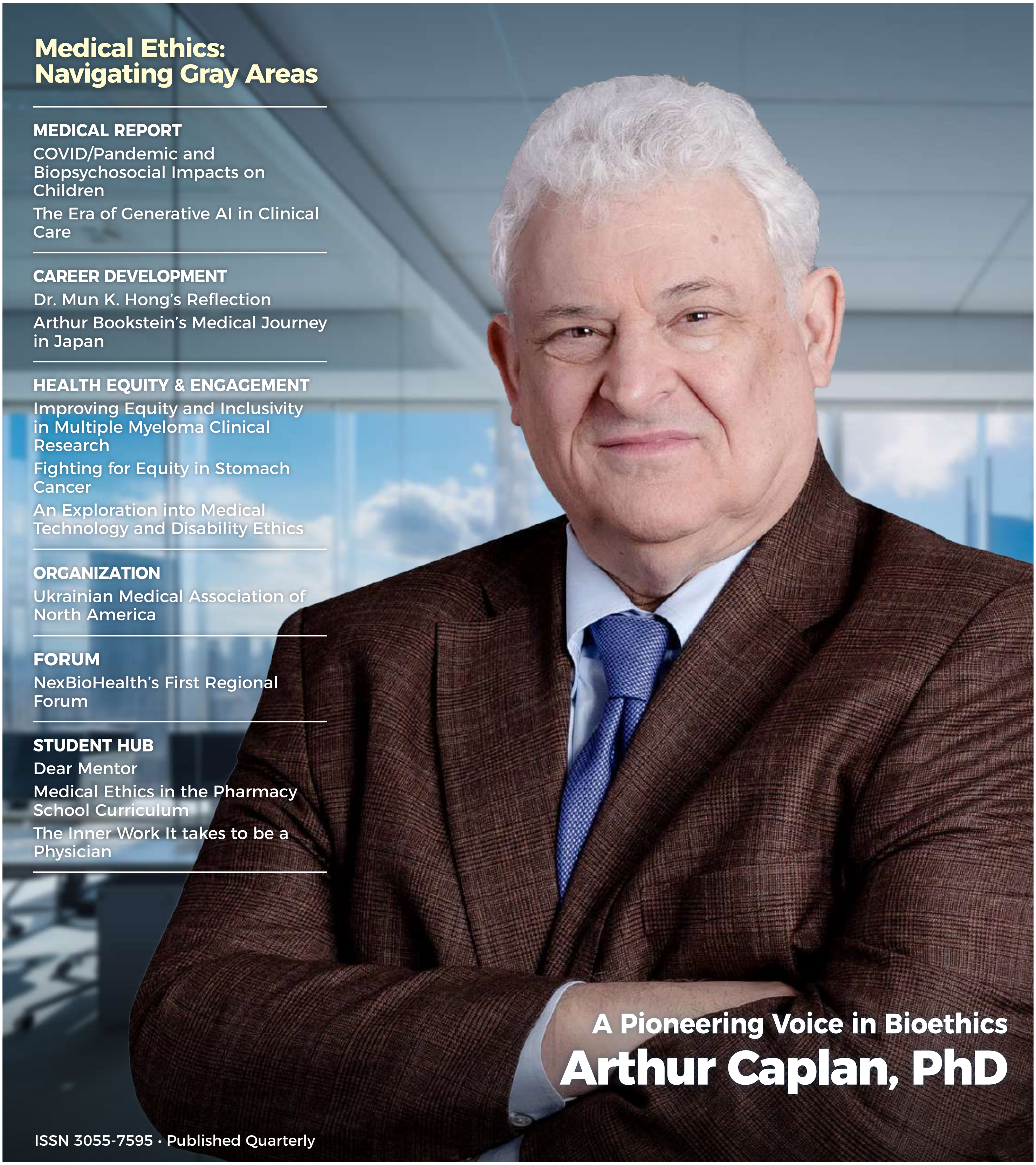
NexBioHealth

Shaping Futures

May 2025 | ISSUE 3



Medical Ethics: Navigating Gray Areas

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STUDENT HUB

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Medical Ethics in the Pharmacy School Curriculum

The Inner Work It takes to be a Physician

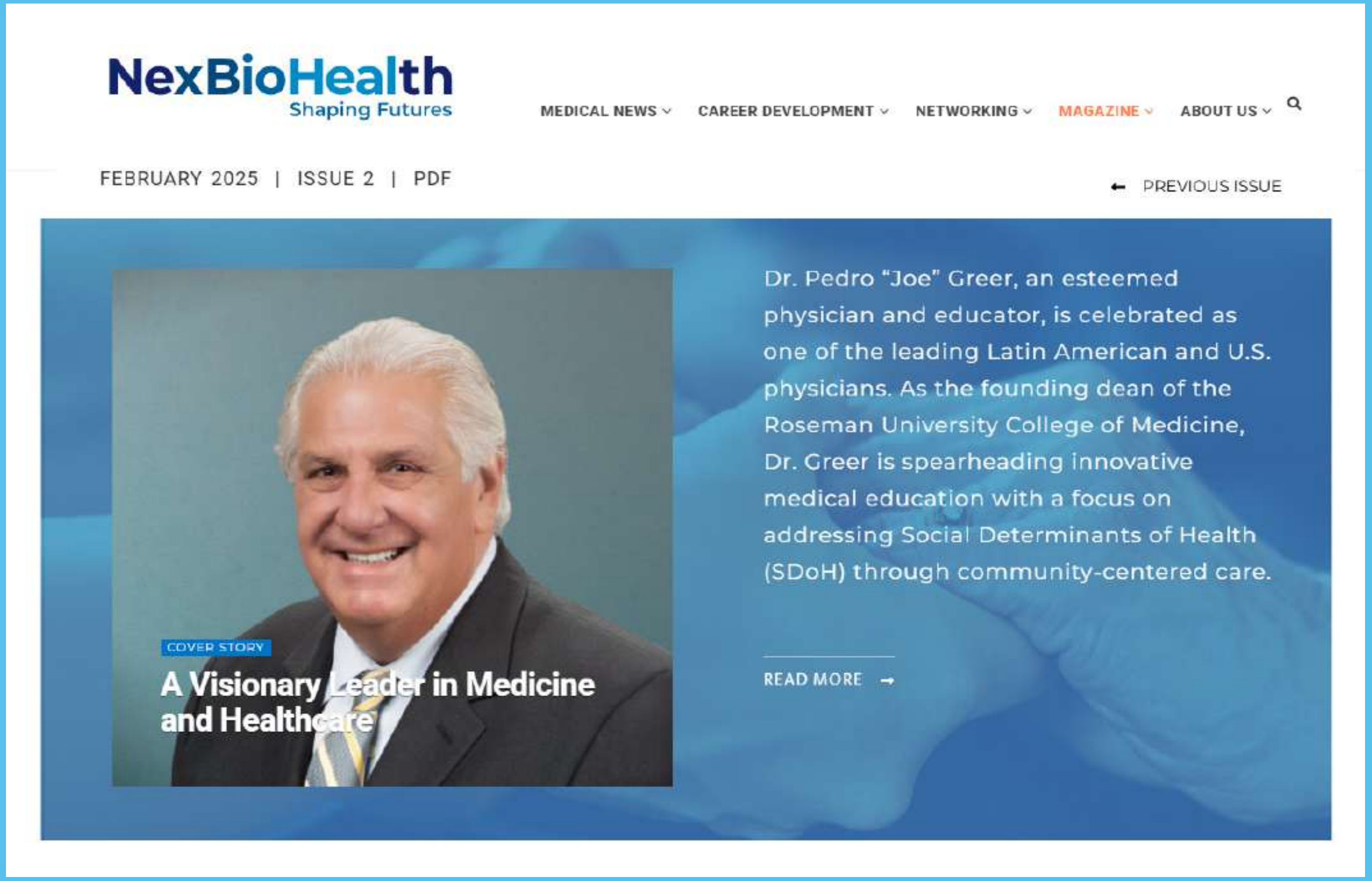
A Pioneering Voice in Bioethics

Arthur Caplan, PhD

ISSN 3055-7595 · Published Quarterly

NexBioHealth: What Makes It Unique

NexBioHealth is a global magazine dedicated to empowering and connecting medical students, residents, and budding physicians worldwide. The magazine is a dynamic platform designed to foster global networking, knowledge sharing, research collaboration, and professional growth for young healthcare professionals.



Dr. Pedro "Joe" Greer, an esteemed physician and educator, is celebrated as one of the leading Latin American and U.S. physicians. As the founding dean of the Roseman University College of Medicine, Dr. Greer is spearheading innovative medical education with a focus on addressing Social Determinants of Health (SDoH) through community-centered care.

Vision

NexBioHealth aims to foster an international community where future leaders in medicine can learn, collaborate, and grow together. Building on the 10-year legacy of the World Asian Medical Journal (WAMJ), NexBioHealth expands its scope to engage a broader, global audience, creating a platform for medical professionals worldwide.

Key Features

01. Career Development & Mentorship:

This section offers guidance and mentoring to help young medical professionals navigate their career paths. It includes contributions from experienced physicians and focuses on professional growth, education, and research opportunities.

02. Diversity, Equity, and Inclusion (DEI):

Focused on addressing health equity and global health, this section highlights innovations in public health, healthcare delivery, and international healthcare innovations. Through in-depth articles and interviews with global health leaders, we aim to promote discussions around equitable healthcare access and inclusion worldwide.

03. Global Networking for Physicians:

NexBioHealth connects medical students, residents, and physicians worldwide by featuring leading organizations, providing networking opportunities, and facilitating international collaborations.

Conferences: This section highlights important medical conferences and events around the world, providing readers with opportunities for learning and professional development.

04. Medical Report & Healthcare Updates:

A comprehensive section delivering the latest news in medicine and healthcare, covering advancements, policy changes, and industry trends.

05. Student and Resident Engagement:

NexBioHealth is committed to representing the interests of medical students and residents through the formation of the Student Advisory Committee (SAC). These committees help shape the magazine's content, organize events, and promote mentorship opportunities.

NexBioHealth is more than just a publication-it's a vibrant community and resource hub for the next generation of medical professionals. By bringing together students, residents, and physicians from across the globe, NexBioHealth is dedicated to supporting the growth and development of future leaders in the medical field.

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The NexBioHealth Editorial Board comprises a diverse group of physicians and healthcare professionals from various specialties who are recognized as thought leaders with innovative ideas and notable accomplishments.

This distinguished group is united by a shared mission: to make NexBioHealth a unique platform for addressing the most pressing issues in medicine and healthcare today and into the future. Their goal is to nurture, motivate, and inspire the next generation of healthcare professionals.

Diverse Expertise

Unlike the typical editorial boards of academic journals, the NexBioHealth Editorial Board is intentionally diverse. It includes physicians from major university settings, private practices, and community health centers, not only in the United States but also globally. This diversity ensures that the magazine reflects a wide range of perspectives and experiences, making it relevant and impactful for a global audience.

Interdisciplinary Approach

In addition to physicians, the board includes prominent individuals from the scientific, legal, health industry, and public health fields. This interdisciplinary approach is crucial for interpreting and providing insights into medicine and healthcare from unbiased and diverse viewpoints. By integrating expertise from these various fields, NexBioHealth is positioned to offer comprehensive and balanced coverage of the issues that matter most to healthcare professionals and the communities they serve.

Supporting Young Minds:

To further enrich the content and ensure it resonates with the emerging generation of medical professionals, NexBioHealth has established two additional boards:

Student Advisory Committee (SAC)

- The SAC is designed to represent the interests and perspectives of medical students. Members provide feedback on articles, suggest relevant topics, and help tailor the content to meet their peers' needs. They also liaise between NexBioHealth and medical schools, assisting with student outreach and event coordination. Their involvement ensures that NexBioHealth remains a vital resource for students, providing content that is both educational and inspiring.

Resident Physicians Advisory Committee (RPAC)

- The RPAC represents residents across all specialties, offering valuable insights into the challenges and opportunities faced by physicians in training. The RPAC helps guide the magazine's content by contributing articles, organizing networking opportunities, and supporting mentorship programs. Their participation ensures that the magazine addresses the specific needs of residents, helping them navigate their careers with confidence.

A Growing and Evolving Board:

Our editorial board is in the beginning phase and continues to grow, inviting more great minds to join us in our mission. As we expand, we are committed to bringing together a broader range of expertise and perspectives to enhance the magazine's quality and impact. We seek thought leaders and innovators who share our vision to join us in making NexBioHealth a powerful voice in medicine and healthcare.

A Truly Unique Platform:

NexBioHealth's combination of a diverse, interdisciplinary editorial board and the inclusion of the SAC and RPAC makes it a truly unique platform. It is a magazine that not only raises important issues in medicine and healthcare but also fosters a collaborative environment where young minds are nurtured, motivated, and inspired.
NexBioHealth is committed to being more than just a publication-it is a community and a resource for those who aspire to lead and innovate in the healthcare field. Through the collective efforts of its editorial board, students, and residents, NexBioHealth aims to be the best platform for shaping the future of medicine and healthcare.

A Pioneering Voice in Bioethics: Arthur Caplan, PhD

Dr. Arthur Caplan, a pioneering bioethicist and the founding head of the Division of Medical Ethics at NYU School of Medicine, has spent decades at the forefront of shaping the field of medical ethics. Renowned for his thought-provoking insights, Dr. Caplan addresses some of healthcare's most complex dilemmas, offering invaluable perspectives on ethical decision-making in medicine.

COVID/Pandemic and Biopsychosocial Impacts on Children

How the pandemic shaped children's minds, bodies, and lives

The Era of Generative AI in Clinical Care

Bringing human-AI collaboration to the bedside

Improving Equity and Inclusivity in Multiple Myeloma Clinical Research

Summary from the MMRF 3rd Annual Health Equity Summit

Fighting for Equity in Stomach Cancer

A Daughter's Journey to Advocacy

The Ukrainian Medical Association of North America (UMANA)

"75 years of healing, advocacy, and action: A conversation with Dr. Marta Lopatynsky, president of UMANA

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From the Publisher

Chul S. Hyun, MD, PhD, MPH

Div. of Digestive Diseases
Yale School of Medicine

Dear Readers,

It's with sincere gratitude and pride that I introduce this latest issue of NexBioHealth. Each edition of the magazine is the result of remarkable dedication-from physicians, students, and contributors who give their time, voices, and stories to something they believe matters. Building a magazine like this, alongside the demanding lives we all lead in medicine, has not been without its challenges. But when I look at what we've accomplished together-especially in this Ethics-themed issue-I feel proud. It's a testament to what can happen when purpose outweighs pressure.

This edition is particularly meaningful. It brings together a wide range of perspectives on ethical dilemmas in medicine-some philosophical, others deeply personal. You'll find insights from leaders like Dr. Arthur Caplan, reflections on disability and equity, and a powerful glimpse into the global mission of the Ukrainian Medical Association of North America. We also highlight stories that speak to the heart of medical training and the quiet, persistent ethical decisions that shape who we become as healthcare professionals.

People sometimes ask me what kind of journal NexBioHealth is. Is it a medical magazine? A student publication? A professional journal? And while it may contain elements of all those things, I've come to believe that our true identity is this: NexBioHealth is an awareness magazine.

By "awareness," I don't mean simply being informed. I mean a deeper understanding-of what illness really means to a patient, of how disease affects families and communities, and of the unseen dimensions of healing and suffering that clinical knowledge alone cannot capture. Knowledge tells us the mechanisms of disease-the pathophysiology, diagnostic criteria, and treatment protocols. But awareness tells us how illness feels, why it matters, and who it touches.

In today's medical environment, we are surrounded by knowledge. What we often lack is space for awareness. NexBioHealth exists to fill that gap-so that knowledge doesn't sit idle, but becomes meaningful, compassionate, and human-centered. Awareness is the key that unlocks the toolbox of knowledge and gives it direction.

This issue reflects that identity clearly-from the innovative use of AI in clinical care, to the nuanced impacts of COVID on children, to student reflections on the moral weight of their training. These aren't just topics-they are reminders of why we entered this field in the first place.

To our contributors, readers, and supporters: thank you. You are shaping not just a magazine, but a movement.

Warmly,

From the Editor-in-Chief

Joseph P. McMenamin, MD, JD, FCLM

Christian & Barton Group, LLP

Dear Reader,

Welcome to our latest edition. We think you'll be pleased that NexBioHealth continues to offer lively variety, with a mix of news and features not found elsewhere.

A prominent motif in this issue is ethics. Healthcare has always implicated ethical questions; most of the 2500 year-old Hippocratic Oath is concerned with a doctor's ethical behavior. The complexity of our current system here in the US, however, is such that the difficulty of identifying the sound, ethical decision, and distinguishing it from less worthy choices, may be greater than it has ever been before. Our cover story features an interview with prominent bioethicist Arthur Caplan of NYU, who tackles several thorny, up-to-date questions with a mix of high-minded philosophical aplomb and common sense. We expand on our ethics theme with a set of articles examining equity questions arising in the management of malignancies and in the care of the disabled. The Student Hub pieces harmonize with this subject as well, looking at ethical questions in both pharmacy and medicine. After all, physicians are not the only healthcare professionals who must wrestle with ethical conundrums.

This issue also includes a timely interview with Marta Lopatynsky, MD, ophthalmologist and president of the Ukrainian Medical Association of North America (UMANA). With 19 branches across the US and Canada, UMANA pursues two announced goals: uniting health care professionals of Ukrainian descent, who share an interest in promoting Ukrainians' health; and sharing medical knowledge and scientific research, emphasizing aspects of each unique to Ukrainians. Given today's savage, disgraceful aggression against her ancestral homeland, and the precarious state of Ukraine's support at present, especially here in the US, NexBioHealth is proud to offer a forum to Dr. Lopatynsky and to UMANA.

As you have come to expect, we offer several pieces spotlighting career matters, such as navigating the choice between personal and career objectives and how the Japanese cope with public health problems, and including in this issue reviews of books pertaining to professional growth.

Our straight medical news focuses on the COVID pandemic's biopsychosocial Impacts on children--while some of the results are probably what you'd expect, others surprise you--and a case study of utilizing generative AI in the management of GI bleeding. (Many the case during my residency when caring for GI bleeders when I would have been glad to augment my own intelligence!) We round things out with our listing of upcoming conferences and meetings our readers may wish to attend.

Enjoy.

Connect with Future Medical Leaders Worldwide!

www.NexBioHealth.org

We invite you to become part of a vibrant community of medical professionals, where experienced leaders and emerging physicians from around the world collaborate, share knowledge, and drive the future of healthcare. This global network fosters mentorship, research collaboration, and leadership development across generations, ensuring that the next wave of medical leaders is well-equipped to tackle the challenges of tomorrow.

For more information or questions email: info@nexbiohealth.org

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CD=Crohn's disease; IFX=infliximab; IV=intravenous; SC=subcutaneous; UC=ulcerative colitis.

References: 1. ZYMFENTRA® Prescribing Information, Celltrion, Inc., 2024. **2.** Data on file. Celltrion, Inc.

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Medical Report

We are honored to feature this timely and thought-provoking piece by Professor Wun-Jung Kim, a highly respected leader in child and adolescent psychiatry. Dr. Kim currently serves as Professor and Director of Child and Adolescent Psychiatry at Rutgers Robert Wood Johnson Medical School and is Professor Emeritus at the University of Toledo College of Medicine. With an illustrious career spanning Johns Hopkins, the University of Pittsburgh, and Seoul National University, Dr. Kim has published extensively and held leadership roles in national psychiatric organizations. In this article, he brings his deep expertise and compassionate lens to examine the biopsychosocial impacts of the COVID-19 pandemic on children and adolescents.

COVID/Pandemic and Biopsychosocial Impacts on Children

The early 2020s began with ominous signs of a mysterious virus originating from China, spreading to the Western Hemisphere. Soon, the World Health Organization (WHO) and the Western nations including the United States (US) declared health emergencies [1]. The initial peak of the pandemic caused by the COVID-19 virus led to panic reminiscent of apocalyptic movie scenes. Accumulating dead bodies in big cities such as New York City could not be accommodated in the existing morgues and had to be preserved in refrigerated trucks. Some reread Albert Camu's "Pest", imagining numerous dead bodies scattered in an Algerian port city. In addition to tens of millions of children grieving from the loss of family members, relatives, and friends, 7.5 million became orphans worldwide, from January 1, 2020, through May 1, 2022 [2]. The toll was greater in the African continent and Southeast Asia than in the US, although the pandemic in America also gave rise to 150,000 orphans owing to the death of a parent or grandparent caregiver. Within the US, the mortality was greater among racial and ethnic minorities, in turn affecting those minority children more than others. Along with other contemporaneous social and political events in the US, the pandemic aggravated existing racism and xenophobia, especially against Asian Americans (3}. With the advancing digital culture, the pandemic accelerated societal disconnectedness and human isolation. The unknown cause and nature of the virus with relentless mutations and lack of treatment tools led to misinformation, politicization, and globalization of the infection. While the evidence for the benefit of vaccination has been accumulating including children, most of the world population does not have access and multiple segments of wealthy nations' population have refused free vaccinations. According to the WHO's epidemiological update from countries with available data on COVID-19, over 500,000 new cases and over 10,000 deaths were reported from 75 and 43 nations, respectively, during the last 28-day period from January 8 to February 4, 2024 [4]. However, the new cases significantly decreased to 147 000 in March 2025 [4]. The waning prevalence with increasing concerns about other serious viral infections such as mpox, H5N1 bird flu, measles and other acute respiratory viruses early 2025 has dulled the painful memories of COVID-19. While the acute crisis is over but still lingering, it would be important to look back and learn from the experiences and be better prepared for any future epidemic. The following are a brief summary of research findings beginning in early 2020 until 2024 with respect to biopsychosocial impacts of the COVID-19 pandemic on children and adolescents globally and of the US.

1. Most studies, cross-sectional surveys, highlighted acute stress responses among children with increased anxiety and depressive symptoms reported in community settings and exacerbated disorders, including eating disorders, in clinical contexts.
2. Several studies indicate developmental delays owing to in utero exposure in such functions as motor capabilities, speech and language development, social-emotional development, and higher healthcare usage compared to non-exposed cohorts.
3. School closures, resource limitations, and restricted access to medical and mental health services disproportionately affected poor, minority, and rural children. While educational deficits are evident, there is no substantial evidence indicating delays in early child development.
4. However, when followed through kindergarten, compared with the immediate pre-pandemic onset period, the rate of change measured by the Early Development Instrument (EDI) scores was significantly lower following the pandemic onset in language and cognitive development, social competence, and communication and general knowledge. EDI scores were significantly higher in emotional maturity, and no significant changes were observed in the physical health and well-being domain.
5. Despite a decade-long rise in adolescent suicide rates before the pandemic, these rates either remained stable or slightly declined during the pandemic.

The studies amply illustrate negative effects of the pandemic in multiple areas of child mental health and child development [5,6,7,8]. Symptoms of anxiety and depression have noticeably increased among all psychiatric symptoms by survey reports. Such increases were pronounced among teenagers, especially girls, minority youth, and LGBQT youth. There is also a report from the U. K., however, questioning the validity of female dominance and theorizing both underreporting of adolescent boys' and overreporting of girls' depressive symptoms coupled with developmental trajectory of depression incidences in early adolescence [9].

In addition to psychiatric symptoms, learning deficits, especially in mathematics, have been well documented in relation to school closures [10]. The effects of school closures were significantly worse for children with developmental disability and autism spectrum disorders in need of special education with structure and multiple remediation services such as behavioral, occupational, speech and physical therapies, etc. Even before the pandemic, however, the trajectory of youth anxiety and depression symptoms had been on an upward trend. It is not certain how much the pandemic contributed to the higher rates of symptoms [11,12]. Other variations correlated with the pandemic stage i.e., when studied at the beginning (with school closures), middle (school reopenings) and the postvaccination period. Survey respondents reported a higher rate of psychiatric symptoms at the beginning of the pandemic but a declining rate afterwards. However, a metanalysis of 137 studies did not find any significant increase of psychiatric symptoms overall but a substantial heterogeneity of higher anxiety and depressive symptoms in female adolescents [13]. Although the incidences of such clinical disorders during the pandemic have not been investigated epidemiologically on representative subjects, one can surmise that the prevalence of clinical disorders would have increased. This conclusion is confirmed by medical care and mental health care utilization data for suicidal, self-injurious behaviors and eating disorders. There were temporary declines at the beginning of the pandemic, especially a normal annual peak season of April in 2020[14]. Sex and SES played a role in the symptomatology and health care utilization. Girls demonstrated higher frequency and more severe symptoms of depression and anxiety, and they and high SES groups utilized health care services more often than boys and minority groups [14]. Perhaps loss of access to resources among high income families that could afford care before the pandemic may have resulted in higher distress levels among their children.

The effects of COVID infection were convincingly negative on physical health. A mother's COVID infection led to a higher risk of preterm delivery, especially in the third trimester, and to motor and speech delays [5]. COVID-19 infection at any time during pregnancy increased risk of maternal death, severe maternal morbidities, and neonatal morbidity, but not stillbirth or intrauterine growth

restriction [9]. Although children do suffer serious complications and long COVID, their severity and frequencies are lower than in adults, especially elderly subjects [15]. Ineffective medical delivery systems correlate with other negative outcomes such as underdiagnosis of cancer, and increased obesity, etc. [16,17,18]. A higher proportion of children with a COVID-19 diagnosis experienced new onset of a mental health condition compared with children with a negative COVID-19 test [8.19]. The problems of access to mental health services have become worse while the need for it skyrocketed because of the existing shortage of mental health providers. Seventy percent of counties have no child and adolescent psychiatrist. Clinic closures, retirements, and providers' leaves of absences to care for their own families contributed. Lack of telehealth access and decreased Medicaid accessible MH services had more deleterious effects on low SES and minority youths [20].

Are there any benefits of the pandemic? Actual youth suicide rates decreased during the pandemic in 2020 through 2022 although the rates had increase for adults during the same time period [21]. One may conjecture the protective effects of more family time during the pandemic may have had an effect, although more free time and social isolation led to longer screen time, causing more depressive and anxiety symptoms [22]. Data on utilization and clinical encounters have also illustrated a paradoxical picture of better adjustment; school closures and social distancing seemed to correlate with better results among children with social and separation anxiety disorders by school closure and social distancing [20, 22]. Kindergarteners in the post pandemic vs pre pandemic years (from 2010 to 2023) showed higher emotional maturity. They scored lower in language and cognitive development, but there were no significant changes in their physical health and well-being as repeatedly measured by the Early Development Instrument (EDI) [23]. Owing to less pollution, masking, and social distancing, the incidence of asthma and influenza declined. The utilization of telehealth has improved access to mental health services for youth in remote areas. Despite recurring reports of negative effects on mental health in non-representative samples, a large, representative U.S. youth population study demonstrated the percentage of youth with severe mental health impairment was 9.7% in 2019 and 9.4% in 2021[12]. The study analyzed data from the 2019 and 2021 Medical Expenditure Panel Surveys (MEPS), which are representative of the US noninstitutionalized population, for changes in mental health impairment and outpatient mental health care of persons aged 6 to 17 years. Controlling for age, sex, and impairment, outpatient mental health care declined among Black youth and increased among White youth. It is again clear that the pandemic was not a unitary experience for all youths. Sex, race, SES and geography all exhibited discernable influences. During the pandemic, the world watched Sweden, with her liberal policy of open schools and open society. The experimentation did not lead to the disaster some people had warned of. With schools open, Sweden had zero COVID deaths in the one-to-15 age group, while teachers had the same mortality as the average of other professions [24]. The debates on the strategy of pandemic management have become greatly politicized, to a degree that influences voters in elections in the absence of difficult -to- execute controlled studies.

While children are resilient, they are also vulnerable. We have short term outcome reports and we do not know how the pandemic will affect children of different developmental stages in the long run. Youth experienced a significant and sustained increase in mental health burden for over a decade preceding the COVID-19 pandemic, and treatment and prevention strategies would need to address preexisting psychiatric needs in addition to the direct effects of the COVID-19 pandemic [21]. The short-term outcome was clear, distressing with unpreparedness and confusion. The state and federal governments have emergency preparation plans for epidemics and disasters which do not include or focus on mental health issues, especially for children. To improve the broken system, the governmental and professional leaderships should fund a well-coordinated system of care, expanding school-based mental health services, child psychiatry access programs, virtual mental health services, and new models of care (e.g., integrated youth services hubs and crisis stabilization units), etc. Of course, these services should be staffed by robust and well-trained workforces with attention to health equity [25].

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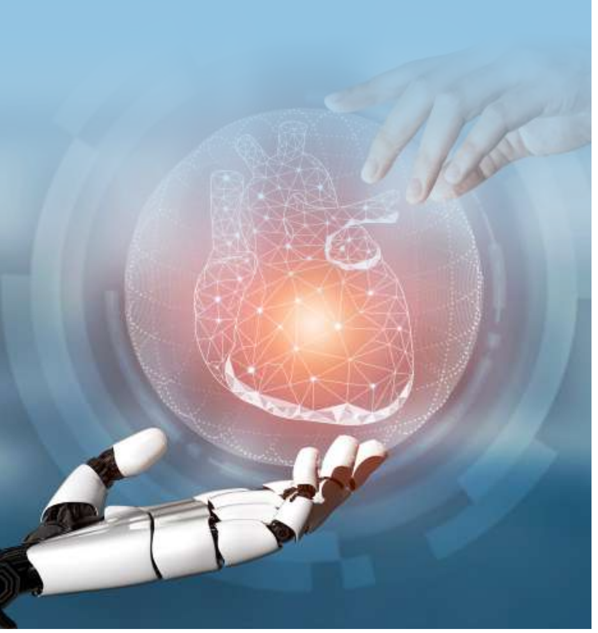
Medical Report

This article by Dr. Dennis Shung, an Assistant Professor of Medicine and Director of Digital Health at Yale School of Medicine, explores how generative AI can transform care for patients with acute gastrointestinal bleeding. A leading expert at the intersection of AI and clinical medicine, Dr. Shung illustrates how tools like large language models and predictive algorithms can improve early detection, risk assessment, and decision-making. His case study reflects a broader trend-AI is rapidly reshaping medical workflows and empowering clinicians to deliver smarter, more efficient, and more personalized care.



The Era of Generative Artificial Intelligence in Clinical Care: A Case Study in Acute Gastrointestinal Bleeding

Generative artificial intelligence will transform the practice of medicine by disrupting existing workflows and changing the dynamic of patient-physician interactions. Multimodal data generated during routine clinical care can increasingly be used to enhance patient care. Gastroenterology and hepatology is a specialty that routinely generates and synthesizes multimodal data for patient disease management, and is on the forefront of artificial intelligence (AI) integration in routine clinical care through computer-aided polyp detection (CADe) systems during screening and surveillance colonoscopy. However, AI will permeate and change all aspects of future clinical workflows, and not just during endoscopic procedures. As a case study, I will explore the potential impact of AI on the most common cause for GI-related hospitalization, acute gastrointestinal bleeding (GIB).

For context, acute GIB accounts for over 27.7 billion dollars over 475,000 hospitalizations annually in the United States.[1] Risk stratification to identify very low risk patients is recommended by national and international guidelines.[2-6] Machine learning models to predict risk of hospital-based intervention outperform existing clinical risk scores in identifying very low risk patients who can be discharged for outpatient management.[7] Identifying and discharging low risk patients with machine learning algorithms can capture potential cost savings of 3.4 billion for upper gastrointestinal bleeding alone.[8]

AI via local large language models can identify patients via named entity recognition and electronic health record phenotyping with very high positive predictive value who have signs or symptoms of acute gastrointestinal bleeding. In a study that evaluated the performance of identifying signs or symptoms of acute gastrointestinal bleeding from nursing notes, a customized prompt architecture for a local language model LLaMA-2-70B had PPV of 97%.[9] Once patients are automatically identified, a trained electronic health record-based machine learning model that outperforms the Glasgow Blatchford Score and Oakland Score can be automatically deployed with a recommendation at the high sensitivity threshold (pre-defined as →99%).[10] This predictive model output and interpretation can be then presented along with clinical guideline-driven decision support via a chatbot interface, where physician users are able to query both the justification for the risk and ask any questions pertaining to the management of patients with acute gastrointestinal bleeding.[11, 12] If the patient is admitted for observation or inpatient hospitalization, generative AI will track the dynamic risk over time by predicting the hemodynamic trajectories.[13] If the patient undergoes diagnostic upper endoscopy and an ulcer is noted, convoluted neural network-based algorithms can evaluate for high risk features.[14] Throughout, certain ranges where there exists greater uncertainty from the algorithmic perspective will prompt the human user to seek additional expertise to prevent overconfidence in algorithmic outputs.[15]

As the proposed workflow suggests, AI could enhance the clinical care of patients with acute gastrointestinal bleeding to promptly identify, risk stratify, follow, and support clinical management pre-endoscopically and during endoscopy. In the future when these platforms are deployed at scale, the reality may be that while good AI can't replace a bad clinician, good AI can empower clinicians to be better.

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Dr. Shung is the founder of Yale's Human+Artificial Intelligence in Medicine (H+AIM) Lab, which focuses on building trust and value in human-AI collaboration. He contributes to national AI policy through the Coalition for Health AI and holds leadership roles in key GI and AI professional organizations. A physician data scientist, his work spans clinical care, machine learning, and implementation science, with publications in Gastroenterology, Nature, and JAMA Network.

In August 2025, Dr. Shung will join the Mayo Clinic as **Associate Professor of Medicine, Physician Lead for Digital Innovation** in the Department of Medicine, and **Director of Clinical Generative AI and Informatics**, where he will continue advancing the integration of artificial intelligence into patient care and health systems.

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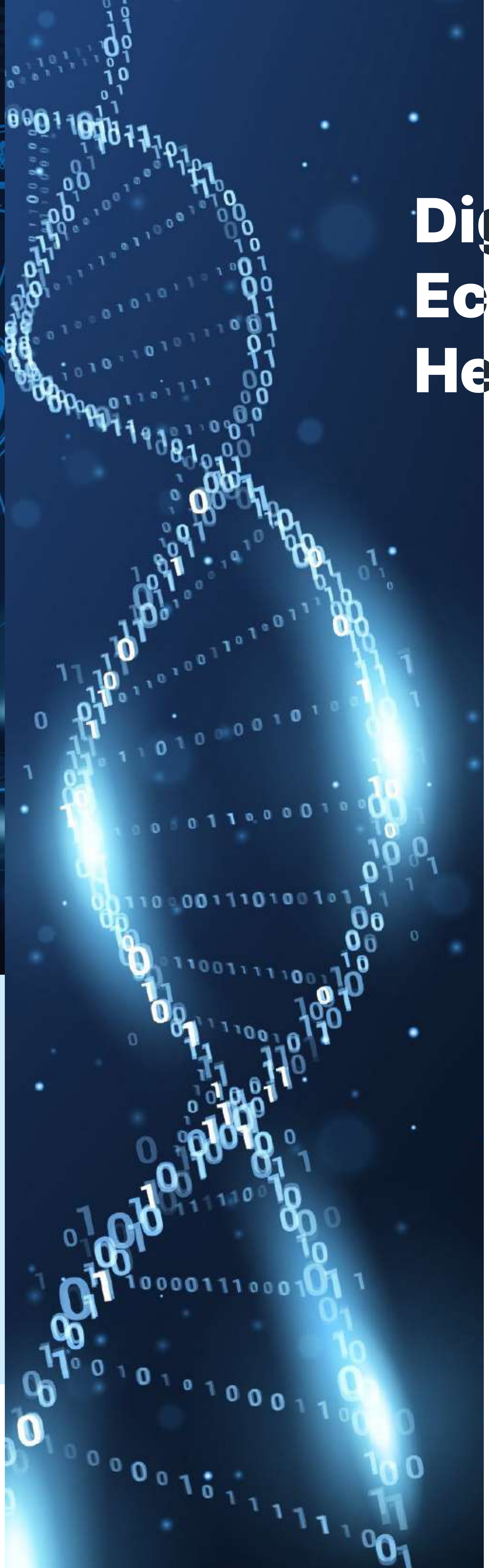

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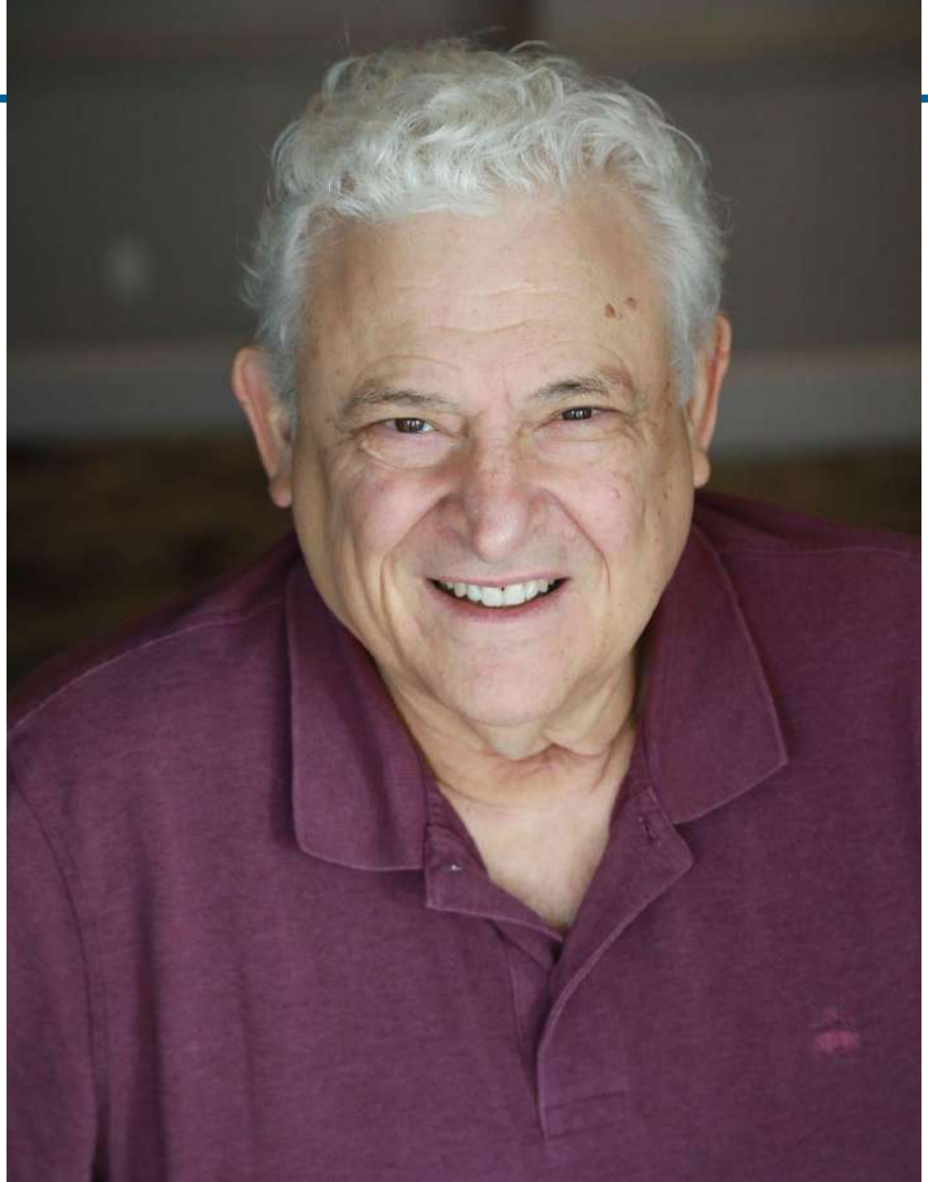

A Pioneering Voice in Bioethics
Dr. Arthur Caplan

In this timely and thought-provoking interview, NexBioHealth Editor-in-Chief Dr. Joe McMenamin speaks with Dr. Arthur Caplan, a pioneering figure in bioethics and founding head of the Division of Medical Ethics at NYU Grossman School of Medicine. Together, they explore pressing ethical challenges in medicine today-from the growing influence of insurers on clinical decisions to vaccine hesitancy, end-of-life care, and the rising role of AI. With honesty, clarity, and wit, Dr. Caplan offers invaluable insights for young physicians and students navigating the changing landscape of modern healthcare.

Dr. McMenamin How are you? I appreciate you taking the time.

Dr. Caplan No problem. Happy to do it.

Dr. McMenamin This is an interview with Dr. Art Caplan, a well-known bioethicist in New York. And we have several questions we'd like to pose; the first, about conflicts of interest: To an unprecedented extent, American doctors today are employees and not in independent practice.

They owe duties, then, both to patients and to their employers. How should they weigh those obligations? And where inconsistent, determine how to proceed? For example, suppose on the basis of a thorough workup and the best available evidence, a physician is convinced that a given patient requires expensive treatment urgently.

Yet in the doctor's healthcare system, a stepped care approach is mandated, under which a time-consuming series of failed approaches must be taken first. What should the physician do?

Dr. Caplan Well, tough situations, and they arise, sadly frequently in our health care system because we have not only third-party payers setting, if you will, what they'll pay for, but increasingly, starting to tell the doctor how to practice.

So: step therapy. Meaning, in many instances, start with something perhaps cheaper at a lower dose, see if that works, and then escalate up to more expensive drugs and, maybe at higher doses This approach is not uncommon in terms of what the insurance company wants. But I have to start by saying having third party payers practice medicine, which is what you're doing when you're saying, not only this is the drugs that we cover, but this is how to use them, I think is ethically inadvisable and flat out ethically wrong.

I think that medicine, nursing, pharmacy should be fighting back more vigorously against the intervention of third parties in the practice of medicine. So, the first thing to do about conflicts of interest is to get rid of them. It's to not have them. And the way you do that, in many instances, is long before the patient is there, you're negotiating what you will and won't put up with from a private insurance company.

Or what Medicare says it's going to do or what the VA says it's going to do. And again, just to repeat: In the old days, there certainly were limits on both what procedures might be covered and what drugs might be in a so-called formulary. And you couldn't get something paid for if it wasn't in your formulary.

But we are escalating and escalating to the point where now people are saying, Well, if you're going to do a procedure, you have to do it this way. Or if you're going to do a knee replacement, you've got to use this joint with these technicians and this type of anesthesia. And that's going way beyond setting fiscal limits, in terms of what somebody can afford for their premium to here's how to practice.

And it's just a bad, bad, situation to not only permit, but not to aggressively, if you will, fight back against. That said, here we are, and it does exist, and so tomorrow morning some people are going to wake up as doctors or maybe nurse practitioners and find themselves in the situation you described.

"I think you need X, but your payer says we can only do Y, and we have to do Y gradually, so for the next six months. Even though you have horrible migraines, I'm going to try three other drugs before I get to the one that I think is best for you." I think first patients need to know that this is going on.

So the first way to manage a conflict is to disclose it to the patient. Why? Well, the patient may say, "I'll pay the difference." Not all can, but some do. I've seen it. They will say, "I don't want to wait. You get reimbursed what you get reimbursed and then I'll fill in the difference and let's go to what you think will work best for me."

Secondly, the patient may want to protest to the payer and say, "Look, I know you have this step therapy, but that's a one size fits all situation." I'm just making this up now. "I have had migraine for 10 years. None of those things has ever worked when I've tried them with other doctors. You're making me go back and do it again."

"It doesn't make any sense. I want you to reconsider for me what it is that you're doing." The company may be thinking, "Well, I'm not sure we could do that because it might set a precedent," but that's their problem. It's not the patient's problem. So the patient does have the right to appeal and the doctor can certainly pile onto that, help out with that to the extent time and patients permit.

I certainly talked to a lot of physicians who said, "I don't want to spend all day, every day talking to third party insurers about their limits and requirements." The third thing to do when you're on the edge, you may lean harder into saying, "I think this is necessary." And, you know, there's a fine line between a fraudulent diagnosis, just lying to get somebody something, and then saying someone's right on the gray zone or border. "I think this drug would help your asthma or this inhaler if that was more expensive, but it's only indicated for someone who has, let's say, three bouts a day of asthma symptoms, you seem to have 2."

Well, I'm leaning into three, and I think that's what good advocacy does. It puts the patient first when possible. I'm not saying make up information. I'm not advocating lying, but look, people bring up that objection all the time. My experience has been, very often, it's not so clear and you could go either way.

And so I think you should be leaning into what the patient needs in the opinion of the doctor, not what the payer wants in terms of containing cost. The other problem here in managing these types of situations is that I think people sometimes forget. Patients don't always do what they're told.

Noncompliance is an issue. You say, "Do this and take it this way," and they don't do that or they say, gee, I feel pretty good today. I'm not taking my blood pressure med anymore or whatever it is. By the way, I do that. I've been known to stop my antibiotics a little early relative to what I know is a necessary course.

So to maximize the efficiency of whatever is being done, I do think it's important to remind everybody about this issue of noncompliance. It may be that the cheaper thing would work if they did it the right way. Or took it at the right time or took it to the end of the course. You know, you look at the statistics out there.

I'm going to say something like 50% of people either don't fill their prescription, or don't take it the right way. So it may not just be a matter of, "Gee, I think this is best for you, and you're not getting what I think is best." Sometimes it's, "I got to work with you to make sure you're doing what's minimally necessary" to see if something would be helpful.

I think we underplay a little bit the magical powers of prescribing to get people to actually do something. It's: they're busy. They get distracted and also, they have their own remedies, right? The other thing to look into is if you say, "Well, I'm not sure this is the best place to start, but let's see how it goes for three months."

Then they say, "Gee, I'll go online and I'll find four other things from corn syrup to milk of magnesium. I'll try that, too." So you want to be making sure that whatever they're doing, you know about it.

Dr. McMenamin Thank you. Good answer. I'm guessing that if on occasion even you deviate slightly from the prescribed course that that can't be all that rare in the general population.

Dr. Caplan Let me tell you. I'm also told occasionally not to eat donuts, but here we are.

Dr. McMenamin I'd like to turn to a question on public health. And I think it's particularly timely today, given events in Texas and elsewhere: Many parents have been influenced by anti-vaccination publications and litigation. Among other consequences, this has resulted in outbreaks, even in wealthy industrialized nations, of diseases that have long been preventable, but remain difficult to treat.

What should the clinician do about a child whose parents want to bring him in for care, but who decline to allow the child to be vaccinated? Is it ethically permissible, for example, to allow that child to be in the presence of other children, vaccinated or not, in the waiting room or elsewhere?

Should the physician recommend that the child be homeschooled so that other children are not exposed to an unvaccinated peer?

Dr. Caplan Well, sadly, as you noted, the problem of not vaccinating is getting worse. And during our conversation today, we're watching a dangerous measles outbreak begin to spread both in West Texas, but also popping up elsewhere.

There are three cases in New Jersey as we're speaking today and other cases. partly due to travel. Those cases seem to have come from other countries into us. Measles, for example, is certainly a problem in many countries. And with airplanes and boats, and even cars and trucks, things can get from one place to another pretty quickly and do.

So under-vaccination of the population and vaccine refusal is something that is getting worse. I think it got worse because people were very disappointed in their ability to do something about COVID. Initially, I think everybody thought when COVID first appeared and was in its most lethal form that public health and American medicine and science would knock it down pretty quickly. And that didn't happen. And we suffered something like a million deaths or more in the country. And by the way, especially ravaged were older people. People in nursing homes had tremendous numbers of deaths.

My mom died in a nursing home in Massachusetts at 95 from COVID and 95 seems like a good life and it is, but she was, you know, hearty and cognitively there, she was somewhat frail, but certainly was enjoying her life. So it wasn't a death that one would accept as a conclusion of a life. It was still premature, even for her.

What happened in the COVID outbreak was then we moved to traditional public health measures: quarantining, isolating, masking, mandating. And the American people, I think, got very angry, and panicked that they were going to lose their liberties, that they were going to wind up unable to go where they wanted and mingle with whom they wanted.

And their kids would be out of school. And it just set off a backlash that I think we still live with today. And that's where I think the anti-vaccine movement or phenomenon arose. It's really both fear of plagues, and disappointment that you didn't get a quick fix. I think people thought, "Well, you know, we're transplanting faces and transplanting pig kidneys. What's this little viral outbreak going to do? We'll get that under control in a couple of months." And it didn't happen. And then we had this legacy of the old-fashioned public health interventions. As I say, isolate, shut down mobility, mask. Mandate masks, real restrictions on lifestyle and on choice. And that just didn't sit well with people leaving us with a hostility toward vaccines, somewhat toward public health.

So to get to the specific question, what do we do now when a parent says, I don't want to vaccinate my kid or doesn't vaccinate their kid? You pointed out one thing. Some people say, well, let's keep the kid more isolated, go to homeschooling. And by the way, there's only one state that had on its books vaccine requirements for homeschooling. It's a good bioethics trivia question, but it was North Carolina. I don't know if they still do, but they did. And if you said, why them? I have no idea. But they did. Everybody else, if you stay in homeschool, you didn't have to vaccinate. Nobody came to your door and said, "You know, can you show me a vaccine certificate for whoever's homeschooling here?" Or a semi private academy kind of thing, where they might have more than one kid?

I don't think homeschooling is the answer for a simple reason. People who homeschool don't just lock their kids up at home. They still go to airports, bus terminals. They might play sports. Many of the kids who homeschool go to the public school for athletics or band or theater. So I don't think they're as isolated as one might think. When you hear the term homeschool, I don't think that's going to protect against a highly contagious disease like measles, for example. I think they could get it, or they could bring it, depending on which way the transmission is going. So, I think we should encourage homeschooling, to understand what I just said, and say that it's still very important as the measles epidemic spreads.

I think more parents are going to rethink their opposition. You got one in 15 kids going to the hospital. I know RFK, Jr. and Donald Trump have said, "There are kids in the hospital because we're quarantining them." Nobody quarantines a kid in a hospital. They're there for respiratory problems and treatment.

And parents know that and will see that. And sadly, the impact of not vaccinating for a highly contagious disease like measles is the occasional death and a lot of hospitalization. So, I'm thinking, that's a message we have to take advantage of right now. "Look, here's what happens if you don't do this, whatever your worries about the safety of MMR vaccines."

And I think they should be minimal. I'm not going to say there's zero, but they're tiny relative to the benefits that we can get for your kid and your kid's friends and the community kids. Let's rethink what we're doing here.

So that would be my first approach: to redouble efforts right now to try to get people going with vaccination as a defense against measles. Then you can extend it, obviously, to cervical cancer or whatever other, once you regain some of the trust, which has been lost. Pediatricians, I think, face a special issue, and you mentioned it. Who's getting into my office? Who do I want in the waiting room? I know a couple of pediatricians who say, "If you won't vaccinate, I'm not your doctor."

And there are days when I wake up and say, that's right. Be tough. See if they knuckle under and get vaccinated. But for some families who won't vaccinate, you could be the only pediatrician for a lot of miles, and that leaves the kid with no care. So I don't think that's a good approach. What I do think is a better approach is to say, "If you won't vaccinate, you're going to have to come at four o'clock or later. That's when the unvaccinated kids are all here, and we're not going to expose you to the other patients. We're going to control access to try and minimize risk to everybody else. And while you all are sitting around in the waiting room, I look at your kid. I'm going to put out videos and written materials about why vaccination is important. Testimonials from parents who said my kid got meningitis or my kid got whatever and this was really horrible." We need some education and we got to work on this together. So I wouldn't cut them off. I used to sometimes think that was hard love, you know, do this or else. But I worry that too many people just say, "Well, then I won't go, and shifted over more toward particular hours with particular education efforts that are aimed at them.

One other thing I think it's important to point out that the doctor got vaccinated. The doctor's kids got vaccinated. I think people are more impressed. Not just about what ethicists say is important about helping the community or doing the right thing. I think they watch their doctor and they say, "If you did it and your kids did it, and you know, you recommend everybody in the family do it" and you follow through.

I think that shapes behavior quite a bit. I would not underestimate the power of a good doc as a role model. Let me divert a little on that. Sometimes people say, "Well, my doctor's overweight. So why should I pay attention?" Well, even there, I think you could say something like, "Look I have a weight issue. I struggle with it. I'm going to work with you on it. We can work on it together." It's not like an overweight physician or nurse is unaware. And they certainly are aware that they're talking about. Health and weight with their patients. But even there, I think identifying a common struggle could be good.

That's why I made that little wisecrack about donuts earlier. It's like, I know I'm not supposed to eat them. I try not to eat them very much. So if I can agree, sometimes I'll just eat a quarter of a donut. Sometimes I'll have a splurgy day, but on the whole, they're bad for you. And I think we should watch what we eat.

I'm in favor of that. So finding ways to identify with the patient, work with them on whatever their worries are. It wouldn't even bother me if a doctor confessed, "You know, I don't like giving 10 shots to these kids. I know they cry and it's uncomfortable and I get it. You don't like it either. I get that you don't want to hurt your child. There's nothing ignoble or immoral about that. But as you know, often in health or medicine, I have to take a little pain to get a little reward or bigger reward." So maybe those are paths.

Dr. McMenamin Thank you. I have felt guilty myself about the role of the legal profession.

I spent a few years of my life defending pharmaceutical companies that were sued on the theory that their vaccines, or the preservatives used in their production, had caused developmental delays-including some very serious cases, such as autism. And it has made me very attuned to this issue. So I'm happy to be able to blame COVID and not my fellow lawyers for this problem.

Let me turn to a third question. This one concerning end of life questions, which I have to guess are pretty commonly bandied about in your world.

Classically, passive euthanasia has been distinguished from active euthanasia. Is this distinction still valid today? In those jurisdictions where active euthanasia is lawful, what should a physician conscientiously opposed to the practice do when a patient she is responsible for requests assistance in dying?

What criteria of competency are sufficiently rigorous?

To justify the conclusion that the patient seeking euthanasia is competent and acting in a manner consistent with her own autonomy, AI is being developed to assist in, among many other things, end of life care, such as predicting life expectancy or guiding treatment options.

What ethical challenges should healthcare providers be mindful of when integrating AI into such sensitive areas?

Dr. Caplan Well, first, let's get AI out of the way. AI is not yet ready to act as a counselor to a patient about matters involving end of life care. It's not sophisticated enough. A lot of the AI chatbots simply surf the

Internet, pulling information from random sources, not vetted, not curated in any way.

So they're just picking up whatever is lying around out there on the Internet and it's not trustworthy. And then key matters like health and end of life care. I think what AI is most useful for is to offer people advice on what the law might be in the place where they live or what their rights are in the place where they live, or how to get in contact with, say, lawyers who specialize in managing end of life planning and retirement and medical power of attorney decision making. It's good as a traffic cop to help people get around a complicated geography, but it isn't a substitute. Absolutely not. I would never trust it right now. Someday we'll see, but that day isn't here yet. I've seen too many false, crazy, bad bits of advice. AI has not learned to be empathetic.

AI stinks at reading human emotions. It just doesn't do it. It's not very good at spiritual help or religious type counseling. So it's a tool, but I would say, in end of life care today, it's a limited tool. I wouldn't rely on it as a substitute.

Is there a difference between active and passive in terms of what gets done when people are dying? Absolutely a difference. For example, on the passive side, there are many people who are very sick and are dying where we have long agreed we're not going to start new things to keep them going longer. And we could. I spend a lot of time in ICUs, spend a lot of time around critically ill people, and spend a lot of time around dying people.

There's always something you could do to extend their life another minute, another 10 seconds, another day. But they may be in pain and it's life that isn't going anywhere because it's not going to cure them, it's just going to keep them going a little bit more. So at some point, as we all know from television, if you have a crash cart and resuscitation, you're going to say, "We're not going to do that again."

Almost anybody could have resuscitation tried on them at any point, but doctors know they are buying another hour of heart function. That is not meaningful in terms of the person being awake or communicating or experience anything or anything. So they do what's called the code. We're done. By the way, it's interesting.

If you're 12 and you have a problem that might respond to resuscitation, you're probably going to see that done six or seven times. If you're 98 with four fatal diseases and in heart failure, you're going to see it done once, and I don't disagree. It's just the younger person has a better chance sometimes to respond to things.

The older person is very, very sick and frail. Not only won't they respond, if you start to do chest compression, all that stuff, you're going to break the ribs and make a disaster. So keep in mind on the passive side, there's always, always a decision not to do something. We could say, "Hey, you know, Art's dying and let's get him a baboon and transplant that heart into him and see if it would work to save his heart that is completely shot."

We're not doing that. I mean, we're not gonna, we're not gonna spend those resources, we're not gonna offer it as an option. It's too experimental, we don't know what the hell would happen anyway. It's not done. I could say, "Hey, don't die here. Let's get an air ambulance, take it to the Mayo Clinic and see if they could keep you alive for another day."

Doesn't happen. People just say, "Your mom, this is it. We're not going to do anymore." The point of our interventions is to try and heal people and then to try to make sure they're comfortable. What's left that we might try to do doesn't do either. So we're not. We're not going to do anymore. Sometimes the family says, "Well, you must do everything."

Well, even the doctor needs to know that everything doesn't mean literally everything. For example, I might say, "Take all the doctors and nurses and just take care of my mom." I ain't doing that. That's never going to happen. My help might get better, intense care, keep somebody going another couple hours? Not doing that. So doctors have the right, I believe, to say, "We've reached the end of what we can do relative to the goals of health care, which are cure or keep comfortable and maintain someone without pain, without suffering." When you've reached the limit of your skills, and there are limits, then I think passive is not the same as saying, "I'm not going to take a pill or an injection and kill you."

There you're taking active steps and the death will occur as a direct result of what you're doing. And as lawyers know, that's a very different set of actions from saying, "I'm not gonna give you any more blood pressure medicine because I think your blood pressure is just out of control. And if I try this medicine, I'm not going to do much anyway."

We sometimes invoke what we call futility. Nobody's going to jail for the decision that they've reached the limit of their skills. Even if the patient subsequently dies, you might be going to jail if you walked up to a patient and injected them and they died.

Now we have some states that permit assistance in dying. There were about 10 of them, places like Colorado, Oregon, Washington, Hawaii. New Jersey, Vermont, among others, and other states are considering it. And I imagine in the U.S. the list of states that allow physician-assisted dying will grow. So it's here, but it is very narrow. Remember, active steps to help somebody die require that you be terminally ill.

So two doctors have to diagnose that you're going to die inevitably. That somewhat makes the act of providing assistance less like murder and more like facilitating a better death, in the eyes of some. I mean, we could argue, and we do in ethics class, as to whether there's much difference there. But for many, if you're going to inevitably die, and someone says, "Well, I can help you die in a way that maintains your dignity or that causes less suffering."

That's not quite the same as saying, "I want to just kill you because I don't think your life is worth living anymore." That would be unconsented murder. In addition to that, you have to be competent. So people have Alzheimer's and dementia from strokes. They can't use this. You have to request it. It is an act in response to a request by a competent individual.

So it's not the same as someone coming up to the bed and saying, "Boy, you know, Art, it's pretty expensive, and I don't think we should be throwing resources into that. Waste of time. Let's kill him." I didn't ask for it. I'm not dying. There's still a difference between, if you will, murdering me, or homicide, and in these states that allow it, assisting in the dying.

Remember too, in assisted dying states in the U. S., you have to take the medicine. The doctor doesn't do it. The doctor gets you the prescription, puts the pills by the bedside, after a waiting period to make sure you really want the pills. But you have to take them. So it is closer to assisting in a suicide, if you want to describe it that way, than it is active killing.

So I think these distinctions morally matter. It's interesting that in the states that have this form of assisted dying, there don't appear to be abuses. I mean, the states study them and monitor them. And we haven't seen people with disabilities or people who are poor, disproportionately put into these situations.

So I think it's worked. Oregon and Washington have had this on their books for 20 years. I'll end this by saying, I've always been surprised. Relatively few people choose to do this because most people want to live as long as they can, so the numbers aren't big They're small, and of the people who get the pills in states like Oregon and Washington, maybe two-thirds of them wind up using them. But a third don't and if you ask the third who don't, "Why didn't they ask for them?" They say well, "It's like having a parachute. If things got really bad I would take it and I liked knowing it was there, but I didn't use it. And I told my family I'll die without taking the pills because I can bear this. That's what the families report. So in a weird way, having the law in the books may prevent some people from suicide.

They might have used a gun or OD'd on pills or whatever, because they felt they were given an option, but then they choose not to use it as much. So in the U.S., not abused. One warning: In Holland, in Belgium, and in Canada, you're starting to see people say, "We want the right to end our lives, not because of terminal illness, but because of pain and suffering."

I don't go along with that shift in moral standard because it's too broad. You could say things like, "I want to end my life because I had a divorce and I'm suffering. I want to end my life because I lost my job and I'm suffering." It makes the eligibility for help in dying way too broad. People get depressed or upset.

They can qualify. I think those countries are going down the wrong road.

Dr. McMenamin Well, thank you. Now this has been fascinating. I'm, I am conscious of the value of your time and we have consumed the 30 minutes we agreed to.

Dr. Caplan And then you can let me run.

Dr. McMenamin Well, I'll leave it at that.

Dr. Caplan It's my fault. I'm talking too long.

Dr. McMenamin You've done a beautiful job and I appreciate it. But should we turn to this fourth or shall we call it a day?

Dr. Caplan We can do one more. I've got five more minutes. I'll just, I'll, censor myself.

Dr. McMenamin This has to do with consent to artificial intelligence and its use. What information should the physician impart to the patient respecting the use of AI in her care? Does the doctor have a duty to ascertain, and then disclose, the degree of similarity between the sources of training data and the patient's demographic group? If so, how are such groups to be defined?

Has the doctor a duty to reveal how much experience he himself has with the use of AI in health care generally and or in circumstances such as this specific patient's? Does he have a duty to adduce data on the costs and benefits of AI-augmented care versus conventional care for the patient's diagnosis? What if such data do not yet exist or are of doubtful validity?

What if the AI comes up with a recommendation the physician disagrees with? Does he still have an obligation to reveal that recommendation?

Dr. Caplan Well, part of the way to answer that question is to say those are going to be the questions that require answers in the next five years.

We don't have enough AI practice out there yet. To even get close to saying, "Well, what's right for Joe is not right for Art," or personalize it. Right now it's a pretty broad brush use of medical information, usually built on categories of disease and disease type. I think, also, there is a lot of AI in use already in healthcare, but it's not in the doctor-patient relationship.

It's humming in the background where your medical records are kept. You may see certain tests. In radiology or lab medicine, or your pap smear sent out, looked at by an AI scanner and then returned. Do you need to know that as a patient? I doubt most people would care. In fact, it's probably doing a better job than human eyeballs and people who get tired and had a bad night of sleep before.

The machine doesn't get tired and it sees, oftentimes, more accurately than the human eyeball. Do we need standards, by the way, to govern that? Yes. They're slow in coming for AI reading of diagnostic information, but it doesn't keep me awake at night worrying that somehow I'm going to be mistreated because this thing was read by a machine.

In fact, it makes me feel a little better, knowing some of the situations my colleagues are in occasionally trying to read these things. So, I mean, emotional state or tired or hungover or whatever they are. So, there, I think there's not much room to worry yet. But we do need to understand AI is out there in the background.

Our records move around the NYU health care system from doctor to specialist. From specialist to nursing home, from one of our hospitals to another hospital. That's all AI now. It's not paper. There are no more charts. We don't run down the basement and say, "Give me a file," you know, and come out with a four pound thing of bad penmanship.

It's moving along and it's bad having all that, but there are certainly situations in which somebody might say you missed the diagnosis. And if you'd used AI, it would have reminded you that these rare symptoms could have been something which you didn't remember or you forgot. So that's augmented patient care right now.

I think doctors do have an obligation to be up to the standard of care. So, as the law will often point out, what's customary, what is approved by medical groups in a particular region, as to be expected, will say what the action should be in the doctor. If a lot of doctors in a specialty are using AI to remind them about diagnostic possibilities or therapeutic options, then you better be doing that too, and it's perfectly fine to say to the patient, "I think A and B are possible, but I have checked with our AI database and there's two other things that are popping up here and I wanna test for them." I think that's gonna become the standard of care. And if you're not doing it, you're gonna get in trouble and you should, because you're not following the best practice in terms of, you know, supplementing your fallible memory with things that the machine can at least bring to your attention, both diagnostic and therapeutic.

The other issue that comes up, in terms of where AI is being used right now, is when you get AI care online. So there are companies that are saying, "Do psychotherapy online." There are companies out there--I've seen them--that say, "Do you have a mole that's worrying you? Well, go online, show it to us on video or send us pictures and we'll diagnose it."

That I think is trouble. There are no standards yet for what's expected, who should be doing this. What conflicts of interest they have if they're prescribing medicines or actions in response. That area I think is under regulated and I think may not be up to snuff in terms of quality of care yet.

So I like the use of AI to supplement human memory. I like the use of AI to replace human labor when that labor could get tired. We're exhausted or maybe not even be as perceptive as machines can be in reading certain things, but for the most part, we better start thinking harder about standards of care, malpractice.

Whose jurisdiction is involved when somebody uses telemedicine? What the need is to disclose the presence of AI and when? I don't think most patients care what's going on with information exchange in the background. But I think they'll be very interested in knowing, you know, if AI is doing the recommendation of what it is that's the best treatment for me.

So we got to really work on that over the years to come. Otherwise, it's going to turn into a sort of Wild West where it's going to be buyer beware.

Dr. McMenamin Very good. Thank you very much. You've been generous with your time. As we discussed, we'll develop a transcript of this and provide it to you.

Again, thanks very much. Really appreciate it. Good of you to take your time. Very good.

Dr. Caplan Glad we got it done. It was a great time. Thank you. Take care now. Thank you. Bye now.

Health Equity and Engagement

Improving Equity and Inclusivity in Multiple Myeloma Clinical Research Summary from the MMRF 3rd Annual Health Equity Summit

This Health Equity and Engagement spotlight highlights the Multiple Myeloma Research Foundation's (MMRF) commitment to equity in cancer care. Multiple myeloma disproportionately affects Black, Hispanic, and older patients-yet these groups are still underrepresented in clinical trials. Through inclusive trial design, community partnerships, and diverse investigator programs, the MMRF is working to ensure that all patients benefit from research advances. This article shares how the Foundation's Health Equity Summits and new MMRC Horizon initiative are helping reshape what equitable research looks like.

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> *populations who are traditionally underserved by the healthcare system and are consistently underrepresented in clinical research. These include racial groups (Blacks and Hispanics) and older adults as the median age of diagnosis is 69 years.*

The mission of the Multiple Myeloma Research Foundation (MMRF) is to accelerate a cure for each and every multiple myeloma patient by focusing exclusively in three areas: supporting the development and delivery of novel therapies; generating, analyzing and sharing large data sets to optimize treatment approaches; and empowering patients and the entire community through education, outreach and support services. Central to our mission is our commitment to advancing health equity so that all myeloma patients can benefit from the scientific and clinical advances we pursue.

As part of this commitment, we believe that clinical trials should reflect the real-world U.S. myeloma patient population so that patients have access to potentially lifesaving treatment options and so that we can understand how these treatments work in all myeloma patients before they receive FDA approval. Unfortunately, certain communities and demographic groups, including patients who are older, who are Black and/or Hispanic, and/or who live in rural areas, are often excluded from multiple myeloma clinical trials. Disparities in access to clinical trials can greatly affect patient outcomes. For example, while Black patients comprise more than 20% of the overall U.S. patient population, they represent less than 5% of clinical trial participants.[1] In contrast, through our clinical trials network, the Multiple Myeloma Research Consortium, which comprises nearly 17 sites across the U.S. and Canada, we have consistently enrolled more than 20% Black patients (internal data). Additionally, each year, the MMRF convenes an annual Health Equity Summit to improve equity and inclusivity in multiple myeloma clinical research. The Third Annual Summit, held September 9-10, 2024, in Hyattsville, Maryland, brought together policymakers, academic researchers, biopharma executives, retail pharmacists, Federal regulators and administrators, and community health advocates to explore strategies and solutions to drive proportional patient representation in clinical research studies.

Building on the 2nd Health Equity Summit

Since the 2nd Health Equity Summit in 2023, the MMRF made significant strides toward increased inclusivity and access to clinical trials.

In response to research presented by Lauren Merz, MD (Dana-Farber Cancer Institute), which showed that benign laboratory differences disproportionately exclude Black patients from clinical trials[2] the MMRF resolved that all future clinical trials conducted by the Foundation through our clinical trials network, the Multiple Myeloma Research Consortium (MMRC), will have more expansive inclusion/exclusion criteria to ensure inclusion of patients who are Duffy-null or have hemoglobinopathies but are otherwise eligible. The MMRC now considers the Duffy-null specific reference range put forth by Merz in developing eligibility criteria and dose-reduction criteria and conducts prospective research within our clinical trials program to refine these factors in the safe conduct of trials to maximize opportunity for the entire myeloma community.

The MMRF has also advanced its Translational Research Umbrella (TRU) program, a new research initiative that will provide deep genomic and immune characterization of patients to better understand how to optimize immune agents. Importantly, TRU will leverage a collaborative network of major medical centers and community sites with diverse patient populations, ensuring sample collection is reflective of a real-world patient population.

As of September 2024, the Foundation launched the MMRC Horizon Clinical Trials Program, an innovative, first-of-its-kind adaptive platform trial program that prioritizes health equity and diversity in its design, site selection, and patient support efforts. MMRC Horizon has appointed a Diversity Officer - Craig Cole, MD (Karmanos Cancer Institute, Detroit, MI) - and established clear enrollment goals of at least 20% Black and 15% Hispanic patients. All MMRC Horizon study sites have a proven track-record of representative clinical trial enrollment and were selected with both geographic and demographic diversity in mind. Additionally, the MMRF is exploring mechanisms to expand Horizon to new community-based sites outside of the MMRC, and will use hub-and-spoke models, community clinics/labs, telemedicine where possible, to support research sites in their efforts to expand access for their patients while reducing the typical burdens associated with clinical trials participation.

In the MMRC Horizon One RRMM study, researchers will prospectively track Duffy status and absolute neutrophil count (ANC), hemoglobin genotypes, and hemoglobin levels for correlation with clinical outcomes, including adverse events, tolerance to therapy/dose reductions, and treatment response. Although MMRC Horizon One will use current standard inclusion and exclusion ranges, supportive care will be allowed prior to screening so that otherwise eligible patients with Duffy-null or hemoglobinopathies will be able to screen and enroll in the trial. To ensure patient burden is not a barrier to participation, the MMRC Horizon team has partnered with Family Reach, a national nonprofit financial resource organization to provide financial assistance with transportation and lodging, meals and utilities.

The 2023 Summit emphasized the importance of patients seeing themselves and their community reflected in their healthcare team. To this end, the MMRF has committed to funding investigators from underrepresented communities through its Scholars Program. The Program's purpose is to improve equity in myeloma research and overall outcomes by increasing workforce diversity. Two inaugural scholars, Eden Biltibo, MD (Vanderbilt University Medical Center, Nashville, TN), and Joselle Cook, MBBS (Mayo Clinic, Rochester, MN), have since undertaken research focused on eliminating disparities in multiple myeloma outcomes. Dr. Cook's MAGIC study, for example, aims to determine the prevalence of monoclonal gammopathy of undetermined significance (MGUS) - a precursor condition to multiple myeloma - in Eastern African and Caribbean populations, and identify the frequency and understand the significance of the RS9344 SNP. The community-based study includes site visits to Trinidad, presentations to community advisory boards, discussions with local imams in the Somali community of Rochester, Minnesota, and a series of community outreach materials, including videos and brochures to explain the disease and the study, and its importance to the community.

Leveraging learnings to accelerate progress

Equity in myeloma clinical research is intrinsic to the MMRF's mission of finding a cure for each and every myeloma patient. The Foundation has integrated key learnings from our Health Equity Summits into our clinical research strategy and we plan to hold our 4th Annual Health Equity Summit later this year

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Hearn Jay Cho, MD, PhD

Hearn Jay Cho MD, PhD is a Clinical Professor of Medicine at the Icahn School of Medicine at Mt. Sinai and an Attending Physician with the Multiple Myeloma Center of Excellence at the Mt. Sinai Tisch Cancer Institute. Dr. Cho's laboratory is investigating novel therapies for multiple myeloma. In 2019 Dr. Cho joined the Multiple Myeloma Research Foundation (MMRF) as Chief Medical Officer. Dr. Cho is responsible for the MMRF's clinical research strategy. Health Equity is a core value of the MMRF mission, and equitable access and participation in MMRF clinical trials are guiding principles. MMRF clinical trials are conducted through the Multiple Myeloma Research Consortium, a group of leading research centers dedicated to advancing treatment options for multiple myeloma patients. Dr. Cho received his MD and PhD in Immunology from Cornell University Medical College (now Weill Medical College), was a resident in the Internal Medicine Investigator Track at UC San Diego Medical Center, and did his clinical fellowship in Hematology and Medical Oncology at New York-Presbyterian Hospital/Weill Cornell Medical Center. He did post-doctoral studies at UCSD and The Rockefeller University in New York City.

Anne Quinn Young, MPH

Anne Quinn Young, MPH, is the Chief Mission Officer at the MMRF, leading strategic initiatives to accelerate a cure for multiple myeloma. She oversees education, outreach, and support programs to ensure equitable patient access to high-quality resources and research. Previously, she served as Brand President and Chief Marketing and Development Officer at MMRF. Anne has been recognized in PharmaVoice 100 and contributes to several advisory boards, including the Harvard Business School Kraft Precision Medicine Accelerator. She has co-authored peer-reviewed publications on precision medicine and patient engagement and is a frequent speaker at industry conferences. Since joining MMRF in 2002, Anne has played a key role in launching innovative collaborations that have transformed patient outcomes. She holds a Master of Public Health from Columbia University and a Bachelor of Arts in Government from Dartmouth College.

Olamide Banjo, PharmD.

Ola Banjo is the Senior Director of Community Engagements and Partnerships at the MMRF, leading efforts to build trust, expand outreach, and improve patient outcomes, focusing on underserved communities. A trained pharmacist, she has developed key partnerships to enhance medication adherence for HIV patients and promote critical vaccinations for high-risk populations. Ola has also created educational materials for patients and healthcare providers and has mentored pharmacy students throughout her career. She holds a Bachelor of Science and Doctor of Pharmacy from Howard University and completed her residency at the University of Illinois at Chicago. A licensed pharmacist in three states, she is active in several professional associations and has contributed to peer-reviewed publications and lectures on health disparities.

Health Equity and Engagement

Fighting for Equity in Stomach Cancer:
A Daughter's Journey to Advocacy

In this moving and insightful piece, Aki Smith, founder of Hope for Stomach Cancer, recounts how her father's diagnosis became the catalyst for a national advocacy effort. As a Japanese American navigating a complex and often inequitable healthcare system, Aki witnessed firsthand the barriers that many stomach cancer patients face-especially those from underserved communities. Her story is both personal and universal, offering a compelling call to action for a more just, accessible, and inclusive approach to cancer care.

It started with a phone call just before Thanksgiving. My father had been experiencing black stools, a telltale sign of gastrointestinal bleeding. He was 71, an immigrant from Japan, with a family history of stomach cancer-and had never been to the emergency room of a hospital. When he was admitted, we feared the worst. But when the GI doctor called me days later and said, "Not cancer," we breathed a sigh of relief. We celebrated that Thanksgiving as though we had dodged a bullet.

But the doctor was wrong.

Weeks later, my father went to a routine follow-up. When I called to check in, his voice sounded off.

"How did it go?" I asked.
"Not good," he said. "I have cancer."

That was the moment everything changed. I rushed to his side, and from that day forward, I became his advocate, his navigator, and, at times, his only hope in a system that was not built for people like him.

Hope for Stomach Cancer: A Mission Rooted in Experience

My father's diagnosis in 2013 came with a grim prognosis-six months to live. In that moment, I wasn't just his daughter. I became his researcher, insurance negotiator, and relentless advocate. But even as I fought for his care, I saw firsthand how broken the system was, particularly for stomach cancer patients.

I learned that systemic obstacles weren't just delaying diagnoses-they were limiting access to novel therapies and preventing patients from reaching the experts and treatments that could save their lives.

It took nearly a decade to fully understand the structural barriers that make stomach cancer one of the **deadliest and most overlooked diseases** in the U.S. In 2016, I founded **Hope for Stomach Cancer** to bridge the gap between research and patient care. What started as a deeply personal mission has grown into a national movement-one dedicated to ensuring that **no patient feels lost, alone, or ignored**.

Identifying Barriers to Stomach Cancer Care

In 2022, we partnered with **Komodo Health**, leveraging one of the industry's most comprehensive datasets to analyze real-world stomach cancer trends. What we discovered confirmed what I had already experienced with my father: patients face **deep, systemic barriers** that delay diagnosis and **limit access to life-saving treatment**.

We identified four major challenges that continue to impact stomach cancer patients today:

1. Age as a Disparity

My father had every risk factor-he was older, of Japanese descent, and had a family history. Yet his initial diagnosis was dismissive. If a high-risk patient like him could slip through the cracks, what about younger patients with no obvious risk factors? Many I've met were initially misdiagnosed-their symptoms mistaken for acid reflux or indigestion-only to be diagnosed later with late-stage stomach cancer.

2. Geographic Limitations

My father was first diagnosed at a local community hospital, where care was inconsistent and specialists disagreed on his treatment plan. It wasn't until we sought a second opinion at an academic cancer center that he received the expert care he needed. But not everyone has that opportunity. There are only **65 NCI-designated cancer centers** in the U.S., and many patients live **hundreds of miles away** from institutions with advanced therapies or clinical trials.

3. Socioeconomic Barriers

My father's Medicare plan locked him into a network that didn't include top stomach cancer specialists. I spent hours filing appeals, navigating insurance red tape, and fighting for access to out-of-network care. Without strong advocacy, he may never have received the treatment that helped save his life.

4. Racial and Ethnic Disparities

As a proud Japanese immigrant, my father felt most comfortable with Japanese-speaking doctors. But language and cultural familiarity didn't always align with the highest standard of care. When he finally met a Japanese surgeon who told him he'd be able to eat sushi again after his gastrectomy, that was the first time he felt real hope.

These barriers aren't just personal-they're systemic. They define the reality for far too many patients facing stomach cancer in this country.

How Hope for Stomach Cancer Is Driving Change

At **Hope for Stomach Cancer**, we are working to **dismantle these obstacles** and provide patients with the tools, support, and knowledge they need to fight this disease. Our key initiatives include:

Education & Awareness

Our **November 2024 campaign** will focus on **early detection, treatment options, and awareness**, aiming to reach millions with critical, life-saving information. In 2023, our efforts reached over **17 million people** across digital platforms.

Patient Support

We host **support groups, webinars, and community events**, connecting patients and caregivers with top specialists, survivor mentors, and trusted resources-ensuring no one feels alone in their journey.

Advocacy & Legislative Efforts

Policy was never my focus-until recently. In 2024, our advocacy led to the introduction of the **Stomach Cancer Prevention and Early Detection Act**, a historic legislative effort to expand screening access, increase public awareness, and address disparities in care.

Expanding Research Efforts

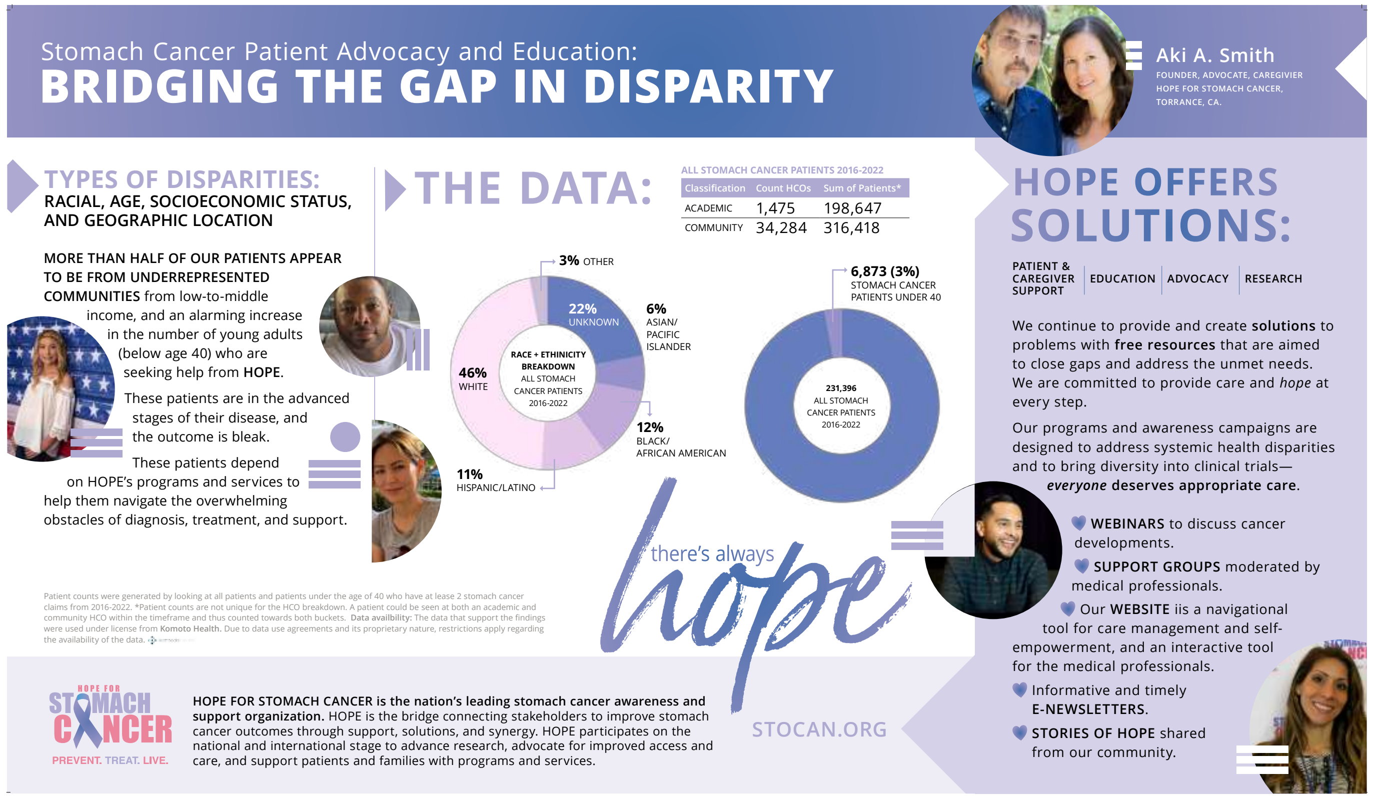
We are proud to serve as **patient advocates on multiple Stand Up To Cancer (SU2C)** research grants, helping shape research priorities and ensure that **real patient needs are reflected** in the search for better therapies. Additionally, through our collaboration with Komodo Health, we helped uncover that **over 2,000 pediatric patients** were diagnosed with stomach cancer between 2016–2021-disproving the long-held belief that this is solely an adult disease.

A Call to Action

Stomach cancer patients deserve better. They deserve earlier diagnoses, access to expert care, and a healthcare system that prioritizes their needs. At Hope for Stomach Cancer, we are committed to that future-but we **cannot do it alone**.

We invite **medical professionals, researchers, and advocates** to partner with us. Together, we can ensure that stomach cancer is no longer a silent killer but a disease met with **awareness, early detection, and effective treatment**.

For more information, visit www.StoCan.org or follow us on social media to stay updated on our latest initiatives.



Stomach Cancer Patient Advocacy and Education:
BRIDGING THE GAP IN DISPARITY

Aki A. Smith
FOUNDER, ADVOCATE, CAREGIVIER
HOPE FOR STOMACH CANCER,
TORRANCE, CA.

TYPES OF DISPARITIES:
RACIAL, AGE, SOCIOECONOMIC STATUS, AND GEOGRAPHIC LOCATION

MORE THAN HALF OF OUR PATIENTS APPEAR TO BE FROM UNDERREPRESENTED COMMUNITIES from low-to-middle income, and an alarming increase in the number of young adults (below age 40) who are seeking help from **HOPE**.

These patients are in the advanced stages of their disease, and the outcome is bleak.

These patients depend on HOPE's programs and services to help them navigate the overwhelming obstacles of diagnosis, treatment, and support.

THE DATA:

ALL STOMACH CANCER PATIENTS 2016-2022

Classification	Count HCOs	Sum of Patients*
ACADEMIC	1,475	198,647
COMMUNITY	34,284	316,418

Patient counts were generated by looking at all patients and patients under the age of 40 who have at lease 2 stomach cancer claims from 2016-2022. *Patient counts are not unique for the HCO breakdown. A patient could be seen at both an academic and community HCO within the timeframe and thus counted towards both buckets. **Data availbility:** The data that support the findings were used under license from **Komoto Health.** Due to data use agreements and its proprietary nature, restrictions apply regarding the availability of the data.

HOPE OFFERS SOLUTIONS:

PATIENT & CAREGIVER SUPPORT | EDUCATION | ADVOCACY | RESEARCH

We continue to provide and create **solutions** to problems with **free resources** that are aimed to close gaps and address the unmet needs. We are committed to provide care and *hope* at every step.

Our programs and awareness campaigns are designed to address systemic health disparities and to bring diversity into clinical trials—***everyone* deserves appropriate care**.

- **WEBINARS** to discuss cancer developments.
- **SUPPORT GROUPS** moderated by medical professionals.
- Our **WEBSITE** iis a navigational tool for care management and self-empowerment, and an interactive tool for the medical professionals.
- Informative and timely **E-NEWSLETTERS**.
- **STORIES OF HOPE** shared from our community.

HOPE FOR STOMACH CANCER
PREVENT. TREAT. LIVE.

HOPE FOR STOMACH CANCER is the nation's leading stomach cancer awareness and support organization. HOPE is the bridge connecting stakeholders to improve stomach cancer outcomes through support, solutions, and synergy. HOPE participates on the national and international stage to advance research, advocate for improved access and care, and support patients and families with programs and services.

STOCAN.ORG

Aki Smith

Executive Director and Founder of Hope for Stomach Cancer

Aki Smith is the Executive Director and Founder of Hope for Stomach Cancer. Inspired by her father's battle with the disease, she has become a leading voice in stomach cancer advocacy, research collaboration, and patient empowerment, working to improve outcomes and access for patients worldwide.

Health Equity and Engagement

An Exploration into Medical Technology and Disability Ethics

In this thoughtful essay, medical student Justin Lin explores how medical technologies-often created with the intention to help-can have complex ethical and cultural implications for people with disabilities. Using cochlear implants and stair-climbing wheelchairs as case studies, he raises important questions: Do these tools genuinely improve accessibility, or do they reflect a deeper societal pressure to "normalize" disability? Who gets access to these innovations, and at what cost? Justin invites us to look beyond good intentions and consider how inclusion must begin with listening to those most impacted.

The idea of "medical technology" has a complicated relationship with disability ethics, serving as a unique intersection between the social and medical models of disability. On one hand, medical technology can be beneficial in improving access for disabled people. On the other hand, however, medical technology can perpetuate the problematic idea that the disabled individual is "abnormal" and must be "cured" to fit better into society. There are many medical technologies that tend to ignore the societal barriers that prevent disabled people from achieving equal accessibility, instead focusing on improving the impairment that the disabled person has. In this unit response, I will explore the social, ethical, and cultural implications of two medical technologies used by disabled people: cochlear implants and stair-climbing wheelchairs.

The first medical technology I will be analyzing is the cochlear implant. For disabled people who are severely or profoundly deaf, cochlear implants are surgically implanted devices that can restore hearing loss (Tucker, 1998). First, it is important to consider the cultural ramifications of cochlear implants. With a shared language (American Sign Language) and shared deaf spaces, such as deaf schools, many deaf individuals view deafness as an elective disability due to the support present in Deaf culture. Therefore, the societal push by non-deaf people for deaf children to have cochlear implants (which are much more effective when implanted at a young age) may be viewed as a form of erasure of the Deaf culture (Tucker, 1998). With cochlear implantation for deaf children, deaf parents will be less able to pass on Deaf culture to their children, such as the use of ASL, because learning how to speak begins at a very early age (Tucker, 1998).

This strong societal push for deaf children to receive cochlear implants at a very young age also has ethical implications. Many deaf parents wish for their deaf children to have their own bodily autonomy as to whether or not they wish to use cochlear implants to "cure" their deafness once they are old enough to consent (Tucker, 1998). However, since the implementation of cochlear implants is much more effective at a very young age, waiting until

deaf children wish to have the procedure later on in life can equate to choosing not to have cochlear implants, which can be viewed as a loss of autonomy. Additionally, with the media and others in society strongly pushing for its use, there is no doubt that the decision to utilize cochlear implants is not a decision that is truly without undue external influence, once again opposing autonomy. Besides the principle of autonomy, the principle of justice also applies, as there are questions as to who is able to benefit from the use of cochlear implants. While most insurance companies cover part of the costs, cochlear implants may still be financially unavailable for those who may not have the resources to afford them.

These implications present in the use of cochlear implants share some similarities and differences with the implications present in the use of stair-climbing wheelchairs. While the stair-climbing wheelchair introduces little cultural implications, this technology does have social and ethical ones. One social implication to consider is its potential opposition to the social model of disability. The stair-climbing wheelchair does achieve its goal of increasing accessibility for wheelchair users in areas with stairs and without elevators. However, it is impractical for actual use because of its extremely slow movement. Considering its impracticality, this technology appears to ignore the idea that society may be creating some of the barriers present for wheelchair users and instead focuses on trying to increase the "functionality" of disabled people. Adopting the social model of disability lens by implementing more accommodations into infrastructure, such as the use of ramps and elevators, would improve accessibility in public spaces much more effectively than having wheelchair users use stair-climbing wheelchairs.

Besides social implications, the use of stair-climbing wheelchairs also has ethical implications. Similar to cochlear implants, the principle of justice also applies to this technology. As a new medical technology, stair-climbing wheelchairs are extremely expensive. Although this technology attempts to seek out accessibility for wheelchair users, financial access plays just as large a role in total accessibility as physical and social participation (Caldwell, 2020). If people of lower income– who already generally reside in areas with less disability accommodations– are unable to have access to stair-climbing wheelchairs, there is a likely possibility that they are further isolated from society, perpetuating the negative stigmas surrounding physical disabilities.

To conclude, through this analysis of both cochlear implants and stair-climbing wheelchairs, it is evident that there are many cultural, social, and ethical implications surrounding the use of medical technologies. While medical technologies may have good intentions aimed at improving accessibility for disabled people, it is vital to be aware of questions that arise as a result of these implications, such as how this technology will affect certain disabled cultures, who gains access to this technology, and how effective this technology truly is at improving accessibility. To ensure that these implications are adequately addressed and resolved as medical technology continues to advance, society must allow disabled people to be at the forefront of the field of medical technology, where their unique lived experiences will help ensure that medical technology does truly improve accessibility and will be accessible by all who wish to use it.

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Justin Lin
MD Candidate, Class of 2028
Hackensack Meridian School of Medicine

Justin Lin is a first-year medical student at Hackensack Meridian School of Medicine in Nutley, NJ. Originally from central New Jersey, he attended Case Western Reserve University in Cleveland, OH, where he earned a Bachelor of Arts in Nutritional Biochemistry and Metabolism with minors in Chinese and Psychology. Building on his passion for the intersection of medicine, ethics, and human behavior, Justin pursued a Master of Arts in Bioethics and Medical Humanities at CWRU. His academic journey reflects a commitment to understanding both the science and ethical complexities of healthcare. As he continues his medical education, Justin is dedicated to integrating his diverse background into patient-centered care and interdisciplinary collaboration.

Dr. Mun K. Hong's Reflection

What do we do when faced with a choice between professional and personal fulfillment?

I recall an episode from about 20 years ago when I found myself at this very crossroads. I had been given the rare honor of delivering a keynote speech on my clinical research at the annual American College of Cardiology national conference. It was a remarkable opportunity for my professional growth.

However, when I checked the schedule with my wife, I realized the conference coincided with my son's middle school graduation trip to Italy. My boss at the time, our chief of cardiology, naturally expected me to prioritize my career and attend the conference. But I couldn't shake the feeling that choosing professional recognition over a once-in-a-lifetime father-son experience would be a decision I'd regret forever.

Without hesitation, I chose to join my son in Italy.

I later learned from his teachers that he had been unusually quiet until I arrived in Florence. I still cherish the memories of our time together in that historic city, visiting galleries and savoring simple yet delightful Italian meals. To this day, I consider that choice-one that wasn't difficult for me at the time-as one of the best decisions of my life.

As physicians, our profession demands an extraordinary level of time, dedication, empathy, and compassion. While professional fulfillment is deeply rewarding-especially when we see the positive impact on our patients-I've learned that true fulfillment cannot exist without harmony in our personal lives. For me, personal fulfillment, particularly in nurturing relationships with my family, is the more significant achievement.

I've always prioritized family vacations and cherished those moments as top priorities. I think of a close friend in the same profession who has had an extraordinary academic career. Despite his achievements, he often laments never taking vacations and missing out on precious time with his family.

It is undeniably important to be the best physicians we can be, to provide exceptional care to our patients, and to honor our professional commitments. However, I believe prioritizing our family life is not only more important but also enhances our ability to be better, more compassionate physicians.

Mun K. Hong, MD, MHCM, FACC

Dr. Mun K. Hong, born in Seoul, Korea, immigrated to America at age 15. He earned his BA-MD from Johns Hopkins University School of Medicine in 1986 and completed residencies and fellowships in internal medicine and cardiology at Johns Hopkins, Georgetown, and the Washington Hospital Center. Dr. Hong has held leadership roles, including Director of Cardiovascular Intervention at Weill Cornell and Chairman of Cardiology at Medstar Southern Maryland Hospital. He currently practices at Bassett Hospital Center as Chief of Cardiovascular Services. A dedicated mentor, he sponsored over 10 interventional cardiologists from Korea, helping them achieve significant academic success. During the pandemic, he earned an MHCM from Harvard. Dr. Hong enjoys family time with his wife of 37 years and their three children in New York City.

Journeys in Medicine

Bridging Cultures in Medicine: A Fulbright Journey Through Japan's Public Health Landscape

I first met Arthur Bookstein in January 2025 at Japan's National Cancer Center (NCC) while giving a talk on Gastric Cancer in the U.S. As a Fulbright scholar and medical student from USC, Arthur stood out not just for his keen interest in cancer epidemiology but also for his deep curiosity about the intersection of medicine, culture, and public health. Our conversation quickly turned into a discussion about global health disparities, early detection strategies, and the importance of cross-border collaborations in medicine. His passion for research and advocacy was evident, and it was clear that his time in Japan was shaping his perspectives in ways that extended beyond the lab. In this article, Arthur shares his unique journey in Japan-exploring the country's approach to cancer prevention, immersing himself in the culture, and reflecting on how these experiences will shape his future in medicine and public health. *Chul S. Hyun*

Hi there! I'm Arthur, a fourth-year medical student at the Keck School of Medicine of USC with plans to pursue a combined Medicine-Pediatrics residency and a Hematology/Oncology fellowship. I studied molecular biology and public health at UC Berkeley, where I also earned my MPH. During these years, I became increasingly interested in global health and epidemiological research as avenues to extend the impact of my work to larger populations and address health disparities on a larger scale. This eventually led to my partner suggesting that I apply for a Fulbright research grant to Japan, which would give me the opportunity to get further in touch with my Japanese heritage while working with internationally renowned cancer researchers. I initially thought the idea sounded neat but didn't think I had a realistic chance of winning the award. Still, when it came time to apply, I decided to give it a shot. I began preparing my application towards the end of 2022, with no idea that almost two full years later, I would be flying to Japan to begin my year as a Fulbrighter.

Japan has one of the highest burdens of HCV-related liver cancer in the world, making it crucial to examine how social risk factors shape disease outcomes. The rapid westernization of the Japanese diet-marked by increased consumption of processed foods and red meat-alongside historically high smoking rates and a deeply ingrained drinking culture, has further influenced liver cancer trends. These lifestyle shifts, coupled with an aging population, have led to evolving disease patterns that challenge existing public health strategies. Addressing these dynamics requires nuanced, data-driven approaches, which is where my Fulbright project comes in. At the National Cancer Center of Japan (located in Ginza, Tokyo), I am working with researchers to investigate how diet and other social determinants impact the progression of viral hepatitis to hepatocellular carcinoma (HCC). My research involves analyzing large epidemiological datasets, refining statistical models, and iteratively improving data organization to enhance predictive accuracy. Ultimately, my goal is to better understand how simple interventions (such as increasing one's fruit and vegetable intake) could reduce HCC risk, which can then inform the design of targeted prevention strategies.

Though I've visited Japan many times before to see family and travel, working here has been an entirely different experience. The transition into Japan's work culture took some adjustment-precision, thoroughness, and consensus-driven decision-making are deeply ingrained in the research environment. At times, this approach means that projects progress more slowly than I'm used to in the U.S., but I've come to appreciate the emphasis on detail and the collective commitment to getting things right. This environment has sharpened my analytical skills, strengthened my ability to work within a team, and given me a new perspective on work ethic. Japanese work culture has a reputation for being intense, but I think there are aspects the U.S. could learn from-particularly the department-wide group workout in the middle of the day, which seems like an obvious win for productivity and well-being.

Outside of work, I've been trying to make the most of my time off to explore the country and the culture, and maybe learn a thing or two about myself along the way. Biking around Tokyo, weaving through narrow alleyways, bustling streets, beautiful parks and tucked-away temples. Watching the sun set over the endless Tokyo skyline. Attending lectures at the University of Tokyo and conferences in south Shikoku. Inhaling delicious Japanese cuisine at every opportunity (despite the variety of incredible dishes to choose from, I always find myself coming back to a simple bowl of kitsune udon as my proven favorite). Experiencing hanami (cherry blossom viewing) in Yoyogi Park. Destroying my legs running marathons

along the Tosa bay and at the base of Mount Fuji. Visiting Hiroshima and reflecting on the immense effort and sacrifice required to build and maintain peace. My most adventurous excursion was over the New Year's holiday, when I went on a biking trip through Kansai, circling the stunning Lake Biwa and making my way through Kyoto, Uji, Nara, and Osaka before returning to Kyoto. I wandered through Kyoto's ancient temples, sipped artisan matcha tea in Uji, made friends with the deer in Nara, and took in the bright neon streets of Osaka at night.

More than anything, this year has been a time of personal growth. I've studied Buddhism and Stoicism, meditated with monks at the mountain temple Enryakuji, and worked on cultivating a deeper appreciation for the people and world around me. I've learned to be more observant, to notice the small things, and to gradually find inner peace. My time in Japan has also helped me understand the cultural context behind Japanese social norms-why the collective and social order are prioritized so much, and how this has historically helped the nation persevere through natural disasters and other challenges. While rugged individualism and openly expressing emotions may work well for Western societies, that doesn't necessarily mean it's the best approach for Japan. This realization has reinforced the broader idea that there is rarely a one-size-fits-all solution to any problem, no matter how universally sound it may seem-context always matters.

Experiences like my Fulbright year are invaluable for personal and professional growth. Stepping outside of my comfort zone, deeply understanding different perspectives, and engaging in self-reflection have all shaped my worldview dramatically. This kind of cross-cultural exchange is especially important today, at a time when people are increasingly divided and often unwilling to understand perspectives different from their own.

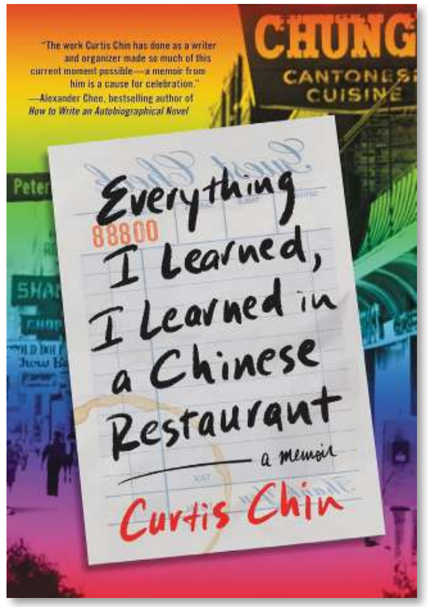
As I move forward in my career, I'll carry these insights with me-the emphasis on prevention, the importance of cultural humility, and the power of global collaboration in advancing health equity. I'm incredibly grateful for this experience and excited to apply what I've learned to my future work in medicine and public health.

Arthur Bookstein, MPH

MD Candidate, Class of 2026
Keck School of Medicine of USC

Arthur Bookstein, MPH is a medical student at the Keck School of Medicine of the University of Southern California (USC) and a recipient of the 2024-2025 Fulbright Research Award to Japan. He completed both his undergraduate and Master of Public Health degrees at the University of California, Berkeley, earning B.A. degrees in Molecular & Cell Biology and Public Health, with minors in Bioengineering and Conservation & Resource Studies, and an MPH with an emphasis in Biostatistics and Epidemiology.. He plans to pursue residency training in Medicine-Pediatrics followed by a Hematology/Oncology fellowship, with the ultimate goal of advocating for vulnerable populations through clinical practice, research and policy. He is the co-founder and COO of the environmental health non-profit ARCH Collaborative and an ambassador for the NIH-funded All of Us Research Program. His research interests include cancer health disparities and prevention, global oncology and Adolescent & Young Adult (AYA) cancer survivorship. He has led and contributed to research published in JNCI, CEBP, ASCO, Frontiers in Public Health, and the World Cancer Congress. In his free time, he enjoys long-distance cycling, language learning, and volunteering.

Everything I Learned, I Learned in a Chinese Restaurant



Authors
Curtis Chin

Curtis Chin's Everything I Learned, I Learned in a Chinese Restaurant is a heartfelt memoir that transports readers to 1980s Detroit, where a young gay Chinese American boy comes of age in the backdrop of his family's Cantonese restaurant. This vibrant cultural hub welcomed everyone-from drag queens to local politicians-and served as the stage for Chin's exploration of identity, family, and belonging in a divided city. Through humor, poignancy, and vivid storytelling, the book delves into themes of cultural heritage, resilience, and the power of community in shaping lives.

Having recently read Crying in H Mart by Michelle Zauner, I couldn't help but draw certain parallels between the two books. Zauner's memoir recounts her experience of losing her Korean mother to cancer, capturing the complexities of grief, identity, and cultural connection through food and memory. Both memoirs explore identity and heritage through deeply personal narratives, using food as a conduit for remembrance, connection, and healing. Chin's memoir, much like Zauner's, prompted me to reflect on the importance of identity and community, not only in shaping individual lives but also in the broader societal structures we navigate daily.

Reading these stories made me consider what today's healthcare system may be lacking. In a field often dominated by data and efficiency, we sometimes lose sight of the human stories behind the statistics. Chin's memoir underscores how identity and culture serve as cornerstones of individual well-being. For healthcare, this translates to recognizing the cultural, social, and emotional dimensions of patients' lives-an area where we still fall short, as evidenced by persistent disparities in care.

The book also highlights the importance of community as a support system, a theme that feels especially urgent in today's fragmented healthcare landscape. Whether it's a family restaurant serving as a sanctuary or a community clinic providing culturally tailored care, Chin's story reminds us of the power of shared spaces to bridge divides and foster trust.

In the end, Everything I Learned, I Learned in a Chinese Restaurant is more than a memoir. It's a meditation on the value of cultural roots, personal identity, and collective belonging-values that are as essential to healthcare and medicine as they are to the human experience. Chin's reflections left me thinking not only about what we've lost but also about what we could regain by prioritizing these elements in our efforts to create a more compassionate and equitable healthcare system.

Chul Hyun, MD, PhD, MPH

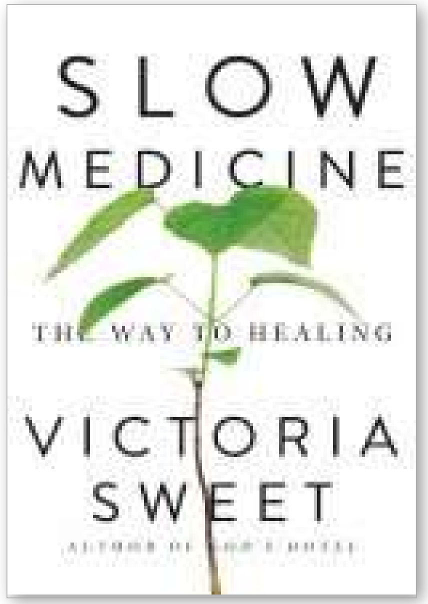
Curtis Chin co-founder and first executive director of the Asian American Writers' Workshop, is a writer, filmmaker, and social justice advocate. His award-winning films have screened at over 600 venues worldwide, and his writing has appeared in outlets like CNN and Bon Appétit. A University of Michigan graduate and former NYU visiting scholar, Chin has received honors from ABC/Disney, the National Endowment for the Arts, and more. Learn more at CurtisfromDetroit.com.

Slow Medicine: The Way to Healing

As the pace of modern medicine accelerates-with algorithms guiding decisions and AI reshaping clinical workflows-Dr. Victoria Sweet's Slow Medicine offers a quiet but urgent reminder: healing can't be rushed. First published in 2017, her book feels even more relevant today. Drawing on her years caring for patients at Laguna Honda Hospital, Dr. Sweet invites us to slow down and return to the basics: careful observation, human connection, and time.

She's not anti-technology. In fact, she embraces the value of science and progress. But she's deeply concerned that medicine is losing its soul to systems that prioritize speed over understanding, data over presence. Reducing care to checklists, protocols, and productivity metrics, she argues, risks eroding the very heart of what it means to be a doctor.

For today's students and early-career physicians, her message lands at a complicated time. Generative AI is reshaping not only how we practice medicine, but how we learn it. The landscape is shifting fast-and adjusting to it isn't easy. In this moment of transformation, Slow Medicine reads like a compass. It doesn't offer easy answers, but it does offer something we need just as much: perspective.



Authors
Dr. Victoria Sweet

Whether you're wrestling with the pressures of residency, questioning what kind of doctor you want to become, or simply trying to keep up with it all, this book reminds you why you chose medicine in the first place-and what's worth holding onto.

Chul Hyun, MD, PhD, MPH

Dr. Victoria Sweet is a physician, historian, and storyteller who bridges the worlds of science and the humanities. She's an Associate Clinical Professor of Medicine at UCSF and holds a PhD in medical history. A California native and fourth-generation San Franciscan, she studied math and classics at Stanford, started a PhD in psychology at Harvard, then switched tracks and earned her medical degree from UC Irvine-eventually finding her true calling in medicine and history combined.

For over 20 years, Dr. Sweet practiced at Laguna Honda Hospital, one of the last old-fashioned almshouses in the U.S., where she experienced a slower, more personal kind of medicine. It was there that she came to see the body not just as a machine to fix, but as a garden to tend-an insight that shaped her writing and her approach to care.

She began writing about her experiences, leading to her first bestselling book, God's Hotel (2012), followed by Slow Medicine (2017), both of which struck a chord with readers around the world. Her books have opened doors to conversations about what's missing in modern healthcare-from hospitals and medical schools to courtrooms and boardrooms. In 2024, she published Convictions: A Story of Medicine in the 21st Century, continuing her exploration of what it truly means to heal in today's fast-paced, tech-driven world.

CALL FOR SUBMISSIONS

NexBioHealth invites contributions from medical students, residents, young physicians, and healthcare professionals worldwide.
We are currently seeking submissions for the following categories:

- **Original Articles**
  Share your research, clinical studies, or innovative projects (2,000–3,500 words).
- **Opinion Pieces**
  Provide your perspectives on current issues in healthcare, medical education, or public health (800–1,500 words).
- **Case Reports**
  Submit detailed reports of interesting or unusual cases that highlight unique challenges and solutions (1,000–2,500 words).
- **Reviews**
  Summarize and analyze the latest developments in your field (2,500–4,000 words).
- **Letters to the Editor**
  Voice your thoughts on published articles or current healthcare debates (400–800 words).

Join us in shaping the future of healthcare by contributing to NexBioHealth!

Sumission Form

To learn more or to submit a paper, visit:

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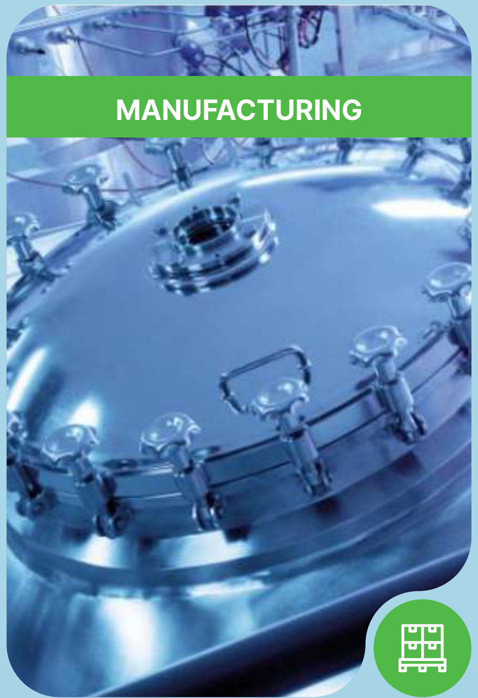

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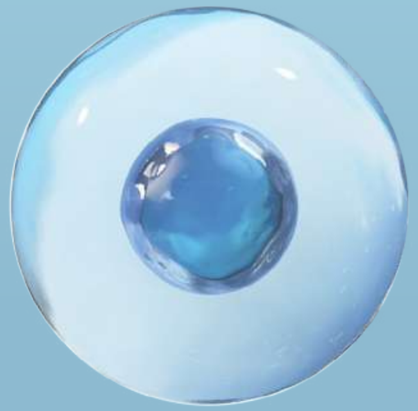
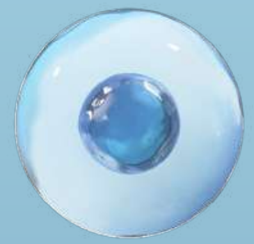




CELLTRION USA
CELLTRION

cGMP, current good manufacturing practice; EMA, European Medicines Agency; GMP, good manufacturing practice; R&D, research and development; FDA, US Food and Drug Administration.

The Ukrainian Medical Association of North America:

75 Years of Healing, Advocacy, and Action

A Conversation with UMANA President Dr. Marta Lopatynsky

As the war in Ukraine continues to grip global attention, many in the medical and academic communities have naturally turned their thoughts to Ukrainian colleagues-especially those working across borders to offer aid, education, and expertise. Among the most prominent voices in this effort is the Ukrainian Medical Association of North America (UMANA), a long-standing professional network of Ukrainian American physicians dedicated to advancing care, community, and collaboration.

UMANA 75th
Anniversary Celebration
Ukrainian Institute of America
2 East 79th St New York, NY
April 25-26, 2025

Founded in 1950 by displaced physicians who arrived in North America after World War II, UMANA has grown into a 900-member organization representing all medical specialties and generations of healthcare leaders. At a time when global crises demand both compassion and coordination, we sat down with UMANA President Dr. Marta Lopatynsky to reflect on the organization's roots, its wartime contributions, and its mission as it prepares to celebrate its 75th anniversary.

From Refuge to Resilience

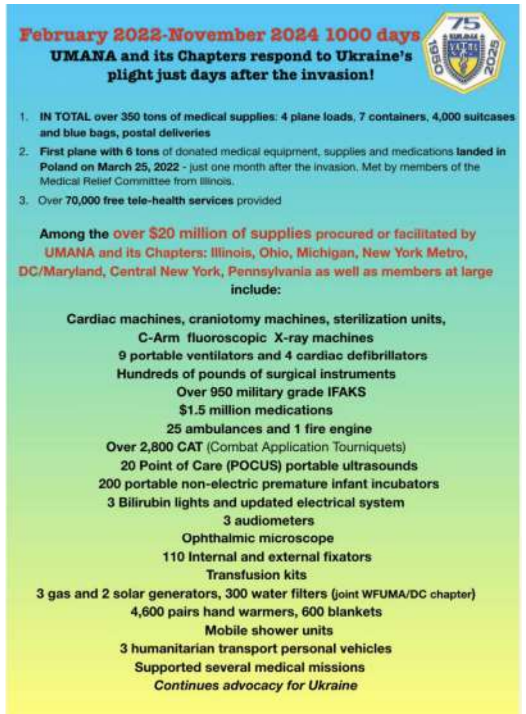
"UMANA was born from necessity," Dr. Lopatynsky shared. "After the war, many Ukrainian physicians who found refuge in the U.S. or Canada had no homes to return to-and no easy path to practice medicine again. They needed each other."

With unfamiliar medical systems, a new language, and cultural barriers to overcome, these physicians leaned on one another for professional guidance, social connection, and practical help navigating licensure and employment. UMANA was their response-a community built for survival, but also for renewal.

That foundation continues today. Although UMANA no longer tracks birthplace, its membership has steadily shifted toward U.S.-born Ukrainian Americans, along with a handful of members connected through marriage or shared interest. Its diversity spans the full range of medical specialties, from primary care and internal medicine to dermatology, ophthalmology, and radiology.

A Wartime Mobilization

When Russia launched its full-scale invasion of Ukraine, UMANA's purpose became more urgent than ever. "We knew we had to respond-and fast," said Dr. Lopatynsky.



February 2022-November 2024 1000 days
UMANA and its Chapters respond to Ukraine's plight just days after the invasion!

1. **IN TOTAL over 350 tons of medical supplies: 4 plane loads, 7 containers, 4,000 suitcases and blue bags, postal deliveries**
2. **First plane with 6 tons** of donated medical equipment, supplies and medications **landed in Poland on March 25, 2022 -** just one month after the invasion. Met by members of the Medical Relief Committee from Illinois.
3. Over **70,000 free tele-health services** provided

Among the over $20 million of supplies procured or facilitated by UMANA and its Chapters: Illinois, Ohio, Michigan, New York Metro, DC/Maryland, Central New York, Pennsylvania as well as members at large include:

Cardiac machines, craniotomy machines, sterilization units,
C-Arm fluoroscopic X-ray machines
9 portable ventilators and 4 cardiac defibrillators
Hundreds of pounds of surgical instruments
Over 950 military grade IFAKS
$1.5 million medications
25 ambulances and 1 fire engine
Over 2,800 CAT (Combat Application Tourniquets)
20 Point of Care (POCUS) portable ultrasounds
200 portable non-electric premature infant incubators
3 Bilirubin lights and updated electrical system
3 audiometers
Ophthalmic microscope
110 Internal and external fixators
Transfusion kits
3 gas and 2 solar generators, 300 water filters (joint WFUMA/DC chapter)
4,600 pairs hand warmers, 600 blankets
Mobile shower units
3 humanitarian transport personal vehicles
Supported several medical missions
Continues advocacy for Ukraine

The association activated its network of members and regional chapters to deliver massive volumes of medical supplies, medications, and equipment directly to Ukraine. According to Dr. Lopatynsky, the total support amounts to millions of dollars' worth of urgently needed aid.

Beyond physical supplies, UMANA has also supported interactive telehealth consultations and facilitated knowledge-sharing around trauma care-critical tools in a conflict where medical systems are under relentless strain.

"This is the largest and most sustained humanitarian initiative we've ever undertaken," she added.

Preparing vital medical supplies for Ukraine

Looking to the Next 75 Years

UMANA's support for Ukraine builds on a deep history of medical outreach, including CPR training, bilingual educational materials, and scholarships for medical and dental students. Now, as the organization approaches its 75th anniversary in April 2025-with a celebratory gala planned in New York City-it is focused on both honoring its legacy and looking ahead.

"Our next chapter will be even more significant," said Dr. Lopatynsky. "We're investing in technology, expanding community outreach, and working to bring in new members through mentorship, word of mouth, and networking."

That vision continues the work started in 1950: to foster professional excellence while standing in solidarity with the Ukrainian people-through every generation, and every challenge.

Marta Lopatynsky, MD

Marta O. Lopatynsky, MD is President of the Ukrainian Medical Association of North America (UMANA) and a board-certified ophthalmologist with over 25 years of experience. She practices at Morristown Eye Consultants and is on staff at Morristown Memorial Hospital. She completed her ophthalmology residency at Albany Medical Center and a cornea fellowship at Wills Eye Hospital.

A dedicated clinician and community leader, Dr. Lopatynsky has been involved in UMANA for years and now leads the organization through one of the most pivotal moments in its history. She has been recognized as a Top Doctor in New Jersey Monthly (2007–2024) and is active in medical education, electronic health records development, and professional societies including the American Academy of Ophthalmology.

NexBioHealth's First Regional Forum:

A Night to Reflect, Connect, and Dream Forward

NEXBIOHEALTH

1ST FORUM

Saturday, March 15, 2025 | 4:00 pm
161 S. Tweed Blvd, Nyack, NY
Myoptimum829b4f
PW: 6598-57-teal

WELCOME
Arrival, meet and greet over cocktails

DINNER
Relax and enjoy the meal together

OPENING
Dr. Henry Lee

From Healthcare to Human Care: Redefining Our Mission in a Changing world
Dr. Alex Kim

Beyond the surface: A Student's Evolving Perspective in Medicine
Kendrick Yu

DESSERT & OPEN DISCUSSION
Dr. Chul Hyun

ANNOUNCEMENTS
June Baik

CLOSING
Dr. Henry Lee

Thank you for being a part of this gathering!!

On **March 15, 2025**, NexBioHealth hosted its very first regional forum-an informal yet unforgettable gathering of physicians and students who came together in New York to pause, reflect, and dream.

This special evening marked a milestone for the NexBioHealth community: the successful launch of the magazine's first two issues, its growing reach to over 30,000 readers, and the powerful momentum built over the past six months. For many, it was the first time connecting in person-creating space not just for discussion, but for inspiration and planning what's next.

Held in an intimate venue with a **breathtaking view of the Hudson River**, the forum offered more than dialogue-it created a sense of warmth and community. With delicious food and a relaxed setting, the atmosphere encouraged open conversation across generations and roles.

The forum opened with a warm welcome from **Dr. Henry Lee**, Associate Professor of Dermatology at Weill Cornell Medical College. His heartfelt remarks highlighted the spirit of the evening-one grounded in reflection, mentorship, and a shared vision for the future of medicine.

Two keynote talks grounded the night.

Dr. Alex Kim, Associate Professor of Surgery at Mount Sinai, challenged the audience to think beyond technological breakthroughs and re-center on the human dimension of care. Drawing from his surgical work, global health missions, and leadership in advancing health equity, he reminded us, "This is not just about providing health care, but human care." He emphasized that innovation alone cannot address healthcare's most urgent problems-inequities, access gaps, and administrative burdens-and that true progress requires compassion, collaboration, and bold thinking.

Dr. Kim also shared a moving story from Uganda, where instead of seeing patients, he trained local surgeons in laparoscopic surgery. "That experience," he said, "was one of the most fulfilling of my career." A powerful reminder that impact can be made through sharing knowledge, not just service.

Sun-Joo Jang, MD, PhD, Cardiology Fellow at Yale School of Medicine, engaging with a group of students.

Kendrick Yu, a second-year medical student at the University of Alabama at Birmingham, brought a deeply personal and thoughtful perspective. Recounting an encounter with an elderly patient during a shadowing visit, Kendrick spoke of trust as the foundation of medical care. He reflected on Alabama's healthcare history-including the Tuskegee syphilis study-and how his education has shaped a strong sense of ethical responsibility and community awareness. "Each community has its own history," he said, "and we have to be willing to learn from it."

Later in the evening, **Dr. Chul Hyun**, Publisher of NexBio Health, reflected on the magazine's journey-from its early beginnings as the World Asian Medical Journal (WAMJ) to its evolution into a platform for young professionals and global collaboration. He spoke of legacy, purpose, and building something that transcends disciplines and generations.

The forum wrapped up with an open discussion about NexBioHealth's future direction, including themes for upcoming issues: the power of **narrative medicine** and how storytelling can deepen empathy and healing, and the role of **AI in medical education**, a topic growing in relevance across clinical training.

As conversations flowed and connections deepened, a shared vision emerged: **NexBioHealth as a platform that bridges generations and fields, cultivates mentorship, and sparks collaboration to address pressing issues in medicine and healthcare**.

More than just a forum, the night was a celebration of shared purpose and possibility. One attendee remarked, "It felt like we were all part of something just beginning-and something that matters."

NexBioHealth's first forum was, without a doubt, an epic beginning to what's ahead.

From Health Care to Human Care:
Redirecting Our Mission in a Changing World

Good afternoon, everyone.

I think it's safe to say that most of us are here today because we share a simple yet profound desire-to help people. We chose medicine not for its prestige or promises, but because we wanted to make a difference in people's lives.

Whether that calling came from a personal experience or a story in a book-whether we were inspired by the selflessness of Dr. Schweitzer, the compassion of Florence Nightingale, or a physician or nurse who touched our own lives-we were drawn to this profession to heal.

But today, I am not here to share my vision or teach you lessons from textbooks. Normally, my talks are about the colon and anus, accompanied by PowerPoint slides filled with graphic images. But today, I am here to **challenge you**-to think about what we can do and what we must do. To recognize that **the future of medicine lies in your hands**.

And I know you are different-because while your friends may be outside enjoying a beautiful spring afternoon, you've chosen to be here, driven by the belief that you can do more.

Look at how far we've come.

Not long ago, gallbladder surgery meant a 10-day hospital stay and a large incision. Today, it's performed through three tiny holes, and patients go home the same day. We once made massive abdominal incisions to remove colon cancer-now, I can remove an entire colon through a few small incisions and discharge patients the next morning.

Dr. Hyun and I have shared colon cancer patients for over two decades; we are part of this incredible evolutionary journey. We've moved from open-heart surgeries to catheter-based procedures, from dialysis to growing organs in animals for human transplantation. **The impossible is becoming reality-because of people who dared to imagine something better**.

In the last decade alone, we've witnessed breakthroughs that once belonged in science fiction.

mRNA vaccines were developed in record time to combat a global pandemic, saving millions of lives and opening doors to vaccines for cancer and chronic diseases.

CRISPR technology now allows us to rewrite human DNA, offering hope to patients with genetic diseases once deemed incurable.

CAR-T cell therapy is revolutionizing cancer treatment. Artificial intelligence can detect early signs of disease faster and more accurately than any human. And technologies like liquid biopsies enable us to diagnose cancers through a simple blood test-**years before symptoms even arise**.

Yet, despite these extraordinary advances, we face a sobering truth: **innovation alone cannot solve the deeper problems in healthcare**.

In the United States, we spend more on healthcare than any other country-almost 18% of our GDP-yet our life expectancy lags behind. The reasons are as complex as they are urgent: gaps in access, systemic inequities, and the crushing weight of administrative inefficiency. **We live in a country where your zip code can determine your lifespan**.

Let me share the story of a visiting nurse in West Virginia, recently highlighted in The New York Times. This nurse travels through rugged, remote areas to deliver care to patients who would otherwise be forgotten. Her work is not just about administering medication or checking vital signs-it's about showing up, offering dignity, and filling the gaps where our system falls short. She is not just providing healthcare-**she is providing human care**. And that distinction matters.

Because healthcare today is no longer just about skilled surgeons like me performing precise procedures or experienced physicians prescribing the right medications. It's about recognizing the **entire ecosystem of care**-where social workers, policymakers, and community leaders play as vital a role as any surgeon. It's about ensuring that patients are not just surviving, but living with dignity-where no one should have to choose between paying for medicine and putting food on the table.

This is the world you are inheriting. And I ask you-what will you do with it?

The future of medicine is not just about the next technological breakthrough-it's about **collaboration, connection, and compassion**.

My own journey in global health has shown me that the greatest impact often comes from working together across borders and disciplines. Whether it's my mission work in South America or supporting a stand-alone surgical center deep in the Ugandan jungle-where local surgeons, supported remotely by experts in New York, are saving lives every day-what matters most is **the human connection**.

Connections that were made are saving lives.

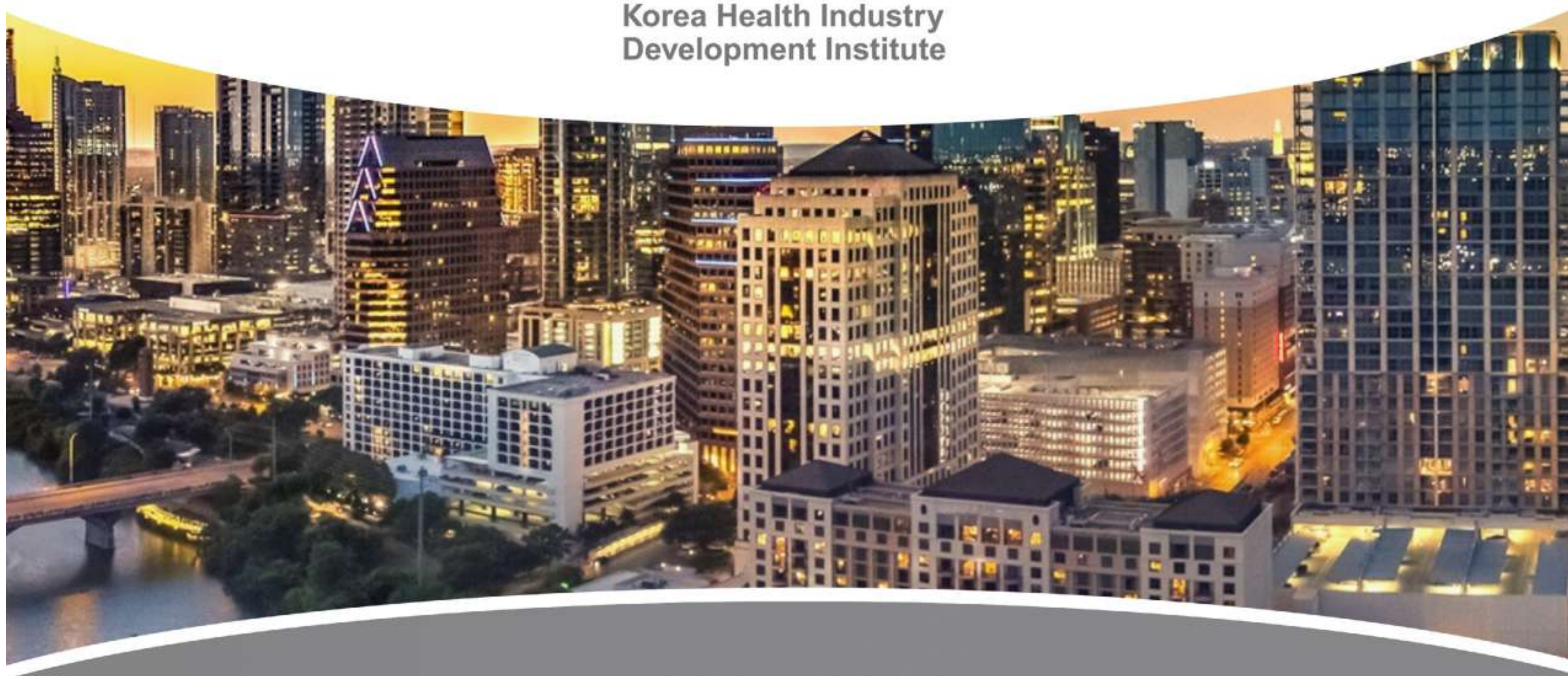
The connections you are making here today are not different at all. Through these connections we may be able to find solutions for even west Virginia.

So, as you continue your journey in medicine, I urge you to hold onto the desire that first brought you here-to help people. But don't stop there. Look beyond the operating room, beyond the clinic. **Be the generation that pushes medicine forward-not just in technology, but in humanity**. Advocate for the patients who have no voice. Challenge the systems that perpetuate inequity. And never forget that behind every chart, every scan, every statistic-t**here is a human being in need of care, human care**.

The world doesn't just need better doctors-it needs **better people in medicine**. And I believe you are those people. I am honored to have known you, and I am even more excited to see what you will do.

Thank you.

Sanghyun Alexander Kim, MD
Colorectal Surgery
Icahn School of Medicine at Mt. Sinai



First, Do No Harm:
Navigating Bioethics in Medicine

Dear Mentor,

My name is Kendrick Yu, and I am currently a second-year medical student at the University of Alabama at Birmingham's Heersink School of Medicine. Before receiving our white coat and beginning our journeys as medical students, we are required to recite the Hippocratic oath and etch the phrase, "First, Do No Harm," into our hearts and minds. But what does this truly mean in practice? How does a deeper understanding of bioethics impact the way physicians approach patient care? Was there a moment in your career that challenged your understanding of this principle? How can students prepare for the transition into a medical environment where ethical decisions rarely have a clear or 'correct' answer?

Thank you for your time and guidance!

Kendrick Yu
MD Candidate, Class of 2027
University of Alabama at Birmingham Heersink School of Medicine

Dear Kendrick,

First, let me congratulate you on making it through the first year of medical school! That is certainly a rite of passage and includes many "firsts," like the white coat ceremony. The oath that we take in those early days is made with anticipation and sometimes only partial understanding of the challenges we will face. We will find ourselves in ambiguous or contradictory clinical situations as we progress into the wards and units and clinics of the hospital. No one embarks on that journey with the intent to do harm. Yet, everyone does do harm. Harms are inevitable in a practice that offers treatments that are effective because they are powerful.

As you make it through the second year and enter the clinical years, you are also shifting from a world of multiple-choice questions to a ward full of human conditions that do not have clear cut "right answers." This is a great time to think about what knowledge and skills can help you think clearly and fairly about often unclear and unfair situations.

Bioethics is a field that developed in the middle part of the twentieth century to help guide medical decision making and protect vulnerable populations. Ethics in general looks at what is right and wrong. Bioethics in particular, looks at what is right and wrong in the context of living beings and their health and ability to flourish. It is important to know that it arose in the aftermath of the Nuremberg Doctor's trials of 1947 which exposed the horrific abuses of human subjects in medical experiments in World War II and it continued to gain relevance during the 1960s and 70s when trust in authorities of all kinds, including medical, was being questioned. In many ways, the original purpose of bioethics was not to do good, but to protect people from both harm and coercion.

That phrase "First, do no harm" is one of the most resonant and meaningful in the medical profession so let's look at it a little closer. Almost always we focus on the "harm" part of the statement and the "first" is just a throwaway. But think about that "first" a little bit more. Medical interventional almost always poses the risk of some harm. But if harm is inevitable, it should never come first. First comes the doctor-patient relationship and the trust that guides everything else. First comes the intention to help and to provide benefit.

The bioethical Doctrine of Double Effect addresses the issue that arises when you need to do something to get a good outcome, but that very action will also cause a bad effect. Attributed to St. Thomas Acquinas, this doctrine says that the good effect is what is intended, not the bad effect; the bad effect is foreseen but not desired; and there must be a proportionate threat or risk that justifies the badness of the bad outcome.

One moment in my career that really made me think about this was when I was taking care of a patient with dementia who had a large cancer invading his eye. As a head and neck surgical oncologist, I knew that this could potentially be cured and would definitely relieve some of his suffering if we operated to remove his eye. As a clinical ethicist, I knew that even with a surrogate decision maker's consent for this patient lacking capacity, an orbital exenteration was extreme and would be considered mutilating by many. I did my best to see things from the patient's perspective and to show kindness and establish trust. He implored me to remove the cancer and ease his pain, but refused the general anesthesia that was necessary. We balanced his understanding and capacity against the values and goals he was able to express and, with the support of a court appointed guardian and our full care team, we proceeded to sedate him and complete the operation. Here again, you see the importance of the order of events. First, is kindness and empathy. Harm is always relative and harm should never come first.

My journey to the work that I love as a clinical bioethicist began with the medical humanities. Before I even thought about going to medical school, I was a musician and a historian and when I discovered the field of medical humanities I dove into the intersections of medicine and history, philosophy and literature. One of my favorite topics was empathy-how we are able to see things from someone else's perspective. Beyond learning about bioethics and its techniques, I would encourage you to read widely-novels, poetry, short stories, as well as social sciences like history and anthropology and psychology. Reading immerses you in the stories of other people but it also trains your mind to think about situations that do not have clear-cut right answers and to balance competing values and compare benefits and burdens.

Best regards,

Susan D. McCammon, MFA, MD, FACS, FAAHPM, PhD

Susan D. McCammon, MFA, MD, FACS, FAAHPM, PhD

Susan D. McCammon, MFA, MD, FACS, FAAHPM, PhD is the John W. Poynor Professor of Otolaryngology and Director of Head and Neck Surgical Oncology at the UAB Heersink School of Medicine in Birmingham, Alabama. There she serves as the Director of the Pat and Jean Sullivan Head and Neck Cancer Survivorship Program, one of the only survivorship programs in the US that enroll patients at the time of diagnosis. Dr. McCammon's career includes a focus on medical ethics. As Associate Medical Director of the UAB Clinical Ethics program, she provides clinical ethics consultation for high-risk surgical patients. Prior to that, she was the Past Chair of the Ethics Committee of the American Academy of Otolaryngology-Head and Neck Surgery. Currently, McCammon serves as Adjunct Faculty in the Department of Bioethics at the Cleveland Clinic Foundation. Her research interests include medical decision-making, narrative ethics, prognostication, and goal-concordant care for patients with advanced and recurrent head and neck cancer.

Medical Ethics in the Pharmacy School Curriculum

In this thoughtful and timely interview, Raveena Baskaran, a PharmD student at the Harrison School of Pharmacy, sits down with Professor Marilyn Bulloch, a dedicated faculty member known for her mentorship and emphasis on professionalism, to explore how medical ethics is taught, internalized, and lived out in pharmacy education. Their conversation delves into the integration of ethical principles within the curriculum, from foundational orientation sessions to clinical rotations where students encounter real-world ethical challenges. Together, they reflect on how the school's Code of Ethical and Professional Conduct aligns with national standards, how mentorship shapes ethical decision-making, and how pharmacy students evolve into professionals who uphold the integrity of their field. This piece offers valuable insight into the cultivation of ethical awareness and responsibility in one of healthcare's most trusted professions-perfectly aligning with the focus of this issue on medical ethics.

Q1 How does the Code of Ethical and Professional Conduct at our pharmacy school align with the ASHP Pharmacist Code of Ethics and the Oath of a Pharmacist?

Pharmacy as a profession has had some sort of Oath for thousands of years. As a profession, it may be one of the longest-standing professions to abide by a code of ethics. Our Code of Ethical and Professional Conduct (Honor Code) was developed considering the same principles as the two documents you mentioned: honesty, professionalism, and with the care and welfare of our patients and the public health in mind.

Q2 What example can you provide of how ethical principles are incorporated into the pharmacy curriculum?

The Harrison School of Pharmacy prides itself on the professionalism component that is woven into every aspect of the College, even if students are not aware of it. We have our Tenants of Professionalism that students are introduced to in Orientation and sign an agreement that they will abide by them. This is important. Professionalism is not a subject to be memorized. It is a culture of behavioral standards that is taught and cultivated so that it becomes part of the core of a person's personality. The expectations that we have of our students in the classroom, in experiential training, etc. is a minimum. We also foster involvement and leadership development with a strong mentorship component to ensure that our students are brought into and developed appropriately for this profession. Pharmacy is a profession – that means it is lifelong. You may change employers and jobs, but "Pharmacist" becomes part of your identity and will remain so for the rest of one's life. Therefore, it is important that everyone who is part of this special group understands and values the same expectations.

Q3 How are ethical dilemmas presented and discussed in the classroom setting?

Academic honesty is the easy answer here, as it would anywhere. However, there are other, smaller matters. Our students have a lot of group work, where they are given autonomy as adults and young professionals to collaborate for a task, much like they would in the real world.

This always has the potential to introduce ethical issues. What if one student in the group did not participate, or did not participate much? Do we still put their name on the assignment? How can we find a way to work out logistics as a group? From a purely curriculum standpoint, we discuss ethical dilemmas at the very beginning of the P1 year and formally again in the P3 year.

It is also scattered around in various cases and lessons over the curriculum, but it may be Subtle.

Q4 How do clinical rotations help students apply ethical principles in real-world settings?

Real life is not easy. People cannot afford medicine. People have addictions. People do no have homes or family members to help them. Pharmacies may not be reimbursed the cost of the medicine – and it may not be viable for them to obtain it for a patient. Medication shortages may require rationing. These are all practical scenarios and ones that rotations help introduce students to while there is a seasoned pharmacist around to help the student understand how to best navigate the difficult situation. Human emotion is not something that can fully be taught in the classroom. We can talk about it, but it is entirely different to see it occur with a real person.

Q5 What role do faculty members play in mentoring students on ethical decision-making during pharmacy school?

At our College, each student has a mentor who is supposed to guide them and help develop them throughout their academic career. This is meant to facilitate the transition from student pharmacist to pharmacist. This is the person that you get to know closely so that you can approach them when there are difficult issues.

Q6 What resources are available to students who want to deepen their understanding of medical ethics?

Students wanting to participate in research are required to take ethics training (CITI training).

However, even if a student does not want to do research, these courses are great at explaining ethics, providing historical context, and professional development. There are also journal sections and entire journals devoted to biomedical ethics.

Q7 How do you ensure that students understand and internalize the ethical standards expected of them as future pharmacists?

You can watch a student grow over the course of their time in pharmacy school. There is not a tangible checklist, but you can see the respect and the commitment to the profession and to patient care takes root and fosters. Often, students are the harshest judges of any peer who does act un-ethically. This makes my heart happy because they are holding their peers to the standards they should be held to, and they are doing it innately.

Q8 Can you share any success stories of students who have excelled in ethical decision-making in their professional careers?

I have stories- but I am not sure, for privacy reasons, if I am allowed to share specifics. I can tell you that I have had students who made mistakes while in pharmacy school. They dealt with the penalty. Some were given a professionalism mentor (in addition to their regular mentor) for a certain duration and went on to become members of the profession to be proud of.

Interviewed by
Raveena Baskaran
Auburn University Harrison School of Pharmacy
Pharm.D. Candidate, 2028
Albert Schweizer Fellow, 2025

Marilyn Bulloch, Pharm.D., BCPS, FCCM

Associate Clinical Professor
Auburn University Harrison School of Pharmacy

Marilyn Novell Bulloch, Pharm.D., BCPS, FCCM is an Associate Clinical Professor at Auburn University's Harrison School of Pharmacy and serves as the Director of Strategic Operations, the Vice Chair for the Honor Board, and the Content Expert for Ethics. Dr. Bulloch earned her Doctor of Pharmacy from Rutgers University in 2007. She completed residencies in pharmacy practice at the University of Alabama-Birmingham Hospital in 2008, and critical care at Charleston Area Medical Center in Charleston, West Virginia in 2009. Her practice focuses on adult critically ill and geriatric patients at DCH Regional Medical Center in Tuscaloosa, Alabama. She is actively involved in various pharmacy and medical organizations and was inducted as a Fellow of the American College of Critical Care Medicine in 2017. Her research interests include geriatric pharmacotherapy, interdisciplinary education, and infectious disease.

The Inner Work It Takes To Be a Physician

As this month's issue focuses on Medical Ethics, I want to share my thoughts on the importance of self-awareness and resilience in becoming a physician who treats the whole patient – not just the disease.

Since high school, I've kept a journal to practice gratitude and document accomplishments and happy memories that I want to look back on. While I use my journal as a way to relieve stress, I've realized that I often hesitate to write anything negative – afraid that voicing my doubts would make them feel more real. This tendency to focus on "good thoughts only" has sometimes prevented me from engaging in the deeper self-reflection I truly needed.

Though this coping strategy got me through a lot, I've learned it isn't sustainable. With the challenges of balancing multiple life roles – especially as a busy medical student – I found myself feeling lost and overwhelmed. I decided to turn to my school's Student Affairs and Wellbeing team for support.

At first, I found it awkward opening up to a counselor, someone I was meeting for the first time. It was unsettling that the simple introduction of "Hello, my name is..." was quickly followed by insecurities I couldn't even bring myself to write down in my private journal. I also couldn't ignore the cultural stigma surrounding mental health – the idea that seeking therapy might reflect poorly on my family and imply weakness.

However, after just three sessions, I felt a sense of relief. Speaking with a professional helped me organize my thoughts, see the bigger picture, and realize that what I was going through was a normal part of life.

I learned that, no matter the struggle, failure, or loss, the first step is to show myself grace. Progress may be slow, and setbacks are inevitable, but with time, I will grow stronger.

Through these sessions and conversations with trusted faculty members, I realized that I wasn't just seeking support and mental health resources to clear my mind and dedicate more time into being a successful medical student. It was about doing the inner work necessary to become the kind of physician my future patients need.

Feelings of shame can cause patients to avoid necessary care and withhold vital information from their doctors. This barrier to open communication hinders effective diagnosis and treatment. Without self-awareness, I would not have the skillset to create a safe, nonjudgmental environment for my patients, nor would I be able to fully apply the clinical skills I've worked so hard to develop.

Therefore, my biggest resilience goal is to shift my focus inward - on what truly matters for my growth as a future physician. Whether that means learning to sit with sadness,

setting boundaries, or openly facing my doubts by reaching out to my support system, I want to let go of shame and channel my energy into growth. By doing the inner work to build self-awareness and resilience now, I will be better equipped to remove shame from sickness, foster trust, and inspire meaningful change in my future patients!

Sohee Kaity Kim

MD Candidate, Class of 2028

Hackensack Meridian School of Medicine

Kaity is a first-year medical student at Hackensack Meridian School of Medicine in New Jersey, where she was raised. She earned her BS in Neuroscience and Human Computer Interaction (HCI) from Carnegie Mellon University. Her background in this interdisciplinary field has taught her to appreciate humans at the center of any design system. As a new member of KAMSA and NexusHealth, she is excited to collaborate with people of various backgrounds and expertise to drive medical progress and advocate for our patients.

UPCOMING CONFERENCE ALERT

Digestive Disease Week (DDW) 2025

Dates: May 3-6, 2025
Location: San Diego, CA

Focus: Latest research and advancements in gastroenterology, hepatology, endoscopy, and gastrointestinal surgery.

https://ddw.org/

American Telemedicine Association (ATA) Annual Conference & Expo

Dates: May 3–5, 2025
Location: Phoenix, Arizona

Focus: Dedicated to telemedicine, offering insights into the latest advancements and opportunities to connect with industry leaders.

https://www.ata2025.org/

Healthcare Innovation Congress

Dates: May 12–15, 2025
Location: Washington, D.C.

Focus: Bringing together healthcare professionals to discuss innovative solutions and strategies in healthcare delivery.

https://www.healthcareinnovationcongress.com/

International Healthcare Conference on Microneedles

Dates: May 11–14, 2025
Location: Brisbane, Australia

Focus: Exploring microarray patch technology for transdermal delivery and healthcare applications.

https://www.microneedlesconference.com/

World Health Summit Regional Meeting

Dates: June 7–9, 2025
Location: New York, New York

Focus: Addressing global health challenges with a focus on sustainable development goals.

https://www.worldhealthsummit.org/

International Conference on Healthcare and Life Science Research

Dates: June 15–17, 2025
Location: San Francisco, California

Focus: Discussing advancements in healthcare research and life sciences.

https://www.ichlsr.org/

AIME 2025

Dates: June 23-25, 2025
Location: Pavia, Italy

Focus: This conference, hosted by the University of Pavia, offers a platform for researchers and experts to present theoretical, methodological, and applied results related to the use of AI in medicine.

https://aime25.aimedicine.info/

Health 2.0 Annual Conference

Dates: July 10–12, 2025
Location: Boston, Massachusetts

Focus: Showcasing cutting-edge technologies and innovations in digital health.

https://www.health2con.com/

Global Healthcare Summit

Dates: July 20–22, 2025
Location: Chicago, Illinois

Focus: Bringing together global leaders to discuss the future of healthcare.

https://www.globalhealthcaresummit.com/

National Association of Community Health Centers (NACHC) Community Health Institute & Expo

Dates: August 23–25, 2025
Location: Chicago, Illinois

Focus: Focusing on community health, providing education sessions and networking opportunities.

https://www.nachc.org/events/chi-expo-2025/

American Telemedicine Association (ATA) Annual Conference & Expo

Dates: August 30–September 1, 2025
Location: Los Angeles, California

Focus: Exploring advancements in telemedicine and connecting with industry experts.

https://www.ata2025.org/

NexBioHealth is more than just a magazine it's a global community for the next generation of medical professionals.

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UPCOMING ISSUE

The Art of Healing:
Where Medicine Meets Creativity

The Art of Healing: Where Medicine Meets Creativity is the theme of our next issue-a timely exploration into the intersection of science, story, and soul in modern medicine. In an age increasingly shaped by AI and technology, the human side of care risks being overshadowed. That's why we turn our focus to the power of narrative medicine, storytelling, and creative expression-not as luxuries, but as essential tools that shape how physicians understand, connect with, and heal their patients. Featuring thought leaders and clinician-artists who are redefining what it means to care, this issue will spotlight the importance of empathy, presence, and meaning in both clinical practice and medical education. As we navigate this transformative era, the challenge-and opportunity-lies in infusing technology-driven care with the deeply human art of healing. We invite you to look forward to an issue that inspires, provokes, and reminds us why we entered medicine in the first place.

Stay tuned for this engaging and thought-provoking issue, coming August 2025!