

Perspective

Generation Z and the emerging paradigm of medical education and health-care delivery in India

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Received: 01 December 2025

Accepted: 01 December 2025

Published: 18 December 2025

DOI

[10.25259/AUJMSR_118_2025](https://doi.org/10.25259/AUJMSR_118_2025)

Quick Response Code:



PREAMBLE

Recent geopolitical events in Bangladesh, Nepal, France, and elsewhere have thrust Generation Z (Gen Z) into global attention, often for disruptive political mobilization.^[1-4] The magnitude of unrest, political upheaval, and violence reflects the fact that, in those places, this generation was exposed to environments where violence – by states, militias, extremists, or mobs – was already present. Their involvement emerged through digital mobilization, social-media activism, street protests, and resistance movements. Examples include the regime change of the allegedly corrupt “Oli government” in Nepal, the ouster of the Sheikh Hasina government in Bangladesh, and the anti-pension protests in France. Even the United States of America has seen large-scale mobilizations such as black lives matter, gun control activism, abortion rights protests, climate activism, and campus unrest.^[5-7]

India is no stranger to this either. The Anti-Citizenship (Amendment) Act/ National Register of Citizens (CAA/NRC) movement in New Delhi followed a similar pattern, where a possible regime-change was the actual intent, as alleged by the Delhi Police.^[8] For more than 100 days, the protesters did sit-in protests and road blockades - which in turn disrupted mobility, compromised the safety of common people, and affected businesses and public activities. Though thankfully, there were no casualties on any side.

Globally, Gen Z represents the emerging youth workforce—learning, training, and entering professional roles. They can be a highly productive, constructive force for the maintenance of *status quo*, or a “disruption” bringing about an upheaval, depending on how they are guided.

MAJOR GENERATIONS (BORN ~ 1900–2020)

If one traces the timeline as per the birth years of humans and their generations, between the years 1900 till 2020 (COVID-19 year),^[9] then we can broadly trace it into.

Silent generation/ ‘The Builders’ (1928-1945)

The majority of this generation, the super senior citizen, have passed away. Some, who are still existing are in their early 80s. The reason the name “silent” is to emphasize the life of a patient suffering. The suffering due to their childhood and growing up during/after World War II (WWII), and challenges faced due to economic depression, wartime atrocities and casualties, and hardships due to mass immigrations/displacements.

In the Indian scenario, they suffered even more because of the pain and torture of the Partition of the Indian subcontinent, displacement/resettling, refugee camps/status, and economic hardships, to mention a few.

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The main qualities of this generation were value for discipline, respect for authority, an active search for stability and conformity.

Baby boomers (1946–1964)

Presently these can be categorized into actual “Senior citizen.” They were born during a huge population boom or also called as “Baby Boom,” after WWII. They are the stark contrast to the previous generation (Silent Ones). In the West, born in the post-war economic boom, they were shaped by the American civil rights movement of the likes of Martin Luther King (Jr.), John F Kennedy, the Cold War, Vietnam War, and massive economic growth.

In India, they had their challenges, in the form of multiple wars with our neighbour, Pakistan, including Bangladesh war and few major natural calamities.

As a result, they are often considered as optimistic, adventurous, career-focused, exploring newer and better pastures, and inherently hardworking. In India, these were the pioneers of the major exodus of professionals such as doctors, engineers, and Bank professionals, to Western countries.

Gen X (1965–1980)

Globally, this generation grew up with the early computer evolution, cable TV and “pop culture explosion.” They are known as the “latchkey generation” because majority of them had both parents working, giving them the resourcefulness, independence, and skeptical attitude, leading to an increased divorce rate. The double-income households also meant affluence, so they tend to be spendthrift.

Millennials/gen Y (1981–1996)

The first generation to grow up with the 24 h internet/Wi Fi facility. Tech-savvy and social-media-dependent generation with a focus on value work-life balance and technology-driven lifestyles. Negatively affected by the 2008 market crash and recession, faced economic challenges, student loans, and financial re-orientation.

Gen-Z (1997–2012)

The generation in “focus.” First generation to grow up with ubiquitous digital technology (true digital natives), smartphones, and social media. Influence from online communities, reels, memes, apps such as YouTube, TikTok, Instagram, which have made them highly progressive. The main characteristics are value diversity, pragmatism, and need for social justice. Especially in the form of value inclusivity, authenticity, mental health, and online activism

such as climate and mental health issues. Often politically aware and socially conscious.

From a medical education point of view, they are joining as undergraduates (UG), postgraduate (PG) residency, and early career roles such as senior residency/fellowships, right now.

Gen alpha (2013–2025, ongoing)

They are the children of Millennials and older Gen Z. The first “generation surrounded by artificial intelligence (AI) assistants, called “AI native” children, growing up with tablets, smart toys/devices, and automation. Expected to be highly tech-integrated and globally connected.

GEN-Z AND MEDICAL EDUCATION: UG AND PG

With Gen Z’s entry into medical institutions as UGs, PGs, and early-career clinicians, the culture and practice of medicine are undergoing a quiet but profound transformation. Gen Z’s educational DNA is fundamentally digital, and this cohort enters training with high expectations for equity, transparency, and integration of wellness into professional identity.^[10-12] Their value system strongly differs from that of the earlier generations and medical teachers often find that working with Gen Z brings both promises and challenges. More of challenges fringed with distant but distinct promises.^[11,13]

A deeper issue is Gen Z’s preference for fast, easily accessible information rather than slow, layered learning.^[10,12] In medicine – where clinical reasoning requires systemic approach of hypothesis, reflection and analytical reasoning acquired by repetitive practical multitasking – these clash with the expectation of instant answers or the “fast-food” model of learning anticipated by Gen Z.^[12,14] Their general attitude towards, the existent education system is that of scoff, casual indifference and inherent belief, that all the information being transmitted is easily available “online/on Internet.” Thus making classroom or ward-based teaching involving pedagogic lectures, bedside or operation-table side discussions seem redundant, an exercise in futility. Their digital fluency creates expectations for interactive, personalized, and technology-enhanced instruction, making long lectures or step-by-step apprenticeship feel inconsequential. Teachers often observe short attention spans when content isn’t visually stimulating, leading to the redesign of teaching into multimedia or interactive formats.^[12]

Communication styles differ as well. Many Gen Z learners express themselves confidently online but become rather hesitant in face-to-face clinical interactions, especially with seniors or patients.^[15] Teachers sometimes struggle to imbibe good bedside manners, empathy, and confidence in real encounters. At the same time, Gen Z expects open

communication, psychological safety, and approachable mentorship – expectations some senior faculty were never trained to provide.^[11,13]

Professionalism also becomes a point of tension. The boundary between personal and academic life can blur when students bring digital habits into clinical spaces. Problems arise around smartphone/tablet use during delivery of didactic lectures or ward rounds, documentation practices, and misunderstandings about hierarchy, responsibility, and accountability.^[16] Motivation fluctuates because this generation grew up with abundant options, flexible pathways, and instant gratification. Hard physical labour, long duty hours, steep learning curves, and emotionally heavy scenarios can be utterly overwhelming, resulting in frequent leaves of absence from duties (sick leave, casual leave...), contributing to “burnout” or preference for lifestyle-friendly specialties.^[14,17]

Teachers, particularly those of an older generation, also feel the pressure to continually update their teaching styles, integrate technology, personalize learning, and mentor effectively – often without institutional support.^[13] Misunderstandings arise when teachers view Gen Z student/s “entitled or disengaged,” while students view faculty as rigid or unsympathetic. Bridging this gap requires mutual effort and leaves some older educators stretched and unsure how to balance tradition with innovation.

GEN Z AND ITS IMPACT ON HEALTH-CARE DELIVERY

Senior medical consultants likewise find that ensuring consistent healthcare delivery from Gen Z trainees involves far more than teaching only clinical skills. A major challenge is the gap between older consultants’ expectations – accountability, discipline, endurance, and hierarchy – and Gen Z’s preference for physical comfort, involvement-flexibility, collaboration, and psychological safety.^[11,13] Consultants often feel frustrated when trainees feign inability to understand, question instructions, seek validation, or resist workloads they perceive as excessive, especially in fast-paced areas such as anesthesia/operating rooms, intensive care units, and emergency departments.

Work ethic and consistency pose further concerns. Gen Z trainees are efficient and adaptable when engaged, particularly with technology, but their motivation fluctuates with emotional comfort, fairness, or task novelty.^[14,17] Older consultants may find it difficult to rely on them for repetitive but essential tasks such as documentation, follow-up, and prolonged monitoring – tasks critical for continuity of care.^[14,17]

Communication gaps also cause strain. Gen Z prefers brief, digital, non-confrontational exchanges, while older consultants are accustomed to direct communication, which

may sometimes become a “nagging lecture.” Feedback intended as routine correction may be misinterpreted as harsh, demotivating, and cutting, leading to a reduction in efficiency in high-stakes environments.^[15]

Clinical responsibility and decision-making create another challenge. Many consultants perceive Gen Z trainees as risk-averse, hesitant to take accountability/responsibility, and dependent on reassurance due to fear of error or criticism.^[13,17] Technology, though a strength, can also distract from patient interaction and situational awareness, with trainees sometimes turning to apps before engaging with patients, or relying on technology as infallible, instead of observing the clinical scenario.^[16]

This generation also enters medicine with higher baseline anxiety and a strong desire for work–life balance, which clashes with medicine’s traditionally rigid and high-intensity structure.^[14,17] Their lower tolerance for prolonged hours and steep hierarchies has sparked important discussions about reform, but also complicates mentorship and assessment.^[14,17]

Professional identity formation is further complicated by social media. Gen Z’s visible online presence increases risks related to privacy, boundaries, and reputational harm.^[16] This has begun emerging as some early-career doctors have been legally sued for publishing details of their patient encounters on social media, without express permission from said patients.^[14,17]

The omnipresence of technology, while beneficial in many ways, can also work against smooth healthcare delivery. Gen Z’s constant engagement with devices sometimes interferes with patient interaction, situational awareness, or the ability to fully immerse themselves in procedures. Consultants may struggle to pull trainees away from screens and into genuine patient-centered practice, where empathy, conversation, and observation cannot be substituted by apps, guidelines, or AI tools.

Compounding the situation is the burden on senior consultants, who must adapt their teaching and leadership styles while navigating heavy workloads and risk of “burnout” for themselves from having to continually adapt their teaching, leadership, and supervisory style. They must balance firmness with emotional sensitivity, authority with approachability, and tradition with innovation—all while handling heavy clinical workloads.^[13] These challenges reflect a generational mismatch rather than deficiencies in the senior teachers, as may have been misconstrued.

Implications

The emergence of tech-savvy Gen Z has compelled educators, higher education institutions/universities, and health systems to reconsider how we teach, work, and care. The competency-base medical education (CBME), early clinical exposure, attitude, ethics and communication

module (AETCOM) and case-based discussions are some of the modalities, that have been implemented. The assessment methods are coming up with objective structured clinical examinations/objective structured practical examinations (OSCEE/OSPE). Medical universities are integrating more digital tools like, multimedia classrooms, advanced simulation laboratories, to mention a few. The hardbound student paraphernalia are being replaced by e-logbooks, reflective portfolios, flipped classrooms, and personalized learning pathways.

Gen Z is prompting the medical profession to re-examine outdated norms and ideas. When guided well, they can become drivers of a more equitable, technologically advanced, but human-centered healthcare system.^[10-14]

SUMMARISING

Gen Z is reshaping medical education and healthcare with digital fluency, strong value-driven advocacy, expectations for equity, wellness, and modernized systems. These strengths also create challenges: Dependence on instant bite-sized information, difficulty with ambiguity, burnout risk, and friction with traditional hierarchies. Their fast, visual, and interactive learning style often conflicts with the sustained focus and reflective reasoning required in medicine.

In clinical settings, many Gen Z trainees show hesitancy in face-to-face communication, reduced bedside engagement, and fluctuating motivation - especially for routine tasks that lack immediate stimulation. Their emphasis on work-life balance and psychological safety sometimes clashes with medicine's conventionally demanding structure. This generational mismatch increases communication gaps, slows decision-making, and raises the supervisory burden on senior clinicians, who must adapt their teaching and leadership styles while managing heavy workloads.

Technology, although Gen Z's greatest strength, can also distract from patient-centered care and hinder the development of observational skills. Yet, Gen Z's expectations for transparency, flexibility, and modernized systems are pushing institutions to update outdated norms and adopt more humane, tech-integrated models. Their influence is not a disruption to resist but a "disruption" for building a more equitable, technologically capable, and patient-focused future in medicine.

Ethical approval: Institutional Review Board approval is not required.

Declaration of patient consent: Patient's consent not required as there are no patients in this study.

Financial support and sponsorship: Nil.

Conflicts of interest: Dr. Mridul Madhav Panditrao is on the Editorial Board of the Journal.

Use of artificial intelligence (AI)-assisted technology for manuscript preparation: The author confirms that there was no use of artificial intelligence (AI)-assisted technology for assisting in the writing or editing of the manuscript and no images were manipulated using AI.

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How to cite this article: Panditrao MM. Generation Z and the emerging paradigm of medical education and health-care delivery in India. *Adesh Univ J Med Sci Res.* 2025;7:75-8. doi: 10.25259/AUJMSR_118_2025