court determines that the plaintiff would face difficulties in proving the causal link.

Conclusion

Appropriate legal regulation of liability for healthcare-related damages is more crucial than ever. At the EU level, achieving consensus is likely to be challenging, given the diversity of interests among stakeholders. There is likely some truth to the notion that AILD was removed from the agenda primarily for pragmatic reasons, namely to preserve the EU's competitiveness in the field of AI. Notably, this may prove to be a strategic misstep,

as Member States are likely to adopt divergent national laws, which may complicate compliance and operations for companies within the EU. AI system manufacturers, however, welcomed this development, as they consider that the *AI Act* already provides sufficient mechanisms for the protection of users.

In my view, ensuring safe healthcare delivery in the future requires establishing clear conditions and safeguards so that only AI tools suitable for medical use are deployed. These systems should be safe, rigorously assessed, and properly certified before being placed on the market. Furthermore, it is crucial that healthcare professionals use these systems responsibly, not only in accordance with the specific requirements of the AI tools, but also in accordance with the fundamental principles of the doctor-patient relationship and the standards of safe, appropriate, and effective care. Liability for damages (and other forms of liability) should be appropriately allocated among the various stakeholders in the healthcare ecosystem. It is particularly important to ensure appropriate evaluation, oversight, and supervision of the implementation of such practices, as this is the only way to enhance patient safety without stifling technical innovation.

Above all, it must be recognised that despite its high effectiveness, AI cannot replace human judgment and responsibility in healthcare. Only healthcare professionals can provide patients with compassionate care and emotional support during treatment and, in partnership with patients, make shared decisions regarding their care. Scientific

progress should therefore never be placed above humanity and empathy.

AI Disclosure Statement

The author confirms that no artificial intelligence tools were used in the preparation of this manuscript.

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From Precision Medicine to Precision Health: Preventive Care and Equity in an Ageing Society



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Precision medicine has become one of the defining ambitions of contemporary health policy: to refine diagnosis and treatment so that interventions are more effective, less toxic, and better aligned to individual biology. Its scientific achievements are real and impactful for patient care. Yet Europe's most consequential health pressures over the coming decades will be shaped less by insufficient therapeutic precision than by predictable demography, unequal exposure to modifiable risks, and persistent failures to deliver prevention at scale. A recurring problem in prevention policy is that failure is often attributed mainly to individuals. People may decline screening or laboratory tests, parents may withhold consent for childhood vaccination, and many do not follow health advice or change behaviours associated with higher risk.

This is the rationale for a shift toward precision health. Properly understood, precision health is an orientation of the health system towards anticipatory prevention and early action. In an ageing society, the sustainability of advanced treatment pathways may depend on whether preventive and early-detection systems can meaningfully reduce avoidable burden upstream [1,2].

Cancer prevention is a strong test of that approach. Cancer rates are shaped by ageing populations, unequal access to care, and the growing strain on health systems. At the same time, treatment costs are likely to rise as more people live longer and survive cancer, even though much of the cancer burden is still associated with risk factors that can be reduced or prevented. In 2019, risk factors included in the Global Burden of Disease analysis accounted for 44.4% of all cancer deaths globally, underlining how much burden is addressable upstream [3,4]. The decisive barrier is not ignorance of what works; it is the design and governance of delivery. Recent European Union (EU)'s modelling suggests that meeting tobacco reduction targets alone could prevent around 1.9 million new cancer cases in the EU between 2023 and 2050, illustrating the scale of preventable burden when prevention is treated as system infrastructure [4].

Why Ageing makes Prevention an Ethical and Operational Necessity

Europe is moving into a demographic configuration in which multimorbidity becomes the norm rather than the exception. Ageing increases cancer incidence even if age-specific risks remain stable, while improved survival expands the population living with cancer and requiring follow-up and long-term care. In such a context, the opportunity cost of prevention failure grows. When systems over-invest in late-stage rescue while underbuilding prevention capacity, they do not merely become inefficient. Instead, they institutionalise avoidable morbidity and distribute these rates along predictable lines of

social advantage and disadvantage [5].

This distributional point matters significantly to health systems. Health equity is commonly framed as ensuring that everyone has a fair and just opportunity to be as healthy as possible; achieving it requires removing obstacles to health that are unequally distributed [5]. A recurring problem in prevention policy is that failure is often attributed mainly to individuals. People may decline screening or laboratory tests, parents may withhold consent for childhood vaccination, and many do not follow health advice or change behaviours associated with higher risk. This explanation is incomplete and, in policy terms, unhelpful. It obscures the fact that participation is shaped by predictable constraints – time scarcity, insecure employment, language barriers, administrative friction, fear or stigma, prior negative experiences, and mistrust – many of which are socially patterned. If a programme assumes that everyone is informed, confident, and able to make time, it will mostly benefit the people who already meet those conditions. The result is an equity failure produced by design [6]. Precision health, therefore, requires what can be called an ethics of design, where prevention is built in such a way that the most constrained individuals can still realistically participate.

Human papillomavirus (HPV) vaccination and cervical screening are well suited to illustrate the governance problem, with strong evidence bases, clear target groups, and measurable outcomes. The World Health Organization has

set explicit 90-70-90 targets for cervical cancer elimination by 2030: 90% HPV vaccination coverage among girls by age 15, 70% screening coverage with a high-performance test by age 35 and again by age 45, and 90% treatment for those with disease [7]. The existence of targets, however, does not guarantee delivery. When vaccination or screening rates remain low, the problem is usually not the clinical evidence. More commonly, it is one or more of the following: fragmented accountability (no single actor owns equitable coverage), weak data-to-action loops (under-uptake is measured but not actively corrected), insufficient integration with trusted delivery sites (schools, primary care, community services), and underestimation of trust and misinformation dynamics. Across many areas of prevention, services are available but participation is uneven, especially among the people who stand to benefit most.

Europe's Beating Cancer Plan represents an important recognition that prevention and early detection must sit at the core of cancer policy. As it emphasises prevention, screening, and equity as strategic priorities, it provides a European framework for national action [8]. A high-level plan, however, cannot substitute for local delivery capacity, stable financing, and practical access design, leading to the consideration of three operational implications.

First, equity cannot remain a post-hoc metric. If performance is reported only as a national average, inequities may remain invisible or politically tolerable. Precision health requires routine disaggregation (e.g., by deprivation, geography, and relevant sociodemographic

indicators) and explicit accountability for closing gaps. Second, prevention capacity needs to be sustained over time. It is especially vulnerable to political change and budget pressure because its benefits emerge gradually and are often less visible than those of clinical care. Yet that is precisely why prevention must be financed and governed as infrastructure. Short-term campaigns and pilot programs do not create the institutional muscle needed for sustained uptake. Third, delivery must be designed around real behaviour. Booking complexity, inconvenient appointment times, low-quality risk communication, and lack of navigational support create friction that disproportionately affects disadvantaged groups. By contrast, participation often improves when access is made easier. Clear invitations, simple scheduling, reminders, and supportive follow-up can improve uptake without coercion while preserving respect for autonomy.

What Precision Health Requires in Practice

For precision health to work in practice, it needs a clear model for delivery, with clear responsibilities, measurable outcomes, and systems for feedback. Five requirements are especially important in real-world use: governance and accountability, infrastructure that can turn data into action, workforce and funding capacity, trust-building engagement, and service design that makes participation easy.

1. *Equity-sensitive accountability.* Health leaders should assess programmes not only by overall coverage, but also by whether they reduce gaps between groups. Prevention indicators should

be published routinely by age, sex, geography, socioeconomic position, migration status, and other locally relevant factors. Responsibility for investigating low participation and addressing it should be clearly assigned, rather than limiting oversight to reporting alone.

2. *Data-to-action loops.* Where possible and legally permitted, health leaders can connect registries, immunisation records, screening data, and primary care systems to identify people who are overdue and contact them directly. Where that is not possible, they can rely on practical alternatives such as call-recall systems, prompts in primary care, and partnerships with community organisations. In either case, the process should be clear and complete: identify, contact, follow up, and record the result.

3. *Stable prevention financing and workforce capacity.* Prevention needs stable long-term funding and clear workforce planning. Capacity has to be planned, not assumed. Staffing, time, and task allocation, especially in primary care and community settings, should match the goals of the programme and the needs of the groups it is meant to reach. As a service design and clinical issue, it should be taken seriously in commissioning and performance management.

4. *Trust as a governance outcome.* Health leaders can view trust as a key measure of effective governance. Trust affects prevention uptake and can be undermined by weak communication, low institutional credibility, or processes perceived as opaque. HPV vaccination

showed how easily participation can be affected by public controversy and concerns about how a programme is run. Trust is stronger when health authorities are open about benefits and harms, respond quickly to concerns, and adapt outreach to communities with lower access or lower trust in institutions.

5. *Behavioural and psycho-cognitive design as a quality domain.* Programme quality should include the cognitive and logistical demands placed on participants (e.g., number of steps, clarity of information, ease of rescheduling, privacy, stigma considerations). Behavioural interventions (reminders, prompts, navigation support, default scheduling) can improve uptake, but effects are context-dependent and should be implemented as testable components within a continuous quality-improvement approach rather than as a universally effective solution [9]. Ethical acceptability depends on transparent intent, proportionality, and easy opt-out/refusal processes – not on the absence of design.

The Role of Medical Associations

Medical associations and clinicians can strengthen precision health by aligning with how prevention works in practice and whether it reaches different groups fairly. First, they can help define and disseminate benchmarks for prevention delivery that include equity-sensitive indicators, not solely aggregate coverage. Second, they can advocate for prevention as enabling infrastructure: stable financing, interoperable information systems where feasible, and delivery

capacity commensurate with stated targets. Third, they can support credible, evidence-based communication by equipping clinicians to address misinformation in a non-stigmatising manner and by promoting culturally competent approaches to consent and counselling. Fourth, they can normalise equity auditing as routine professional practice. Systematic prevention gaps are generally patterned rather than random; treating them as remediable performance issues links professional ethics with accountability mechanisms.

Conclusion

This text presents the case that prevention is one of the clearest ways to make precision health meaningful in practice. In ageing societies, this matters not only for sustainability, but also for equity. Cancer prevention brings this concept into focus because effective interventions already exist and progress can be measured. The central challenge is therefore not the absence of evidence, but whether health systems can deliver prevention in ways that people can realistically access and use. This approach requires trust, stable funding, sufficient workforce capacity, and services designed to reduce barriers to participation, especially for underserved groups. From this perspective, precision health should be judged by its ability to reduce preventable illness, death, and avoidable inequality.

AI Disclosure Statement

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Interview with Experts in Patient Advocacy and Engagement



Clarinda Cerejo



Caitlin Rich

For this interview, Clarinda Cerejo and Caitlin Rich, hosts of the “Not Just Patients” [podcast](#), describe the need to reinforce patient engagement and shared decision-making in physician-patient interactions. Their award-winning podcast aims to break barriers to meaningful patient involvement in healthcare, by challenging patient stereotypes, highlighting successful collaborations in healthcare, and sharing energising tales of turning adversity into advocacy. In this interview with Dr. Helena Chapman, the WMJ Editor in Chief, they comment on how their lived experiences and training facilitated their podcast leadership, describe systemic gaps in health systems, and propose how physicians

can advance efforts to ensure physician-patient rapport and better quality of care.

Tell us more about the “Not Just Patients” podcast and how your collective roles as podcast co-hosts have created an inclusive and informed community.

Clarinda Cerejo: We started the “Not Just Patients” podcast in April 2024, shortly after we met at the Patient Expert Training programme run by the European Patients Academy for Therapeutic Innovation (EUPATI). During the programme, we learned about the value of patient involvement across various stages of the medicines development process. We started the podcast as a way to continue our learning and highlight for a broad audience the value that patient perspectives can add to all aspects of healthcare, even beyond medicines development. This mission holds deep significance for us, both as patients living with rare and chronic diseases, and as professionals working in healthcare communications and stakeholder engagement. The “Not Just Patients” podcast aims to break down barriers to meaningful patient involvement in healthcare. By talking about the barriers and opportunities to patient engagement from different stakeholders’ lenses, we highlight the infinite possibilities for patients to bring value and create impact throughout the healthcare continuum.

Caitlin Rich: Patient engagement should be implemented across all facets of the healthcare system, and

therefore requires collaboration from all stakeholders. The “Not Just Patients” podcast lives up to its name: it is for everyone, not just patients! Our guests and audience represent a diverse variety of stakeholders from across the healthcare ecosystem and around the world, including physicians; patient advocates; pharma representatives; regulatory, policy, medical publishing experts; and healthcare agency leaders. As hosts, we also bring our unique perspectives and experiences: I live in London and have been living with cystic fibrosis since birth, while Clarinda lives in Mumbai and was diagnosed with neuromyelitis optica spectrum disorder in her 20s.

While we interview globally recognised experts on highly technical topics, we break them down with practical advice and real-world examples, making each episode accessible and actionable for all. We recognise that no one expert holds all the answers on any topic, so while our guests share deep knowledge, the conversations are designed to spark reflection and challenge assumptions. We encourage listeners to share their stories, successes, and questions, fostering collective learning for everyone. While this journey started as a passion project to champion patient engagement, we have led this podcast for two years, releasing over 24 monthly episodes, ensuring steady audience growth, and receiving two business awards.

From the patient's perspective, can you describe three primary systemic gaps in health systems that challenge physician-patient rapport and quality of care?

Clarinda Cerejo: In my experience, some systemic and cultural issues can undermine shared decision-making from the outset. One gap is the inherent power imbalance between physicians and patients, where doctors are viewed as superior authorities. If physicians do not actively work to rebalance this dynamic, patients have little chance of achieving true parity. A second gap stems from the paternalistic “doctor-knows-best” attitude, which flows directly from the power asymmetry. When physicians overuse jargon or adopt a patronising or dismissive tone, even unintentionally, patients feel unwelcome to ask questions or voice differing opinions.

A third gap lies in viewing patients as cases, rather than unique individuals. With artificial intelligence (AI) and digital tools providing better on-demand access to medical information, patients can become more informed and willing to partner in their treatment decisions. However, not all patients want to be partners, which is why physicians must view patients as individuals and meet them where they are. As Dr. Victor Montori commented in one of our podcast episodes on shared decision-making, “Treating all patients with the same condition as *cases* rather than as *individuals* with distinct preferences and life circumstances does not allow physicians to see patients in high definition.”

Caitlin Rich: First, although physicians endure years of gruelling, intense training in science,

medicine, and clinical practice, they receive little instruction in key “softer skills” (e.g., communication, empathy, conflict management). It is encouraging to see growing education on these topics for medical students and practising physicians, but we still have a long way to go until it is ubiquitous. Second, consultations face strict time constraints with little flexibility to extend appointments. This makes it difficult for physicians to build rapport and trust, confirm patient understanding, field questions, and obtain a holistic view of patients’ history and lifestyle. While systemic changes are not always feasible, tangible strategies can help overcome these time constraints. For example, physicians can ask patients to complete pre-appointment surveys, share resources for self-paced learning, and offer access to the wider clinical team (e.g., nurses, pharmacists, psychologists) for ongoing questions and concerns. Third, as physicians experience burnout, and patients experience emotional distress, this dynamic can create tension between physicians and patients, requiring empathy from both sides to bridge the gap.

Clarinda Cerejo and Caitlin Rich: Although we initially answered these questions independently, we recognise that our comments reflect our distinct cultural contexts and healthcare systems. These differences often arise in our podcast discussions, uniquely positioning “Not Just Patients” to highlight health inequities and compare patient engagement practices across regions.

How can physicians best evaluate patients’ health and digital literacy to ensure their equitable access to care and

understanding of medical information?

Clarinda Cerejo: Once again, it starts with meeting patients where they are. The best way for physicians to evaluate comfort levels is to ask patients whether they would like additional reading materials, whether they are comfortable reading in the consultation’s language, and if they have access to a device for viewing online videos. Having accessible medical information tailored to grade-school (age 11-14 years) reading levels can be invaluable for addressing common patient questions and information needs. In countries where multiple languages are spoken, localising this material can further enhance its effectiveness.

In some of my own consultations, I have found it extremely beneficial when physicians have shared videos or photos directly on their computer screen and explained relevant details in real-time. This model offers an immediate education opportunity, allowing physicians to gauge patients’ ability to comprehend, while opening up space for questions during the consultation. The key is avoiding a one-size fits-all approach and rather keeping various options available to best suit patients’ needs.

Caitlin Rich: My advice is to treat every patient as an individual, ask questions, and listen attentively. Avoid assumptions based on stereotypes, such as assuming a person’s tech-savviness from age or language fluency from appearance. Every consultation requires sharing a bare minimum of essential information so patients can understand their condition and follow health recommendations.

After sharing this information, invite further questions or deeper discussions on specific topics, as patients' responses will reveal comprehension levels and desired detail. At the end of an appointment, ask patients to repeat back the next steps, which will confirm if they fully understand the information discussed.

Remember that most people can only absorb limited information in one meeting, especially during emotional or distressing medical circumstances. Sending patients home with accessible resources to review at their own pace can be incredibly helpful. Patient organisations and advocacy groups often provide resources specifically designed for patients. Physicians can consider their patients' needs and prepare a range of resources with different topics, depths, and formats (e.g., larger fonts, child-friendly layout, multiple languages) for patients to choose from.

How can physicians' sustainable engagement in shared decision-making with patients in clinical practice improve patients' satisfaction, adherence to treatment, and overall health outcomes?

Clarinda Cerejo: Shared decision-making is the process whereby patients and physicians work together to make informed decisions related to patient care, considering the best available evidence alongside patients' values and preferences. As a science communication professional newly diagnosed with a rare disease, I was dismayed to find the scarcity of research publications on my rare disease. I brought all relevant research papers I could find to my medical consultations, expecting physicians to engage with me as

someone deeply invested in the science behind their decisions. Unfortunately, I perceived that my actions made physicians uncomfortable, and I was frequently dismissed.

The physician I eventually chose as my primary consultant embraced my research-oriented mind, answered my questions thoroughly, and collaborated with me on treatment decisions. Now, 15 years later, I often share this interaction as life-changing, because it not only brought positive medical outcomes but also served as the pivotal event that led me to pursue patient advocacy. In this sense, my first experience of true shared decision-making had a profound, snowballing positive impact on my life.

Caitlin Rich: When I first left home for my university studies, I suddenly found the burden of managing all my treatments, alongside self-care, studying, and socialising, to be overwhelming. As a result, I avoided all treatments that required anything more than swallowing a pill. While it made life easier and more fun, my health declined over time, eventually leading to hospitalisation. My doctor scolded me and insisted that I resume all medications, while adding new treatments due to my worsened condition.

Unfortunately, behaviour change is not that simple, and I lacked time in my daily schedule to manage all treatments, continue my academic routine (e.g., studying, socialising), and recommended health behaviours (e.g., adequate sleep, physiotherapy, exercise, consuming over 3000 calories a day). Although I agreed to adhere to these recommendations, I was unable to

follow through. During my next consultation, I was honest about my situation with a different physician I already trusted, and together, we developed a care plan that incorporated the most important treatments while suiting my lifestyle. This physician invited a nurse and psychologist to discuss habit stacking to support behaviour change, switched me from a nebuliser (requiring 15 minutes, refrigeration, and cleaning) to a portable inhaler (taking 2 minutes before brushing my teeth). Though not the absolute best treatment per data guidelines, it improved adherence (*some medication vs none*) and health outcomes significantly.

As demonstrated by my own personal experiences, shared decision-making empowers patients with the knowledge, confidence, skills, and motivation to manage their own health. This is particularly important for chronic conditions, where care must seamlessly integrate into daily life over the long-term. If you would like to learn more about shared decision-making from the physician and patient perspectives, I highly recommend two "Not Just Patients" episodes: one with Victor Montori (physician perspective) and one with Estelle Jobson (patient perspective), offering practical tools for individual and systemic implementation.

How can physicians empower the global community to collectively address patient engagement and advocacy efforts?

Clarinda Cerejo: Physicians have a powerful and unique role in the healthcare ecosystem. Among all healthcare stakeholders—drug manufacturers, hospital administrators, payers, and policymakers—physicians are the

ones who have maximum direct and meaningful access to patients. In fact, as their perspectives are often used as a proxy for patient perspectives, they hold significant power to influence patient engagement and advocacy across multiple levels.

The beauty of patient engagement and advocacy lies in its flexibility, differing in scale and form based on objectives and available resources, from in-clinic to community and then to global engagement. First, in-clinic engagement and advocacy require that physicians see the patient as a whole person, ask the right questions and actively listen, simplify complex medical information, and encourage shared decision-making. Second, community advocacy and engagement might involve activities like sharing more patient stories, raising awareness of healthcare issues (via podcasts, lectures, social media, editorials, blogs), reducing stigma through seminars at schools and workplaces, and supporting local advocacy efforts (e.g., amplifying messages on social media, donating to advocacy groups, participating in fundraiser events). Finally, national and global advocacy and engagement incorporate partnering with patient authors for research publications, integrating patient voices into programming for medical conferences, serving on

regulatory committees that matter to patients, and becoming involved in international projects (e.g., World Health Organization, United Nations) related to meaningful patient engagement.

Although physicians often refrain from engaging in patient advocacy due to perceived time and resource constraints, advocacy is inherently scalable and can be adapted to available capacity. Notably, in-clinic efforts can be just as powerful as global advocacy. What matters most is for physicians to leverage their strengths and skills to try and bring more patient voices into rooms where they have influence.

Caitlin Rich: As a first step, physicians can explore patient engagement and advocacy efforts in their own space. They can research patient advocacy organisations and events related to their disease expertise, region, or interests, learn about their activities, and identify how they might become involved. They can review advice on supporting patient care and then implement one small change in their clinical practice and monitor improvements. They can explore ways to support patient engagement beyond the clinic; patients can (and should!) also be invited to help shape research, regulations, reimbursement, policy, and healthcare systems. “Not Just Patients” episodes are available on

a range of healthcare topics if any health professional would like to learn more.

Once health professionals gain experience in patient engagement and advocacy, they can share insights with their peers. For example, what did they do, why did they do it, and what was the impact? Their stories and example can motivate and empower others. Change at a personal level can drive change at the department level, and then locally, regionally, nationally, and ultimately worldwide.

AI Disclosure Statement

The authors confirm that no artificial intelligence tools were used in the preparation of this manuscript.

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Constitutional Court and “Administrative Solutions” for Physician-Assisted Suicide in Italy



Marta Perin



Carlo Botrugno

Medical Assistance in Dying (MAiD) is a regulated process where a physician or nurse practitioner helps a mentally competent patient intentionally end their life at their own request. This practice involves either the direct administration of a drug by the clinician (euthanasia) or the prescription of a medication for patient self-administration (physician-assisted suicide, PAS). The right to die is among the most ethically and legally complex issues in bioethical discourse since the discipline's origins.

Numerous ethical arguments supporting the right to die are grounded in the principles of dignity, bodily integrity (particularly in the context of suffering), and autonomy (freedom of choice).

Together, these principles support a broader understanding of personal self-determination that includes the possibility of choosing to anticipate one's own death. In sharp contrast, arguments such as the slippery-slope objection, protection of vulnerable groups, dignity of life, and related concerns have been invoked to oppose the legal recognition of the right to die [1].

Despite ethical debates, MAiD remains a central to the social, clinical, and cultural landscape of many Western countries, where research consistently shows generally favorable stakeholder attitudes [2]. Over the past decade, MAiD legalization has expanded globally, with countries adopting different regulatory frameworks governing eligibility, assessments, and integration with health, social care, and end-of-life systems [1]. MAiD remains highly debated in several countries, with Italy representing one of the most controversial cases.

MAiD and Italy: A Complex Landscape

Under Italian law, PAS and euthanasia are prohibited by *Article 580* and *Article 579*, respectively, of the 1933 Penal Code. *Article 580* establishes criminal liability for anyone who “*instigates another to commit suicide, or reinforces another's intention to commit suicide, or facilitates its execution in any way,*” while *Article 579* criminalizes the act of directly causing a person's death, even with their consent (consensual homicide). Specifically, regarding “incitement or aiding suicide,” *Article 580* states that

“Anyone who instigates another to commit suicide, or reinforces another's intention to commit suicide, or facilitates its execution in any way, shall be punished, if the suicide occurs, with imprisonment from five to twelve years. If the suicide does not occur, but an attempt is made, the penalty shall be imprisonment from one to five years, provided that the attempt results in serious or very serious bodily injury. No punishment shall be applied if the suicide attempt does not result in injury.”

In parallel, the right to self-determination has gained an increasingly central role within Italian jurisprudence, particularly with the *Law 219/2017* (“Law on informed consent and advance healthcare directives”). It draws on *Article 32* of the Italian Constitution – which states that “*no one may be obliged to undergo any given medical treatment*” – and the principles of dignity, autonomy, relationship of care, and respect for bodily integrity. The law affirms the right to self-determination in healthcare decisions, including those made at the end-of-life, marking a significant milestone in the protection of patients' rights. It ensures access to comprehensive information, effective pain management, and palliative care, while promoting active participation in clinical decision-making.

The *Law 219/2017* provides a clear legal framework for expressing advance directives and advance care planning regarding life-sustaining treatment, including the possibility of refusing or discontinuing such treatment, such

as artificial ventilation, artificial nutrition, and artificial hydration. The law incorporates four key ethical, clinical, and legal concepts as follows:

- *Appropriate care:* The obligation of healthcare professionals to provide treatment and interventions are clinically justified, proportionate, and aligned with patients' values and goals.
- *Prohibition of unreasonable treatments:* Patients cannot be subjected to treatments that are futile, disproportionate, or excessively burdensome relative to the expected benefits. It protects individuals from interventions that prolong suffering without offering meaningful improvement in their quality of life.
- *Withholding or withdrawing treatment:* Patients have the right to refuse or discontinue medical treatments, even when such treatments are necessary to sustain life. Withholding treatment (not initiating a treatment) and withdrawing treatment (stopping an ongoing intervention) are ethically and legally recognised as expressions of patient autonomy, rather than acts intended to cause death.
- *Palliative care (e.g., palliative deep and continuous sedation):* Patients' right to care are focused on relieving suffering and improving quality of life (e.g., symptom management, psychosocial support), especially for patients with serious and/or terminal illness. Deep and continuous palliative sedation may be used in cases of refractory symptoms, which consists of reducing consciousness to alleviate intolerable suffering

while providing basic care.

Furthermore, four tools can help ensure personal autonomy across present and future contexts, including:

- *Informed consent:* A competent individual agrees to a medical intervention (treatment, procedure or trial) after receiving, understanding, and considering all relevant information. It requires disclosure of the diagnosis, nature of the intervention, risks, benefits, and alternatives.
- *Advance directives:* Legal documents (e.g., living wills, durable powers of attorney for healthcare) allow individuals to specify in advance their preferences for medical treatment, including life-sustaining care. They only take effect if a person becomes unable to communicate their own decisions.
- *Shared care planning:* This collaborative, patient-centred process involves patients and clinicians, together with families and other healthcare professionals, jointly planning future care pathway by defining treatment options and supportive measures.
- *Surrogate decision-maker:* A legally or informally appointed person who makes healthcare or financial decisions on behalf of an individual who lacks the capacity to make their own decisions. They act based on the patient's known wishes, values, and preferences (substituted judgment), or if unknown, in their best interest.

The Case of DJ Fabo

In 2019, the Italian Constitutional Court – Italy's highest authority after Parliament – ruled on the case of Fabiano Antoniani, a young man who was tetraplegic and who, under *Law 219/2017*, could have accessed the withdrawal of life-sustaining treatments and deep palliative sedation. Since he was not fully dependent on artificial ventilation, discontinuing treatment would have led to death within a few days. However, in Fabiano's view, this perspective did not represent a dignified way to end his life, and he requested "a different way of departing from life," one that would be faster and entail less suffering for himself and his family.

The Italian Constitutional Court recognised that, "*The absolute prohibition of assisted suicide ultimately limits the patient's freedom of self-determination in choosing therapies, including those aimed at relieving suffering (...) by imposing, in the final analysis, a single way to take leave of life (...) thereby violating the principle of human dignity as well as the principles of reasonableness and equality in relation to different subjective conditions*" [2] Then, it confirms that under certain circumstances, those who assist a person in pursuing their suicidal intent may not be punishable.

The Italian Constitutional Court's ruling explicitly refers to the ethical – not the normative framework established by *Law 219/2017* – highlighting several points of ethical convergence. Both the ruling and the law respond to the concern that the dignity of individuals at the end-of-life may be jeopardized by changing conditions of dying. They

share a focus on the relationship between care and dignity, emphasising the need to safeguard both. Moreover, they are grounded in a patient-centred approach that prioritises respect for personal dignity through the protection of both self-determination and vulnerability, ensuring that individuals are never abandoned in moments of fragility [3].

New Insight from Italian Constitutional Court

The Italian Constitutional Court ruling highlights the need to understand specific issues related to access to PAS. First, PAS is initiated by patients' explicit request rather than serving as a proposed treatment by healthcare professionals. Second, the ruling establishes specific eligibility criteria that patients must meet in order to access the PAS. Finally, the lack of uniform and immediate implementation of PAS across all Italian regions resulted in significant variability in organizational responses [4]. The five criteria governing access to PAS include:

- *Irreversible pathology:* The patient must suffer from an irreversible medical condition that cannot be cured or significantly improved.
- *Intolerable suffering:* The condition must cause physical or psychological suffering that the patient personally considers intolerable.
- *Dependence on life-sustaining treatments:* The patient must be kept alive by life-sustaining treatments (e.g., mechanical ventilation, artificial nutrition/hydration, other vital support systems).

- *Full decision-making capacity:* The patient must be fully capable of making free and informed decisions.
- *Clinical and ethical assessment:* These conditions must be verified by the National Health Service following a formal procedure, including medical assessments and ethical committee review.

Since the enactment of the Italian Constitutional Court sentence, developments in Italy have proceeded at two markedly different speeds. First, the Italian Parliament has approved a national law regulating medically assisted suicide. Second, opened by constitutional jurisprudence, citizens have requested that healthcare institutions assess whether they meet the required criteria, highlighting the legal and ethical need to provide clear answers to patients. Consequently, some Italian regions have started adopting internal procedures that promote justice, respect for self-determination, and the protection of vulnerable individuals faced with deciding upon PAS.

The Emilia-Romagna Regional Experience: Policy Addressing PAS

Emilia-Romagna (ER) became the first Italian region to issue a regional deliberation in 2024, establishing a clearly defined and uniformly applied pathway across all its healthcare facilities. Subsequently, Tuscany and Sardinia regions adopted regional laws in 2025 [5]. The regional deliberation implies the creation of two dedicated bodies – the “Area Vasta” Evaluation Commission and the Regional Clinical Ethics Committee (Comitato Regionale

per l'Etica nella clinica, COREC) – and delineates their respective role and responsibilities in PAS criteria assessment [6]. The “Area Vasta” Evaluation Commission, consisting of seven health experts in law, psychiatry, palliative care, and psychology, is responsible for assessing whether the PAS criteria are met and for providing a preliminary written response. The COREC, composed of 22 health experts in clinical practice, healthcare assistance, and bioethics, provides a second evaluation of the PAS criteria, highlighting the ethical issues and vulnerable situations.

In addition to “Area Vasta” Evaluation Commissions and the COREC, the ER regional deliberation was the first to establish a clear internal pathway with the procedural steps for assessing patient requests, which set a timeline that the Commissions, COREC, and healthcare organisations must follow. This framework offers a structured model for defining responsibilities and outlines the procedures for the request evaluations related to managing PAS assessment and implementation (Figure 1).

Focus on the COREC Activity

Between February 2024 and November 2025, a total of 11 PAS requests were submitted to the Healthcare Directorate of the ER region three in 2024 and eight in 2025 – related to neurological conditions, cancer, and psychiatric and other chronic illness. As these requests were assessed by the COREC, four of these cases met the PAS criteria and were subsequently completed. The ER regional pathway safeguards vulnerabilities in the context of PAS request, as it guarantees a

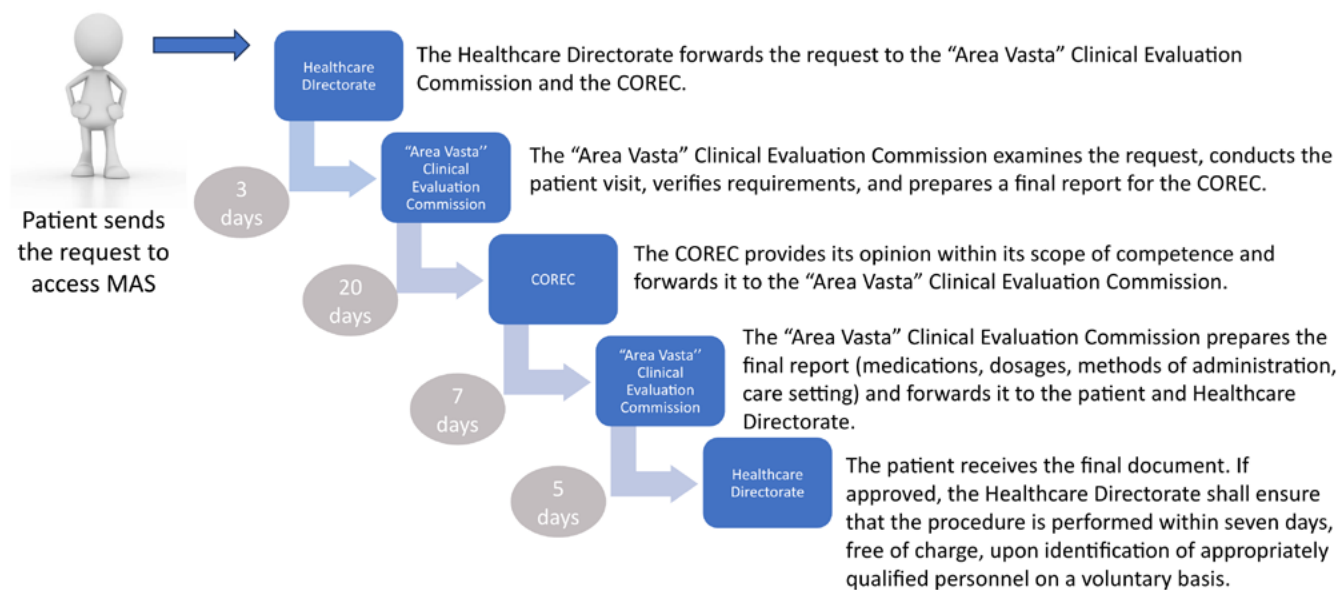


Figure 1. Procedural steps for managing patient requests for medically assisted suicide. Adapted by authors [7]. Abbreviations: Regional Clinical Ethics Committee, COREC; medically assisted suicide, MAS.

clear timeline to patients and families for multidisciplinary care management, as well as supports healthcare institutions in addressing this complex issue without national regulation.

The COREC evaluation addresses the vulnerability of patients and their family members, offering an ethical (rather than purely document-based) assessment, in close collaboration with the Evaluation Commission. Working together can expose challenges, particularly regarding complex definitions such as life-sustaining treatments and unbearable suffering, while raising broader ethical questions concerning the balance between self-determination and vulnerability in such contexts. Moreover, several practical challenges remain, including supporting patients who cannot self-administer medicine, the need for specialised staff and standardised protocols, concerns about territorial inequality, insufficient time to meet patients' needs, infrastructural limitations, and limited training to strengthen clinical competencies in palliative care.

Conclusion

The introduction of PAS requires the development of new ethical guidelines for healthcare professionals, clearly delineating the moral responsibilities and implications from clinical assessment to implementation. In Italy, the ER regional pathway represents a practical solution for providing healthcare professionals and citizens with a clear procedure for accessing PAS, in accordance with the principles of autonomy and equity. Furthermore, the pathway is particularly important given the absence of a national law regulating PAS.

Investing in evidence-based research on the practices and implementation processes can generate timely empirical evidence to assess the impact of the process and deepen understanding of the experiences of the actors involved. This information can help guide the development of high-quality recommendations to increase the acceptability of PAS within Italian society and the medical community. Since administrative

solutions are alone insufficient, regulatory frameworks that ensure national uniformity and equitable access are needed to uphold the principles of justice and respect for self-determination.

Author Contribution Statement

MP, CB, and LDP conceptualised the study, MP prepared the original manuscript draft, and LDP critically reviewed the manuscript. All authors contributed to the manuscript revisions and approved the final version for publication.

AI Disclosure Statement

The authors used artificial intelligence tools for language editing to improve grammar and clarity. The intellectual content, analysis, and conclusions remain entirely those of the authors.

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Physician Mental Healthcare and Professional Responsibility: Lessons from PAIME



María Isabel Moya



Álvaro Cerame

Physicians' mental health has ceased to be a private matter, often silenced, and has become a central issue of professional, institutional, and healthcare organisational responsibility. For far too long, physicians' psychological suffering has been interpreted through an individual lens: personal fragility, clinical disorder, addiction or deterioration of professional competence [1]. Although this perspective remains necessary when illness is present, the accumulated evidence compels us to recognise that a significant part of physician's distress has organisational, occupational, and cultural roots [2-4].

The II International Comprehensive Care Programme for Sick Doctors (Programa de Atención Integral al Médico Enfermo, PAIME) Meeting was held on 19 February 2026, in Alicante, Spain, offering a platform to discuss physicians' mental health within a global dimension. Using the "From Evidence to Action: Physicians' Mental Health Worldwide" theme, the event highlighted findings from the Mental Health of Nurses and Doctors survey in the European Union, Iceland, and Norway (MeND) survey conducted by the World Health Organization (WHO) Regional Office for Europe, as well as recent studies on physicians' mental health in Brazil and Spain, European experiences with specific care resources, and an international panel on sustainable support systems [5]. The underlying message was clear: it is no longer enough merely describe the problem, as the weight of the evidence now demands action.

Compelling Evidence for Action

Data presented at the II International PAIME Meeting, alongside the wider international literature on physician mental health, reinforced that view that healthcare professionals' mental health constitutes a critical indicator of healthcare system functioning. The association of burnout with on-call duties, sleep disturbance, poorer quality of life, the use of psychotropic medication, and other indicators of personal deterioration reinforces the idea that the problem cannot be attributed solely to individual vulnerabilities [3]. This evidence shifts the focus from individual

vulnerability to systemic and organizational determinants of physicians' mental health, shaped by work conditions, professional culture, health policy, and occupational health.

The MeND report, produced by the WHO Regional Office for Europe, is a cross-sectional survey conducted across 27 European Union countries, Iceland, and Norway, with 122,048 responses (including 90,171 valid responses) [5]. The study identified a high prevalence of anxiety and depression symptoms, thoughts of death or self-harm, impaired psychological well-being, and exposure to adverse working conditions. Researchers estimated that one in three physicians and nurses reported symptoms consistent with anxiety or depression, while more than 10% reported thoughts of death or self-harm. Furthermore, perhaps the report's most important contribution is its recognition that physicians' mental health cannot be separated from working conditions. Violence, harassment, excessive workload, long hours, night shifts, job insecurity, limited support and autonomy, and poor work-life balance are consistently associated with worse mental health outcomes [6].

Similarly, data presented by the Brazilian Medical Association reinforced the idea that suicidal behaviour among physicians cannot be interpreted exclusively as an individual problem, with researchers estimating that one in 10 physicians will, at some point in their lives, experience a situation of high suicide risk. The high prevalence of suicidal

ideation, plans, and attempts, as well as their association with emotional exhaustion, occupational frustration, self-prescribing, substance use, and cultural barriers to seeking help, highlight the need for specific, confidential, and non-punitive programmes [7]. Finally, findings from the IKERBURN study, promoted by the Spanish General Medical Council (OMC)'s National Section of Young Doctors, showed a particularly high prevalence of burnout among young physicians in Spain, with more than half meeting the criteria for full burnout [8]. Burnout among young physicians represents a structural risk to healthcare system sustainability, underscoring the need to integrate prevention, occupational health, and psychological support into human resources policies [8,9].

From Illness to Occupational Psychological Suffering

For years, physician support programmes have focused mainly on mental illness, addiction or deterioration in professional capacity that may compromise medical practice and patient safety. While this scope of action remains essential, another profile has become increasingly visible in recent years: physicians who remain functional and clinically competent, but who experience persistent burnout, moral distress, emotional exhaustion or occupational psychological suffering [2,3]. These highly committed and competent professionals may endure chronic stress, anxiety, emotional exhaustion, moral fatigue or loss of meaning for years without initially identifying themselves as unwell, continuing to work under overload and normalising distress as an inevitable part of medical practice. When suffering becomes chronic and begins to affect

clinical judgement, empathy, personal life, professional safety or the desire to leave the profession, it ceases to be solely an individual problem and becomes an indicator of systemic risk [9].

For PAIME, this changing context highlights the need to urgently address the transformation by identifying mental health risks and implementing timely preventive interventions to reduce risk of occupational psychological suffering. The classic profile of the "sick" physician is increasingly accompanied by a broader framework that recognises burnout, moral distress, and work-related psychological suffering as risk markers requiring preventive, organizational, and professional responses, without reducing all work-related suffering to psychiatric diagnosis [3,9].

PAIME as a High-value Professional Response

PAIME was influenced by North American physician health programmes, particularly state-based programs in the United States, and adapted to the Spanish medical and institutional context [10-13]. For almost three decades, PAIME has represented one of the strongest responses of the Spanish medical profession to mental illness and addiction among physicians. Its value lies not only in the care resources it offers, but also in its ethical architecture. PAIME is grounded in the premise that physicians can also become ill and must be able to ask for help without fear of stigma, automatic sanction or loss of professional dignity. Its pillars – confidentiality, trust, voluntariness, specialised care, and professional reintegration – have been essential in enabling physicians to seek

help during periods of significant vulnerability [4].

While supporting professional careers, protecting patients, and restoring dignity to physicians experiencing severe suffering, PAIME has also helped shift professional culture by breaking the silence that for decades surrounded physicians' mental illness. The programme extends beyond a care service, representing an expression of the medical profession's deontological responsibility, which is why it was created and is currently managed by the OMC [10,11]. With its high value and major impact, PAIME must not remain static, but should be preserved while also adapting to current evidence.

Evolving toward Occupational Health and Prevention

In the coming years, the challenge is to redefine PAIME beyond a care service for sick physicians, as a structural component of policies that protect physicians' health. Integrating PAIME into the occupational health ecosystem should not dilute its identity or turn it into an administrative human resources tool [3,5]. Its independence, professional legitimacy, and confidentiality must be preserved, while ensuring that independence does not imply isolation. As a safe space for physicians, PAIME can contribute to identifying risks, anticipating issues, and informing prevention policies through aggregated data, clinical experience, and professional knowledge. Physicians' mental health requires a strategy combining prevention, early intervention, specialised care, follow-up, professional reintegration, and institutional learning [12,13].

An Ethical, Systemic and Global Commitment

Caring for physicians' mental health is both an ethical obligation and a necessary condition for patient safety, quality of care and public trust in medicine, as noted in global documents like the WMA International Code of Medical Ethics and WMA Declaration of Geneva [14,15]. Patients need physicians who are competent, clear-headed, empathetic, and adequately protected to practise safely. Institutions need professionals who can remain in medical practice without being overwhelmed by the demands of the profession. Society needs healthcare systems that do not rely on the silent deterioration of those who sustain them. The medical vocation should not justify working conditions that harm physicians' health, nor should professional resilience be equated with an obligation to endure excessive stressors. A mature profession does not hide its suffering, but recognises, addresses, and transforms stressors into collective responsibility. Notably, junior physicians attending the II International PAIME Meeting underscored that new generations are clearly expressing that professional excellence must be compatible with health and personal dignity – a voice that represents one of the most necessary cultural corrections in contemporary medicine.

The II International PAIME Meeting demonstrated that physicians' mental health remains a global priority for the medical profession, highlighting shared experiences from the WHO and selected European and Latin American institutions. Physicians

worldwide should have access to dedicated mental health programmes that address the issue from a healthcare, social, and professional perspectives, ensuring confidentiality and non-stigmatization, while promoting physical and psychological rehabilitation, return to work, and quality of care. This consensus is consistent with the WMA Statement on Physician Mental Health Care, adopted in October 2025 in Porto, Portugal, which establishes a clear international framework for recognising physicians' mental health as a professional, ethical, and health policy priority and calls for prevention, access to confidential care, support during treatment and safe return-to-work processes [16].

Furthermore, the French Medical Association (Conseil National de l'Ordre des Médecins) shared its experience promoting physicians' mental health, describing how its national and regional structures organise listening, guidance, and psychological and social support services under strict confidentiality for physicians and residents facing difficulties. Among these resources, a free and confidential telephone helpline offers 24/7 psychological support, as well as social assistance during working hours. Like PAIME, this experience illustrates that professional medical associations can play an active role in regulating the medical profession and protecting physicians' mental health. It also underscores the value of programmes that support physicians through treatment, recovery, and safe return to professional practice [10,16].

Conclusion

The II International PAIME Meeting was timely and effectively demonstrated that physicians' mental health is closely shaped by the environments in which they practise. Understanding the risk of anxiety, depression, burnout, suicidal ideation, and substance use beyond the individual is essential, as these outcomes are consistently linked to work-related factors such as excessive workload, prolonged on-call duties, lack of rest, violence, harassment, precarious employment, limited autonomy, and weak institutional support. This evidence calls for a shift beyond exclusively reactive models toward integrating confidential care for physicians with prevention, early detection, occupational health, and improved working conditions to ensure safe, high quality patient care.

The PAIME programme of the 21st century must preserve its care function, while advancing towards prevention, early detection, integration with occupational health, outcomes evaluation, knowledge generation and institutional influence. Resources such as PAIME will remain crucial for caring for physicians with mental health problems and addictions, with a model based on confidentiality, trust, and specialised care that constitutes an asset of considerable professional and social value. The new context requires a strategic evolution of these programmes, with international evidence pointing to the future of PAIME, which cannot be limited to addressing harm once it has already occurred, but must establish itself as a fundamental tool of public health and professional responsibility. Protecting physicians' mental health requires preserving

quality of care, patient safety, and the human dimension of medicine, calling on medical associations, health authorities, and healthcare organisations to assume an unavoidable responsibility.

Author Contribution Statement

MIM and AC conceptualised the study and prepared the original manuscript draft. All authors critically reviewed and revised the manuscript and approved the final version for publication.

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The authors used artificial intelligence tools for language editing and proofreading to improve grammar, structure, and clarity. The intellectual content, analysis, and conclusions remain entirely those of the authors.

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Bioethical Issues in Surrogacy: The Case of Greece



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Our existence as humans and the continuity of our species rely on reproduction. Throughout history, people have expressed a strong desire to have children, driven not only by biological instinct but also by social, cultural, moral, and psychological factors. This aspiration reflects a fundamental human impulse to create, nurture, and ensure the legacy of future generations. Nowadays, this desire is increasingly challenged by rising infertility rates. Consequently, the pursuit of parenthood has become both a significant individual objective and an important issue at the global level, influencing ethical discussions, policy development, and progress in medical science.

Surrogacy raises a range of bioethical considerations relating to human dignity, individual autonomy, self-determination, principles of beneficence and non-maleficence, and the commercial aspects of the practice and equality. Far from being a modern phenomenon, surrogacy is as old as recorded human civilisation. Its earliest documented trace appears in the Old Testament (Genesis 16:15–16), describing the birth of Ishmael to Hagar (Sarah's slave), due to Sarah's infertility. This arrangement was closely mirrored

in the contemporaneous Code of Hammurabi (c. 1754 BC), which contained provisions for a childless wife to offer her husband a female slave to bear children on her behalf, with any offspring legally considered to belong to the wife. Similar practices persisted across the ancient world, as Homer's *Odyssey* (Book IV) referenced Megapenthes, Menelaus' son by a slave, born after his wife Helena could no longer bear children as a divine punishment. However, in the modern world, the first widely publicised surrogacy birth occurred in the United States in 1976, marking the beginning of surrogacy as a formally arranged and legally contested practice.

According to the World Health Organization (WHO), infertility affects one in six adults worldwide, leading to increased reliance on medically assisted reproduction technology (ART) [1]. Globally, around 30,000 children are born through surrogacy each year, with the global surrogacy market valued at US \$22.4 billion in 2024 here projected to reach US \$201.8 billion by 2034 [2]. These data underscore the increasing significance of surrogacy in addressing infertility and the evolving family structures on a global scale.

Greece, a nation of 10 million residents, faces low birth rates, an ageing population, and rising infertility [3]. According to the Hellenic Authority for Medically Assisted Reproduction, 194 embryo transfers to surrogates (81 births) occurred in 2022 and 192 transfers (51 births) in 2023 [4]. Although ART began in Greece in the 1980s, a comprehensive legal framework focused on

protecting the child was later established with two of the most liberal policies in Europe: Law 3089/2002 (amending the Greek Civil Code) and *Law 3305/2005* (describing the Application of Medically Assisted Reproduction, MAR). The current Greek Civil Code clearly separates biological from legal motherhood, acknowledging that the woman who gives birth is not necessarily the legal mother.

In Greece, the legislative framework governing surrogacy is comprehensive. First and foremost, *Article 5 §1* of the Constitution of Greece guarantees the right of every person to develop their personality freely, their personal autonomy, and the right to natural reproduction [5]. An unrestricted right to access ART methods is not granted, as it remains subject to strict legal conditions. Second, the *Article 3 §9* of *Law 3305/2005* declares that surrogacy for legal purposes refers to “*the case in which a woman becomes pregnant and gives birth (carrier, surrogate), after in vitro fertilization and transfer of fertilized eggs, using an egg foreign to herself, on behalf of another woman, who wishes to have a child but is unable to conceive for medical reasons.*” Third, the *Law 3089/2002* introduced the first comprehensive framework for MAR and incorporated surrogacy procedures and safeguards into the Greek Civil Code. Finally, the *Article 46* of *Law 5197/2025*, which amended *Article 1458* of the Greek Civil Code and replaced *Article 8* of *Law 3089/2002*, set stricter frameworks regarding surrogacy, where the acquisition of a child through surrogacy in Greece requires: 1) gestational

surrogacy, 2) applicant's medical inability to conceive, 3) judicial permission granted at the request of the intended mother with an irrevocable court decision, 4) written agreement that participation is voluntary and unpaid, and 5) both the surrogate and applicant residing in Greece [6].

Conditions for MAR Access

In Greece, only gestational surrogacy is legal, meaning that the surrogate has no genetic link to the child, and that the egg comes from the intended mother or donor. Surrogacy is permitted in clearly defined medical circumstances, such as cases of hysterectomy or uterine agenesis, as well as in cases of unexplained infertility. The Greek Civil Code protects surrogates from being separated from their biological children, which would raise ethical concerns and resemble infant trafficking, and permits MAR if natural conception is a) not possible, b) prevents serious disease transmission, or (c) preserves fertility. MAR, however, is not considered as an alternative route to parenthood, as the applicant must prove her inability in court with medical evidence, and it is sufficient if one partner in a couple is infertile.

Gender Suitability

A recent amendment, through *Article 46 of Law 5197/2025*, clarifies that the inability to conceive due to gender does not constitute a medical inability, as it aims to restrict surrogacy to medically necessary limits and prevent illegal practices. This amendment thereby excludes male same-sex couples and single men from eligibility for surrogacy. Although the Greek law recognizes gender-neutral civil marriage and

adoption by same-sex spouses, surrogacy laws only refer to women, raising constitutional concerns related to equality and non-discrimination, as well as broader ethical and social debates. For example, does allowing a single man to become a parent cause harm? Why should society object if a man is willing and capable to raise a child alone? If medicine is intended to benefit everyone, should certain ART procedures be restricted to women? The debate ultimately concerns the bioethical principle of justice: whether access to parenthood should be equal and whether restricting surrogacy to women constitutes discrimination. However, future judicial decisions by Greek Courts may determine that denying men access to surrogacy solely on the basis of gender violates equality rights, or even find the existing legal framework unconstitutional.

Furthermore, it remains unclear whether the Greek law applies only to *primary* infertility (e.g., following hysterectomy) or also extends to *subsequent* infertility (e.g., after childbirth). A Greek Court viewed surrogacy addressing *childlessness* as an exceptional measure, not an alternative route to expand a family, with infertility falling outside the scope of the law [7]. In my view, limiting surrogacy to individuals who do not already have children raises serious concerns under the bioethical principle of justice and equal treatment. Denying access to MAR because a first child already exists undermines equal access to medical treatment and restricts reproductive autonomy. Medical inability should therefore be assessed based on the individual's health condition at the time of evaluation, regardless of prior fertility.

Age Limit

Article 1455 of the Greek Civil Code permits surrogacy up to the age that corresponds to a woman's natural reproductive capacity, which *Law 4958/2022* defines as 54 years. Hence, women (including surrogates) aged 50 years and 1 day up to 54 years may access ART, only upon authorisation from the Hellenic Authority for Medically Assisted Reproduction. The current age limit in Greece raises concerns about older parents' ability to stay current with social, scientific, and technological changes and provide sustained care. Children's welfare could be affected if age-related issues prevent proper supervision, support, and safety. Considering the inherent physical risks of pregnancy, and documented increased complication rates among surrogate mothers, allowing surrogacy up to age 54 may heighten these risks [8-10]. Hence, a serious dilemma remains: the need to protect surrogates' health versus the altruistic desire to help others become parents, although such altruism should never endanger the surrogate's life or health.

According to *Article 1458* of the Greek Civil Code, the surrogate must be medically suitable for pregnancy, although the law offers no detailed criteria. Even though *Article 13 §2 of Law 3305/2005* requires her to undergo medical and psychological evaluations of her health condition at the time of examination, these findings cannot predict the psychological impact of pregnancy, hormonal changes, or environmental pressures. Surrogacy requires judicial authorisation, with courts reviewing legality rather than suitability, which establishes the legal mother as the woman

who received permission. This authorization is valid only when the court's decision is irrevocable, which can cause delays and stress, especially for the intended mother.

Altruistic Agreement

According to Greek law, surrogacy requires a written agreement of no compensation between the intended parent(s) and the surrogate, as well as her spouse or civil partner. If the surrogate is a foreign national, the agreement must also be provided in a language she understands. In cases where the intended parent is a single woman or an unmarried couple, the agreement must be executed as a notarial deed, enabling voluntary recognition of the child and ensuring a fully informed decision. In practice, agreements may attempt to regulate the surrogate's lifestyle (e.g., diet, exercise, social activities). In my opinion, any terms that unreasonably restrict the surrogate's autonomy or personal rights are inappropriate and unacceptable.

Under *Article 1458* of the Greek Civil Code, which is in line with the Oviedo Convention, surrogacy must be altruistic, and payments are limited strictly to: a) expenses related to achieving pregnancy, childbirth, and postpartum care, and b) compensation for lost income due to absence from work. Altruism requirements pose major bioethical challenges, as genuine altruism is likely among relatives and friends than among unrelated individuals. Online advertisements in Greece, including advertised availability, expectations, and fees, already reveal the existence of a clear surrogacy market. Although the law permits reimbursement of medical and pregnancy-related expenses, lost income (€10,000 or

equivalent of US \$11,600), and a fixed amount (€10,000-15,000 or equivalent of US \$11,600-17,400) for physical strain, the actual financial burden on intended parents is extremely high (€100,000 or equivalent of US \$116,000). In fact, this amount surpasses the annual income of the majority in Greece, raising concerns about surrogates who may have compromised autonomy when faced with economic or social pressures or coercion.

Under the recent amendment, *Article 46 § 2* of *Law 5197/2025*, surrogacy is allowed only when both the intended parent and the surrogate reside in Greece, which aims to reduce commercialization and prevent illegal practices such as trafficking. This change may create significant obstacles for Greek citizens living abroad who retain Greek nationality, as it raises questions of its constitutionality related to equal treatment between Greek residents and Greek citizens abroad. The residency requirement rises bioethical concerns regarding the principle of equal access to reproductive rights, as it ties legal surrogacy to location rather than citizenship. Furthermore, restricting surrogacy arrangements to residents may inadvertently drive Greek nationals abroad to seek surrogacy in less regulated jurisdictions increasing risks of exploitation and commercialization.

Surrogacy and Criminological Issues

Although current forensic data in Greece do not allow a precise assessment of human trafficking linked to surrogacy, documented cases have shown that crime rings have exploited women by trafficking eggs and coercing them

into surrogacy. The trafficking of illegal genetic material used in surrogacy procedures is considered as a form of human trafficking and is prohibited under *Law 3984/2011*. Accordingly, the question arises as to whether the strict ban on compensation may inadvertently encourage the emergence of illegal markets. Some argue that regulated payment could reduce exploitation, while others fear that it would merely shift criminal activity into more concealed forms. As *Article 26 §§5, 8* of *Law 3305/2005* sets penalties for violating surrogacy rules, unauthorised MAR practices, and illegal brokerage, stricter sanctions, especially targeting intermediaries, may be necessary to enhance deterrence of violations.

Conclusion

Since surrogacy is regarded as a prominent reproductive option, the growing commercialization of surrogacy has led to ongoing ethical debates regarding dignity and potential exploitation. The surrogacy process has both physical and psychological impacts on all parties involved, making clinical care, psychological support, and transparency essential to minimise potential harm. Greece, as one of the few countries to have legislatively regulated altruistic surrogacy, stands at a critical juncture. The recent amendment of *Article 46* of *Law 5197/2025*, which excludes male same-sex couples and single men on the ground that the inability to conceive due to gender does not constitute a medical inability, raises profound concerns regarding equality, non-discrimination, and reproductive autonomy. By linking eligibility to biological capacity rather than reproductive need, the Greek law risks transforming

surrogacy from a right into a privilege determined by gender. Clear and ethically informed policies are therefore essential as frameworks that shape clinical practice, psychological care, and the dignity of all parties involved. Responsible and robust regulation and ethical oversight are needed to ensure that surrogacy remains a pathway to parenthood without compromising the dignity and well-being of surrogates, intended parents, and children. By prioritising these values, surrogacy can fulfill its true promise of expanding reproductive possibilities while fostering empathy, autonomy, and respect for all parties.

AI Disclosure Statement

The author used artificial intelligence tools for language editing and proofreading only. The intellectual content, structure, analysis, and conclusions remain entirely those of the author.

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MedEdAfrica 2025 and the State of African Medical Education



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Africa continues to face a persistent health workforce paradox, with approximately 25% of the global disease burden but only 3-4% of the global health workforce [1]. Between 2010 and 2023, the number of medical schools across the continent grew from around 165 to 444, and Africa now produces over 225,000 health graduates annually from more than 4,000 training

institutions [2,3]. Despite this growth, Africa still faces a projected shortfall of 6.1 million health professionals by 2030 [3], one that is further compounded by fragmented education systems, misaligned curricula, and an outmigration rate estimated between 20% and 40% of physicians trained on the continent [4].

To address this workforce and training challenge, a unified continental and interdisciplinary platform, including medical education leaders, researchers, policymakers, faculty, and students, is needed for African medical schools to collectively identify, deliberate on, and respond effectively. In March 2025, African leaders took a significant step toward realising this vision through the inaugural Advancing Medical Education in Africa Conference (MedEdAfrica 2025). This commentary summarizes the key scientific outputs and outcomes of the MedEdAfrica 2025 and leaders' reflections about the present state and future trajectory of African medical education.

Scope and Scale

Held in Kigali, Rwanda, the initial plan of MedEdAfrica 2025 grew from a 500-person gathering to over 750 attendees, including 117 medical school deans from 34 African countries, 195 student delegates, 64 speakers, and representatives from the World Health Organization Regional Office for Africa (WHO-AFRO), the World Federation for Medical Education (WFME), the Association of Medical Councils of Africa (AMCOA), and the World Medical Association (WMA) [5]. Participants attended from all five African Union regions, reflecting both the scale of geographic engagement, as well as the practical reality that proximity reduces the structural barriers (e.g., cost, visa accessibility, travel logistics) that typically exclude African scholars from Global North conferences [5,6]. The conference featured 86 abstracts, including 32 oral and 56 poster presentations, spanning topics from artificial intelligence (AI)-driven simulation and competency-based education to social medicine, medical humanities, medical education during crises, and the role of the African diaspora. The digital reach was substantial, with over 123,000 total social media impressions and strong engagement across X, Facebook, and LinkedIn, underscoring the historically unmet demand for a continental platform for scholarly exchange among African medical schools.

Scientific Agenda

The intellectual quality and breadth of the program distinguished MedEdAfrica 2025 from a standard convening, with three sessions particularly standing out in the scientific agenda. First, the opening

plenary entitled, “2050 in Our Vision: Embracing Technology and Innovation in Medical Education,” convened four panellists who were deans and faculty from institutions across the continent, to examine how African medical education systems must evolve to remain relevant. There was consensus that AI, virtual simulation, and digital learning platforms must become embedded in teaching and assessment, rather than added as supplementary or ad hoc modules. The panelists also explicitly cautioned against importing uncontextualised models of innovation, calling instead for African-led approaches that are grounded in local infrastructure realities and disease contexts [5]. This framing around embracing transformative technologies, while insisting they be contextualised and African-owned, set the tone for other sessions throughout the conference.

Second, one presentation described an innovative district hospital clerkship model that was designed to train medical students in under-resourced settings, where they could develop relevant clinical competencies and were more likely to stay and practice in those communities after graduation. As a result, participants called for competency mapping in alignment with the local community needs. Finally, one interactive session entitled, “Competency-Based Medical Education (CBME) is Feasible and Essential for Undergraduate and Postgraduate Medical Education in Africa,” incorporated presentations and a structured debate on the feasibility of CBME in medical education. The majority sided with the opposing argument (CBME is not feasible), citing that it demands infrastructure, faculty capacity,

and functional health systems that remain out of reach for many African institutions [5]. This outcome was not a rejection of educational quality standards, but rather a claim by participants that externally developed CBME frameworks require African interrogation and contextualisation. The debate format will serve as a model for MedEdAfrica 2026, which will examine the question of global versus African-contextualised accreditation systems.

Consortium of Medical Schools-Africa (COMS-A) Foundation from Convening to Institution

At the heart of MedEdAfrica 2025, a historical moment occurred when the 117 deans in attendance separately convened, debated, and adopted the COMS-A constitution, establishing the governance structure for a continent-wide platform dedicated to transforming health professions education [5,7]. The following day, an inaugural Executive Committee of eight members was elected, overseen by an independent electoral commission comprising representatives from the WMA, WHO-AFRO, and WFME [5]. COMS-A provides a grassroots platform for collective ownership, grounded in the principle that African medical schools must lead (not just receive) the transformation of their education and health systems [7]. The strategic goals included the standardisation and harmonisation of health professions education curricula, development of continent-wide quality assurance benchmarks co-designed with national accreditation bodies, and support for collaborative research and faculty development across multi-lingual member institutions [8]. During the first year, the

COMS-A expanded to over 180 member institutions, with the University of Global Health Equity mandated to host a full-time secretariat in Rwanda. Its design addressed structural vulnerabilities that undermined previous African medical school associations including the absence of a permanent secretariat and governance gaps [5].

What MedEdAfrica 2025 Revealed

MedEdAfrica 2025 revealed three key findings that reflect the path forward for medical education across Africa. First, the high attendance and engagement data reflect the significant demand for peer-to-peer African medical education exchange, which has been systemically suppressed by the structural barriers of hosting events in the Global North. Over 90% of global health conferences take place in high-income countries, imposing cost-prohibitive registration fees, visa barriers, and travel expenses that exclude professionals whose contexts are central to the discussions [6]. This convening drew 750 participants from 46 countries, 50% above its initial projections, representing the predictable outcome of removing those barriers.

Second, the scientific program demonstrated that medical educators across the continent exhibit the expertise and determination to engage rigorously with challenging questions in health professions education. The scientific sessions reflect this prepared workforce through interactive debates on workforce migration and CBME, plenary on the history of African medical schools, and breakout sessions on AI, simulation, and social medicine. The missing element remains expanding the visibility of this

COMS-A platform to a continental scale with institutional legitimacy. Third, the unanimous adoption of the COMS-A constitution by deans from across the continent's linguistic, regional, and institutional divides demonstrated that collective African governance of medical education is structurally possible.

Looking Ahead to MedEdAfrica 2026

[MedEdAfrica 2026](#) will convene on 6-8 July 2026 in Addis Ababa, Ethiopia, co-hosted by the COMS-A and the Ministry of Health of the Federal Democratic Republic of Ethiopia. Under the theme, "Preparing Africa's Health Workforce for an Uncertain Future: Harnessing Partnerships, Technology, Innovation, and Leadership", the program is structured around four thematic tracks: (1) leadership, governance, and African ownership; (2) transformative technologies, AI, and simulation; (3) maternal, newborn, and child health alignment; and (4) learner-centered systems, including assessment and accreditation. With over 800 participants expected, the convening in Addis Ababa – as the seat of the African Union and a continental policy hub – signals an intentional effort to engage the regulatory and governmental actors needed to translate COMS-A's commitments translating into workforce and health system outcomes.

Conclusion

MedEdAfrica 2025 provides structural evidence that a continental platform for African-led medical education reform is feasible, timely, and capable of producing long-lasting institutional and systemic outcomes. The establishment of the COMS-A,

the high-quality scientific program, and participation across all five African regions constitute a foundation for continued scale-up. The challenge now is to sustain the momentum by adequately resourcing governance structures, publishing MedEdAfrica research in peer-reviewed literature, and advancing policy discussions initiated in Kigali through Addis Ababa and beyond. The WMA and its member organisations are well-positioned to engage in this work, with initial dialogue already underway with COMS-A as a key platform for African medical education. These early interactions reflect a shared interest in recognising Africa-led convenings as hubs for knowledge exchange and in exploring future collaboration.

Author Contribution Statement

AB, KLN, and BO prepared the original manuscript draft. JK, ASN, BTA, MN, and LG-T conceptualised the paper. All authors critically reviewed and edited the final manuscript.

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Sustainability in Surgery: An Initiative by the Surgical Society of Bangalore



Bodela Sree Vidhya



Prem Kumar A.

Climate change is one of the most significant global threats to human health, with healthcare systems contributing substantially to environmental degradation. The health sector is responsible for approximately 4.6% of global greenhouse gas emissions, and surgical services are among the most resource-intensive components [1,2]. Operating theatres function as high-intensity clinical environments, characterised by continuous energy demand and dependence on disposable resources, making them a critical focus area for sustainability interventions as surgical volumes expand globally.

Addressing sustainability in healthcare is increasingly recognised as a global priority and aligns closely with major international policy

frameworks, including the United Nations Sustainable Development Goals (SDGs). In particular, SDG 3 (Good health and well-being), SDG 12 (Responsible consumption and production), and SDG 13 (Climate action) underscore the need for health systems that are both environmentally responsible and socially equitable [3]. Building on these frameworks, the global surgical triple goal emphasises that surgical innovation must now be driven by sustainability to ensure that the expansion of essential care does not exacerbate global healthcare inequities [4]. This perspective shifts the focus from merely increasing surgical volume to ensuring that such growth is environmentally sustainable and ethically sound. The World Health Organization has further highlighted the urgent necessity of developing low-carbon, climate-resilient healthcare systems, especially in low- and middle-income countries where rapid expansion of medical services is occurring [5].

In this context, surgical practice warrants particular attention as a focal point for operational change. Operating theatres concentrate energy consumption, material use and waste generation within a single clinical setting, allowing targeted interventions to deliver measurable environmental benefits without compromising patient safety or clinical outcomes. This focus is particularly pertinent in India, where high surgical volumes, constrained public sector resources, and marked infrastructure variability mean that even incremental gains in efficiency can yield substantial environmental benefits and enhance healthcare system resilience.

Sustainability Strengths of the Indian Healthcare System

In India, the healthcare system serves a population of approximately 1.47 billion people, characterised by a high and heterogeneous disease burden, substantial reliance on resource-intensive hospital-based care, and pronounced urban-rural disparities in access and infrastructure. Consequently, healthcare delivery contributes to an estimated 2% of the national climate footprint, a proportion expected to increase with urbanisation, population growth, and rising demand for surgical care [2]. The heterogeneity of healthcare infrastructure across India provides a natural setting to assess the scalability and adaptability of sustainability initiatives across diverse clinical environments.

Over the past decade, three landmark national policies have strengthened environmental governance within India's healthcare sector. First, the Bio-Medical Waste (Management and Handling) Rules, first adopted in 1998 and revised in 2016, established standards for waste segregation and disposal. Second, the National Programme on Climate Change and Human Health was approved in 2019, under the National Health Mission, integrating environmental sustainability into health system planning. Third, the Health and Environment Leadership Platform, launched in 2017, has promoted the adoption of sustainable practices across Indian hospitals.

Linking Surgical Care with Sustainability Principles

Surgical care is inherently resource-intensive, requiring continuous electricity supply, substantial water use, energy-demanding sterilisation processes, and extensive reliance on single-use consumables. Life cycle assessment studies have shown that a single procedure is associated with a substantial carbon footprint, with reported emissions ranging from approximately 6 to over 800 kg of carbon dioxide equivalents depending on the type and complexity of surgery, anesthetic practices, energy use, and material consumption [6]. These challenges are particularly pronounced in high-volume public hospitals, where infrastructure constraints and workforce pressures limit the adoption of environmentally responsible practices.

In response to these challenges, the Surgical Society of Bangalore, under the leadership of Professor Prem Kumar (President), developed the Sustainability Initiative in 2025, to integrate global sustainability principles and practices into operating theatres within the Indian healthcare system. By improving sustainability in surgery, hospitals can enhance efficiency, reduce costs, and optimise resource utilisation. In fact, evidence indicates that environmentally responsible surgical practices can be implemented without compromising infection control standards or clinical outcomes [7]. Furthermore, the Sustainability Initiative aims to foster a culture of stewardship, accountability, and professional commitment across surgical specialties as well as throughout undergraduate medical education, postgraduate surgical training, and



Photo 1. Professor Prem Kumar, President (2025) of the Surgical Society of Bangalore, promoted the integration of environmental stewardship and clinical excellence during a monthly clinical meeting at API Bhavan, Bangalore, in September 2025. Credit: Surgical Society of Bangalore.

continuing professional development (Photo 1).

Specifically, the Sustainability Initiative incorporated a strategic framework to promote environmental stewardship with improved clinical outcomes through improved surgical knowledge (Sustainability in Surgery Booklet), operational efficiency (Green Operating Theatre Checklist), and cultural accountability (Oath for Sustainable Surgery).

1. Sustainability in Surgery Booklet.

This booklet outlines practical guidance on energy optimisation, rational use of consumables, biomedical waste segregation, and environmentally responsible procurement within the Indian healthcare system. By integrating education, operational change, and accountability into routine surgical practice, it emphasises the need for sustained system-level transformation over short-term interventions.

These recommendations align with existing infection control standards and clinical governance standards, demonstrating that sustainability can be embedded into routine surgical workflows.

2. Green Operating Theatre Checklist.

This checklist supports perioperative teams in making environmentally responsible decisions across all workflow stages, focusing on high-impact areas such as low-global-warming anaesthetic use and energy optimisation. By reducing unnecessary consumables and auditing waste segregation, it embeds measurable resource conservation into surgical routines, promoting environmental stewardship without compromising sterility or patient safety.

3. Oath for Sustainable Surgery.

The introduction of a professional sustainable oath marks a critical shift towards ethical

accountability and cultural transformation in surgery. Inspired by traditional medical ethics, it extends the surgeon's duty of care to include minimising environmental harm. As a formal pledge to deliver high-quality outcomes while protecting community and ecological health, it integrates sustainability into surgical identify and fosters long-term behaviour change across healthcare systems.

Conclusion

Within the Indian healthcare system, rising surgical demands, combined with finite resources, makes sustainability in surgery both a practical necessity and an ethical obligation. The Surgical Society of Bangalore's Sustainability Initiative demonstrates how locally led, professionally driven programmes can align global sustainability goals with national policy frameworks and routine clinical practice. By operationalising existing guidelines through education, structured tools, and ethical commitments, this model offers a scalable approach for other urban and teaching centres across India. Notably, it illustrates that sustainability initiatives can enhance efficiency and accountability without compromising patient safety. As climate change increasingly shapes population health outcomes, surgical communities must play an active role in reducing the environmental footprint of healthcare delivery.

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Renewed Ethos for the One Health Movement: A Book Review



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The national and international One Health movement has expanded substantially over the past two centuries, where four key figures (two physicians and two veterinarians) led the transformation of the perceived interconnectedness of human, animal, and environmental health. Initially recognised as the One Medicine concept, Rudolf Virchow (physician)

demonstrated the value of integrating medical and veterinary sciences in the 19th century. Building on these findings, William Osler (physician), James Harlan Steele (veterinarian), and Calvin Schwabe (veterinarian) advanced the One Medicine foundation to the modern One Health concept. Nowadays, the One Health High-Level Expert Panel, an advisory

group to the Quadripartite organizations (Food and Agriculture Organization of the United Nations, FAO; United Nations Environment Programme, UNEP; World Health Organization, WHO; World Organisation for Animal Health, WOAH) has further refined the One Health definition, incorporated the 4 C's (communication, coordination, collaboration, capacity building), and developed an operational guide to support the implementation of the *One Health Joint Plan of Action (2022-2026)* [1,2].

Established in 2006, the [One Health Initiative](#) (OHI) has played a fundamental role in engaging diverse stakeholders in the One Health movement, supporting a wide range of professional and occupational initiatives worldwide. Together with the One Health Commission and the Global One Health Community (formerly, One Health Platform), the three groups have supported [One Health Day](#) celebrated annually on 3 November. Notably, the OHI autonomous pro bono team contributed an interview and prepared a historical review of the One Health movement, describing primary leaders in human, animal, and environmental health from the 1880s to present day [3,4]. In this article, the OHI team synthesises key highlights and offers analytical perspectives on a timely One Health publication for the global community, as an opportunity to help catalyse collective dialogue on ethical approaches to the practical implementation of the One Health concept.

Discovering the One Health Roadmap

As emerging global challenges grow more complex and interconnected, understanding the scientific, social, and ethical dimensions will be essential for effective preparedness and response by leaders and community members alike. The *Ethics for One Health Approaches: A Roadmap for Future Directions* book, published by Henrik Lerner in 2025, marks the path for a closer look at the ethos for the One Health movement [5]. The author proposes an accompanied literary journey to review and identify frameworks on strategically solving ethical challenges using the One Health approach.

In the first chapter (“Introduction and Scope of the Book”), Lerner presents an overview of how One Health approaches have evolved since the 19th century (Rudolf Virchow as the “Father of Modern Pathology”), and underscores the importance of ethical approaches to analyze the utility of these One Health approaches in real-world scenarios using three concrete examples. First, since understanding infectious disease transmission (including bats) can be connected to value systems and knowledge traditions, conflicts between species conservation and disease transmission or prioritising one development goal versus all goals may present. Second, as animal-assisted interventions (including therapy, learning, and coaching) are directly aligned with human health, promoting best hygiene practices may not reduce all potential risks of infectious disease spread (such as antimicrobial resistance). Third, compounding risks of marine ecosystems – such as increasing ocean temperatures (leading to

warming, acidification, and coral reef health) or plastic waste (causing the accumulation of microplastics and increased health risks in humans and animals) – bring non-living elements of ecosystems to the forefront of global dialogue.

In the second chapter (“Values and Scope of One Health Approaches”), the author highlights that the empirical and conceptual groundwork for a unified ethical approach is posed by an examination of central values and definitions of various integrated health frameworks. He discusses key issues for advancing cohesive, practicable One Health ethical principles. The primary focus remains on integrating or amalgamating diverse health standpoints by independently examining the holistic perspectives of One Health, EcoHealth, Planetary Health, and One Welfare. Consequently, this chapter positions the book as a roadmap for future dialogue and research aimed at building a more robust ethical framework for One Health approaches.

Exploring Ethical Perspectives

In the third chapter (“Ethical Attempts for One Health Approaches”), the author presents proposed ethical frameworks within One Health approaches, disputing some claims that One Health approaches ignore ethics. This chapter points out that when participants address situations requiring multiple disciplines, they must recognize that actions employed within each discipline may reflect distinct ethical viewpoints and norms, which may not always be compatible. The author cites several examples related to animal culling in dealing with disease outbreaks,

noting that domains encompassed by a broad One Health definition – such as Planetary Health and EcoHealth (e.g. biophilia, land ethic) – may be overlooked by biomedical experts. The [Merriam-Webster Dictionary](#) defines ethics as the “*principles of conduct governing an individual or a group*”, as a reminder that individual behaviors and activities may vary substantially from our own. The unspoken question, however, remains: *Who holds the responsibility for determining what elements fall within or outside the scope of One Health?*

In the fourth chapter (“Expanding Anthropocentric Ethics”), Lerner evaluates the feasibility of whether or not an anthropocentric, ethics-based framework can meet the needs of the One Health movement. The author examines the pros and cons related to issues of anthropocentric bioethics, principlism, and biophilia. He stresses that a truly effective, ethical framework for One Health must transcend conventional public health concerns, by incorporating moral consideration for ecosystems and recognising the intrinsic value of non-human species beyond human exploitation.

In the fifth chapter (“Animal Ethics, Veterinarian Ethics, and Humans”), the author highlights the burgeoning global curiosity and desire to better understand the vast realm of animal ethics and human-animal interactions and relations. The chapter references decades of work by Martha Nussbaum, who avows that all humans and wild and domesticated animals have a straightforward right to dignity. It also showcases the work by David Fraser and other well-known philosophers on animal welfare and the ethical treatment

of animals. As Lerner’s analysis looks closely at similarities and differences between human and animal species, he examines Nussbaum’s premise that the combined capabilities concept can also apply to animals in various ways. Finally, the author references the four principles of animal ethics, comparing and contrasting Fraser and Fawcett et al. (Anne Fawcett, Siobhan Mullan, and Paul McGreevy) versions, and concludes that all forms of ethical decision-making (principlism) tend to be too narrow in scope and not inclusive enough for One Health approaches.

In the sixth chapter (“Environmental Ethics”), Lerner uses the lens of Aldo Leopold’s Land Ethic framework to discuss the importance and the interconnectedness of environmental ethics in the One Health approach. He developed the Lerner’s Land Ethic Decision Model, influenced by the Intergovernmental Platform on Biodiversity and Ecosystem (IPBES) that shifted its framework from the Nature’s Contribution to People (NCP) to the Nature Futures Framework (NFF). Through three applications of his decision model, the author examines One Health bioethics, emphasising the effects on the beauty, stability, and integrity of various biotic communities.

In the seventh chapter (“A Need for a Pluralistic Ethics”), the author promotes pluralistic ethics as an inclusive approach that engages multiple perspectives and fosters fair and ethical conclusions through a two-step process. The first stage (“pre-framing”) includes the selection of relevant stakeholders to identify hidden assumptions, acknowledge cultural differences, select values, and

set agendas. The second stage (“ethical dialogue”) brings the first stage results to an open-ended, inclusive discussion with the goal of obtaining feedback and mutual understanding. With the frequent omission of the role of animals and the environment in ethical debates, the author comments on the important inclusion of indigenous people’s belief systems as well as the ethical, cultural, and philosophical views underlying animal rights and the moral position of animals. Ongoing global discourse spotlights One Health priorities in national and international funding, policy development, and capacity building activities.

Incorporating Lessons Learned

In the final chapter (“A Roadmap for Future Directions”), Lerner draws on the analysis developed in the prior chapters that One Health advocates and experts lack a shared definition and ethical integration to address the complex challenges spanning human, animal, and environmental domains. Various One Health initiatives routinely involve selective stakeholders with divergent world views – such as veterinarians, physicians, ecologists, indigenous communities, sociologists, agriculturists, policymakers, and the public – and each group brings their own assumptions about what counts as harm, benefit, responsibility, and justice. Asserting ethical pluralism as a structural requirement for One Health, the author proposes an inclusive, dialogical model to manage diverse values, cultures, and knowledge systems involved in One Health decision-making.

Conclusion

The Ethics for One Health Approaches: A Roadmap for Future Directions book, published by Henrik Lerner, offers a fresh ethical perspective about the human-animal-environment nexus that can broaden the scope and enrich the One Health discourse. The author underscores the analysis that no single ethical framework effectively captures the diverse values and interests involved in addressing complex One Health issues. By supporting the pluralistic two-step dialogue, sharing multidisciplinary and multisectoral perspectives on pressing global health topics – like the triple planetary crisis (climate change, biodiversity loss, pollution) – can lead to developing ethical and cost-effective solutions and sustainable change.

While this book provides a valuable forum for debating ethical perspectives on One Health approaches, the author does not share guidance on resolving conflicts arising from different disciplinary viewpoints. Although conflict resolution extends beyond the scope of this literary work, it remains an essential critique deserving broader attention in One Health discussions. Future trends that highlight One Health ethics worldwide should consider understanding the gap between ethical concepts (e.g., anthropocentrism, biocentrism, ecocentrism, zoocentrism), identifying ethical decision models, and balancing ethical aspects among different species or levels [6]. Furthermore, the author recognizes that future progress for the One Health movement depends on ethical consensus among diverse global stakeholder communities.

Note: The OHI team contends that, *ceteris paribus*, irrefutable evidence underscores the critical need to institutionalize the One Health concept or approach worldwide, as it will “...protect and/or save untold millions of lives in our generation and for those to come.”

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