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August-September 2025

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A COMPLETE HEALTH MAGAZINE

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Tel: 0120-4165606 / 9953604965.

Contact us :
contact@doublehelical.com
doublehelicaldesign@gmail.com,
editorial@doublehelical.com
Website: www.doublehelical.com,
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Medical Dreams Turn into Nightmares

Dear Readers,

Double Helical, a comprehensive national health magazine, serves as a platform to acknowledge innovations, individuals, products, and services transforming India's healthcare sector, paving the way for affordable, high-quality, and inclusive healthcare.

In this current issue, we focus on medical admissions as our special story. Today, medical admission processes for both undergraduate and postgraduate courses have increasingly turned into a marketplace, compromising educational standards and the quality of future doctors.

This transformation is evident in today's high-pressure, cutthroat competition—not only for MBBS seats but beyond. The price one pays to become a doctor spans almost half a lifetime, with no assurance of a secure and fulfilling life thereafter. Compounding these hardships, anxieties, and frustrations are the often whimsical decisions taken by our regulatory bodies, frequently bypassing established protocols and failing to consult appropriate expert committees. Various stakeholders are taking advantage of this confusion, pursuing their own political, populist, and profit-driven agendas.

Three states—Tamil Nadu, West Bengal, and Karnataka—formally challenged the National Eligibility cum Entrance Test (NEET) by passing resolutions in their respective state assemblies in 2024. These states argued that a centralised examination disadvantages rural students from different states and those passing state board examinations compared to students following the CBSE syllabus.

The opposition gained momentum following the 2024 NEET controversy, which involved allegations of paper leaks, scoring irregularities, and other malpractices. However, as of September 2025, despite these legislative resolutions, NEET continues to be conducted nationwide. The 2025 examination was held on May 4, 2025, with counselling processes currently underway.

Tamil Nadu's government has maintained its opposition to NEET since its implementation, arguing that it benefits privileged urban students while disadvantaging rural ones. The state passed resolutions in 2024, but as of September 2025, the Central government continues to reject their requests for exemption.

The human cost of this ongoing battle has been devastating. Over 20 students have reportedly died by suicide related to NEET pressure in Tamil Nadu, a tragic trend that began with Anitha's death in 2017. Chief Minister M K Stalin continues to maintain that "the biggest unfairness in the NEET examination is that it's advantageous only to those who can afford special coaching classes."

West Bengal's legislative assembly passed a resolution against NEET in July 2024, with the state government arguing that Bengal was never in favour of conducting a national-level examination. The West Bengal Medical Counselling Committee has faced multiple disruptions in admission processes over the years, including various legal disputes related to reservations and procedural issues.

Karnataka became the third state to pass a resolution against NEET in July 2024, with the state assembly unanimously demanding exemption from the national examination. The state government argued that "Karnataka has built colleges, but the NEET exam is benefiting North Indian students and depriving our own students."

Meanwhile, new challenges have emerged: The Supreme Court is currently hearing petitions regarding NEET PG 2025 answer key transparency, with students protesting against the use of only "Question IDs" instead of complete question papers and answers, making verification difficult. In Maharashtra, Students continue to face uncertainty as seat allotment processes face delays due to court hearings and approvals for new colleges.

The Supreme Court's role has been crucial in maintaining NEET's continuity, often overruling state-level decisions. This has created a peculiar situation where states officially oppose the examination they are compelled to implement.

While the Central government maintains that NEET ensures uniform standards and prevents capitation fees, the persistent state opposition suggests an urgent need for comprehensive reform. The challenge lies in balancing the goals of maintaining national standards while ensuring equitable access for students from all backgrounds.

The current deadlock between state aspirations and federal mandates is serving neither the cause of educational equity nor administrative efficiency. Until this fundamental tension is resolved through constitutional mechanisms or innovative policy solutions, the medical admission landscape will continue to remain turbulent, affecting the dreams and aspirations of millions of medical aspirants across the country.

The question is no longer whether NEET will continue—it's whether the system can evolve to address the legitimate concerns raised by states and students while maintaining its core objectives of standardisation and merit-based selection.

This issue is packed with many more interesting, thought-provoking, and insightful stories that examine the evolving landscape of Indian healthcare and medical field. Do write to us with your feedback.

Happy reading!

Thanks and regards
Amresh K Tiwary,
Editor-in-Chief

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Nepal Eliminates Rubella

The World Health Organization (WHO) has announced that Nepal has eliminated rubella as a public health problem, a remarkable achievement for a country making concerted efforts to protect its people from vaccine preventable diseases.

Rubella, or German measles, is a highly contagious viral infection. It is particularly serious for pregnant women as infection can lead to miscarriage, stillbirth, or a range of lifelong and debilitating birth defects. But rubella is preventable with safe and cost-effective vaccines.

"Nepal's success reflects the unwavering commitment of its leadership, persistent efforts of the health care workers and volunteers, and unstinting support of engaged and informed communities, for a healthy start for babies and a future free of rubella disease," said Dr Catharina Boehme, Officer-In-Charge WHO South-East Asia, while endorsing the recommendation of the Regional Verification Commission for Measles and Rubella Elimination in South-East Asia Region (SEA-RVC) for Nepal to be verified for eliminating rubella.

The SEA-RVC, which held its annual meeting from 22-24 July 2025, reviewed and evaluated information and data submitted by the national verification committee on measles and rubella disease surveillance and immunisation coverage rates, and recommended verification of rubella elimination in Nepal.

Nepal is the sixth country in WHO South-East Asia to achieve rubella elimination. Prioritising elimination of measles and rubella as public health problems in WHO South-East Asia by

2026, Bhutan, North Korea, Maldives, and Timor-Leste have eliminated measles, and Bhutan, North Korea, Maldives, Sri Lanka, Timor-Leste, and now Nepal, have eliminated rubella.

"Nepal's achievement of rubella elimination is yet another testament to the success of the national immunisation programme ahead of the regional target, which has long been one of the strongest pillars of our health care system. Gavi and WHO's steadfast support to the programme and the overall health sector in Nepal is deeply valued and acknowledged. I take this moment to thank and congratulate all the leaders, health workers, volunteers and community members who've contributed to this achievement. And I call upon all stakeholders to continue their unwavering support so that no child in Nepal has to suffer from a vaccine-preventable disease," said Mr Pradip Paudel, Minister of Health and Population, Nepal.

Nepal introduced rubella-containing vaccine into its immunisation programme in 2012 with a nationwide campaign for the age group 9 months to 15 years. A second dose of rubella-containing vaccine was added to the routine immunisation schedule in 2016.

Four national campaigns with rubella vaccines in 2012, 2016, 2020, and 2024, helped increase access, despite major public health emergencies such as the COVID-19 pandemic and earthquakes in 2015 and 2023. By 2024, Nepal achieved over 95 per cent coverage for at least one dose of rubella vaccine.

Innovative strategies such as observing 'immunisation month', outreach to vaccinate missed children, and motivation for the districts to be declared 'fully immunised', provided further impetus to elimination efforts.

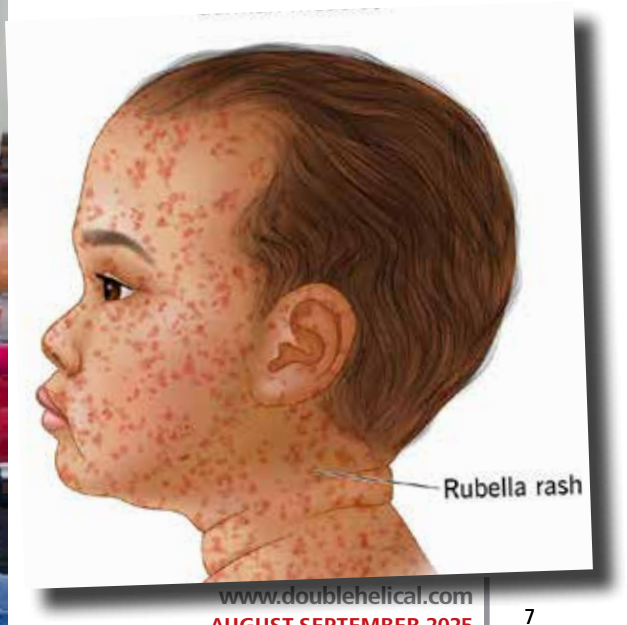
To further strengthen surveillance, Nepal recently introduced a robust laboratory testing algorithm, the first in the WHO South-East Asia Region to do so.

"Congratulations to Nepal for eliminating rubella. This public health achievement is the result of close collaboration between the government, dedicated health workers, partners and communities. WHO is proud to have contributed to this journey and remains committed to supporting Nepal in sustaining this accomplishment," said Dr Rajesh Sambhajirao Pandav, WHO Representative to Nepal.

The Regional Verification Commission for Measles and Rubella Elimination in South-East Asia Region (SEA-RVC) was established in March 2016 to monitor progress towards measles and rubella elimination.

National Verification Committees of countries in WHO South-East Asia Region report on annual progress made towards achieving the goal of measles and rubella elimination, which is then reviewed by SEA-RVC, which provides suggestions and recommendations or verifies them as having achieved the status of measles and rubella elimination.

In 2013, the WHO South-East Asia Region set the goal to eliminate measles and control rubella by 2020. In 2019, the goal was revised to measles and rubella elimination by 2023. In view of the setback during the COVID-19 pandemic, in 2024, member countries agreed to extend the target for elimination of measles and rubella, aspiring to achieve it by 2026.



Scale-Up Efforts to End TB: WHO

The WHO recently called for urgent scale-up of research, innovation, and collaboration to accelerate momentum towards ending tuberculosis in the WHO South-East Asia Region, which continues to bear nearly half of the global TB burden, accounting for the highest share of cases and deaths worldwide.

To build momentum, experts, national TB programme managers, and researchers, along with partners and members of civil society, began a three-day virtual workshop organised by WHO for 'Advancing Research and Innovation to Accelerate Momentum Towards Ending TB in the WHO South-East Asia Region.'

"In our Region alone, nearly 5 million people developed TB and close to 600,000 died from the disease in 2023," said Dr Catharina Boehme, Officer-in-Charge, WHO South-East Asia Region. Calling for urgent action, she said, "Achieving the ambitious targets in the WHO End TB Strategy requires collaboration to accelerate research and innovation. It requires the adoption and use of new tools, technologies, and drugs. Ensuring timely and equitable access to these innovations remains critical to achieving impacts at scale, leaving no one behind."

While the Region recorded a significant increase in TB case notifications in 2023, signalling recovery after COVID-19-related setbacks, progress remains insufficient to meet the End TB Strategy targets aligned with the Sustainable Development Goals (SDGs) that call for

a 90 per cent reduction in TB deaths and an 80 per cent reduction in incidence by 2030 compared to 2015 levels.

Post-COVID-19 pandemic, TB once again reemerged as the world's leading cause of death from a single infectious agent. It places a disproportionate burden on the poorest and most vulnerable, further exacerbating inequalities. In the South-East Asia Region, 30 per cent - 80 per cent of TB-affected households experience catastrophic costs, underscoring the need for equitable, people-centred approaches and strengthening social protection for the affected.

Despite these challenges, the WHO South-East Asia Region made notable progress. In 2023, 3.8 million new and relapse TB cases were notified, with an 89 per cent treatment success rate for those who began treatment in 2022. Missed cases dropped to 22 per cent in 2023, down from 44 per cent in 2020.

Backed by strong political commitment, countries in the Region are increasingly leveraging new approaches such as artificial intelligence for case detection, computer-aided diagnostics, digital adherence tools, and direct benefit transfers for patients, streamlining the social support process. At the same time, several countries are undertaking important research, including epidemiological research to assess the disease burden. Bangladesh recently completed a patient cost survey, while findings from India's RATIONS study on the impact of nutrition on TB outcomes and incidence of the disease have contributed to the global guidance.

Social and community-based innovations are also playing a vital role. Nepal's TB-Free Pallika initiative and multisectoral coordination mechanisms in Myanmar are helping reach vulnerable populations with person-centred care.

A review by WHO South-East Asia found that member states published over 3,000 TB-related research articles in the past six years, with 60 per cent being original research. However, uptake of research outcomes remains uneven due to knowledge gaps and limited platforms for knowledge exchange and collaborative use. "Our progress is uneven. Research and innovation capacity varies across the Region, and the results of these efforts are often siloed and unavailable for collaborative use. The rise in drug-resistant forms of TB remains very concerning," said Dr Boehme.

The key areas of focus during the virtual consultation include strengthening of South-South collaboration, vaccine preparedness, digital tools for patient care and adherence, and efforts to overcome vaccine hesitancy. Participants will also discuss aligning regulatory processes, promoting data sharing, and improving platforms for knowledge exchange. A significant emphasis is being placed on identifying operational implementation research priorities, especially in relation to social determinants such as undernutrition and climate change, which influence TB incidence and outcomes. "Several ongoing innovations are attempting to reach out to marginalised and vulnerable groups through active case finding and by providing affected families socio-economic support to mitigate catastrophic costs," said Dr Boehme. Highlighting the importance of equity, she added, "It is incumbent upon us to ensure equitable access to the benefits of research and innovation, including vaccines, medicines and diagnostics."

WHO remains committed to supporting countries in translating political commitments into evidence-based actions aimed at advancing progress towards ending TB through innovation, equity, and collaboration.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MEDICON 2025

In a gathering that underscored the accelerating pace of medical innovation in India, Pushpanjali Medical Education & Research Centre recently hosted Pushpanjali Medicon 2025, a landmark international event held at The Leela Ambience Convention Hotel, East Delhi. With the theme "Empowering Healthcare Excellence Across Communities", the conference was designed to foster deeper connection, richer communication, and stronger collaboration among medical professionals from across specialities.

THEME & AIMS: BRIDGING GAPS IN HEALTHCARE

The chosen theme—Empowering Healthcare Excellence Across Communities—captures several intertwined goals. In many parts of India, even as medical science advances rapidly, disparities in access, outcome, and awareness persist. This conference sought to narrow these gaps by providing a forum in which breakthroughs in research, updated clinical practices, and public health strategies could be shared, debated, and disseminated to benefit both practitioners and patients.

By emphasising connection (among practitioners), communication (of ideas and best practices), and collaboration (across disciplines, sectors, and geographies), Pushpanjali Medicon 2025 intended to be more than a display of achievements—it was a catalyst for change. Themes like early detection, preventive medicine, integrative care, and innovations in treatment underline the shift from reactive care to proactive and patient-centred care.

KEY FIGURES & LEADERSHIP

One of the driving forces behind the event was Dr Vinay Agarwal, Chief Managing Director of Pushpanjali Medical Education & Research Centre. Dr Agarwal, in various speeches during the conference, stressed that the aim is not only to educate doctors but also to raise awareness among all health-care stakeholders about newer diagnostics, management protocols, and research developments. He reiterated that Pushpanjali Medicon is an annual event, organized by Pushpanjali Medical Centre together with its research and education arm (which operates under M M Health Care Limited), devoted to enabling health-care professionals to deliver higher quality care and better services to society.

Another notable voice was Vijay Agarwal, President of the Consortium of Accredited Healthcare Organizations (CAHO), who also attended. He highlighted that such conferences are essential to share knowledge, showcase best clinical practices, and to enable doctors to network and present their research findings. In his view, professional conferences like Medicon extend beyond academic curiosity—they


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> **The chosen theme—Empowering Healthcare Excellence Across Communities—captures several intertwined goals**


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directly contribute to patient outcomes by influencing what doctors do in clinics, hospitals, and outreach settings.

PROGRAM HIGHLIGHTS & TOPICS COVERED

Pushpanjali Medicon 2025 attracted over 2,500 participants, including physicians, surgeons, specialists, researchers, and medical students. The program spanned a broad range of topics, reflecting current challenges and innovations in medicine. Important sessions included:

- Drug-Induced Acute Kidney Injury (AKI) – Prevention and Cure: exploring how certain medications can impact kidney function, ways to monitor and reduce risk, as well as newer therapeutic measures.
- Urine Albumin-to-Creatinine Ratio (UACR) and estimated Glomerular Filtration Rate (eGFR) as Screening Tools to Detect Early Nephropathy: tools that allow earlier detection of kidney disease, particularly valuable in populations with high burden of diabetes and hypertension.
- Transplant Innovations – An Interactive Session: discussing recent developments in transplantation, possibly including organ preservation, immunosuppression advances, and post-transplant care.
- Difficult Asthma – Handle and Care: focused on treating asthma cases that are resistant to standard therapies, improving inhaler techniques, and managing comorbidities.
- Men's Health and Sexual Medicine – New Emerged Specialty and Role of Indian Medical Association (IMA): reflection on how men's health is being recognized as a specialty, the guidelines for care, and how associations like IMA can support its growth.
- Setting Up Men's Health Clinics and Management Guidelines: practical guidance on setting up clinics focused on male reproductive, sexual, and general health, grounded in latest evidence.

Prominent medical experts and leading physicians shared their insight, including Dr Rajeev Sood, Dr Manish Malik, Dr O P Kalra, Dr R V Asokan, Dr Randeep Guleria, Dr Karan Madan, Dr Shekhar Seshadri, among others. Their presentations spanned clinical case studies, updates from research, guidelines, and panel discussions. This confluence of senior specialists provided younger doctors an opportunity to learn not only through lectures but also through interactive sessions and debate.

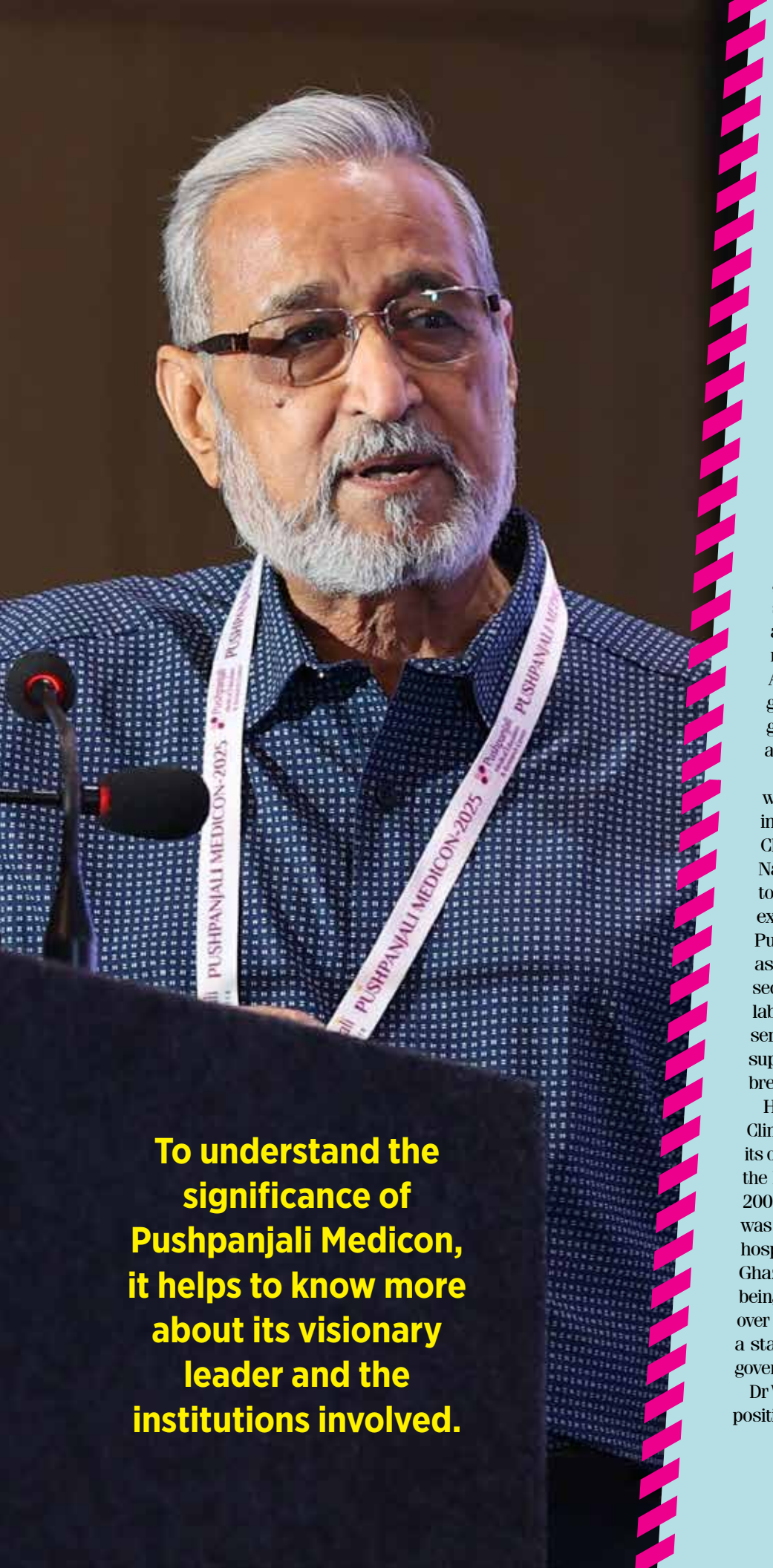
INSTITUTIONAL SETTING & INFRASTRUCTURE

The conference was held in the grand ballroom complex of The Leela Ambience Convention Hotel, Delhi, a venue chosen for its size, amenities, and capacity to host international and national delegates with comfort.

In addition, event planning included workshops in ACLS/BLS (Advanced Cardiac Life Support / Basic Life Support), monthly clinical meetings, a walkathon, and creative activities like





To understand the significance of Pushpanjali Medicon, it helps to know more about its visionary leader and the institutions involved.

"Health in Colour" painting competitions. Also, orations such as the Dr Shekhar Aggarwal Oration and Dr M. M. Aggarwal Memorial Lecture were part of the academic program, honouring past luminaries and giving a historical and human touch to the scientific content.

DR VINAY AGARWAL & HIS INSTITUTIONS

To understand the significance of Pushpanjali Medicon, it helps to know more about its visionary leader and the institutions involved.

Dr Vinay Agarwal began his professional journey as a medical officer in the ESI group of hospitals. However, his drive to serve larger, underserved communities and address gaps in healthcare services motivated him to move into private practice. Around the early 1980s, he started as a general practitioner in Krishna Nagar, Delhi, gaining reputation for being compassionate and competent.

He quickly recognised that many patients were underserved not only in treatment but in diagnostics. This led him to establish a Clinical Pathological Centre (CPC) in Krishna Nagar in 1985 as a means to provide access to diagnostic services. From there, his vision expanded. In 1989, Dr Agarwal founded Pushpanjali Medical Centre (PMC), starting as a 60-bed compact hospital focused on secondary care, with emergency, critical care, laboratory, ambulance and pharmacy services. Homing in on both specialities and super specialities, PMC gradually grew its breadth of departments.

He also established Pushpanjali Family Clinic in 2003, a multi-speciality polyclinic with its own pathology lab and dental clinic, to serve the locality with outpatient services. Later, in 2008, the Pushpanjali Crosslay Hospital (PCH) was founded— a tertiary care, multi-speciality hospital located on NH-24 at the Delhi-Ghaziabad border. This facility is known for being built on a cooperative-corporate model: over 100 doctors contributed equity, giving them a stake in the institution's performance and governance.

Dr Vinay Agarwal has also served in leadership positions beyond his institutions. He has been

Past National President of the Indian Medical Association (IMA), has held responsibilities in medical education committees, healthcare advocacy, and has been vocal about public health, rural health, preventive care, etc. In interviews, he has spoken about adopting villages through IMA to improve primary health, tackling endemics, maternal and child health, and so on

INSTITUTIONAL PROFILE: PUSHPANJALI MEDICAL CENTRE & RESEARCH & EDUCATION ARM

- Pushpanjali Medical Centre (PMC) is located at A-14/15 Pushpanjali, Vikas Marg Extension, Delhi-110092. It is a well-equipped, 45- to 50-bed multi-speciality hospital providing both specialities and super-specialities. Services include anaesthesia, ENT, general surgery, internal medicine, nephrology, nutrition & dietetics, etc. It operates 24/7 emergency, critical care, lab, ambulance and pharmacy back up. Its strategic location makes it accessible to East Delhi, Ghaziabad, Anand Vihar, etc.
- Pushpanjali Medical Education & Research Centre, the academic / research arm, works in tandem with PMC to host events like Medicon, workshops, continuing medical education (CME), academic meetings, etc. Together with PMC, it falls under M M Health Care Limited.

- Pushpanjali Crosslay Hospital (PCH) is another major institution founded by Dr Agarwal. As noted, in 2015 Max Healthcare acquired a majority stake (about 76%) in Pushpanjali Crosslay, while founder Dr Vinay Agarwal along with co-owners and stakeholder coaches continued involvement. PCH is spread over ~3.46 acres, has 11 operation theatres, and had significant capacity and quality accreditations (NABH, NABL).

KEY TAKEAWAYS

Pushpanjali Medicon 2025 suitably emphasised a vision in which healthcare excellence is not just about urban tertiary hospitals or cutting-edge interventions but about what quality of care looks like at every level. This includes clinics, early screening, specialist care, preventive medicine, and addressing health in the community.

Dr Vinay Agarwal's leadership, combined with a steady institutional foundation (Pushpanjali Medical Centre, Crosslay Hospital, the Education & Research Centre), has created an ecosystem where medical practitioners can learn, share, and grow. The success of such conferences suggest the coming years will see increased specialisation, better diagnostic screening, enhanced collaboration, and improved patient outcomes provided the challenges of equity, cost, infrastructure, and local evidence are addressed head-on.

Delhi's Dog Dilemma

The Supreme Court's initial order to relocate all stray dogs to shelters, the subsequent backlash from animal rights activists, and the eventual policy reversal, highlights the complex interplay between public safety, animal welfare, and practical governance in addressing the issue.

BY DR AMITAV BANERJEE

Due to years of neglect and lack of attention to the problems of stray dogs and other stray animals, we have reached a situation which offers no opportunities for right moves and quick solutions. Our predicament can be compared to a casual chess player who has not moved his pieces thoughtfully and faces defeat in the endgame.

In the game of chess, zugswang is a position where players are forced to make a move that worsens their position and would prefer to skip their turn but cannot. The word has its origin in the German language, meaning "compulsion to move" or "coercion to move."

The Supreme Court (SC) found itself in this unenviable position recently when it took a suo motu call on the vexing issue of stray dogs in Delhi NCR. With "National Dog Day," which is observed on August 26 every year, imminent, the SC, on August 11, 2025, ordered all stray dogs to be removed from the streets and housed in dedicated shelters under the arrangement of the concerned authorities within eight weeks. Dogs should be thankful for small mercies. During the pandemic, humans were locked down with four hours' notice! Directions were given by the SC that the municipal bodies should create adequate shelters within this period and ensure all public spaces are free of stray dogs. It also emphasised that once in a shelter, no dog should be released back onto the streets. The authorities were instructed to start picking up stray dogs from all public spaces with immediate effect.

THE SUPREME COURT JUDGMENT IS SHORT-SIGHTED

One may ask why only Delhi-NCR—why not the entire country, since the stray dog menace is present in all states. Ahmedabad, for instance, witnessed a high-profile tragic death a couple of years ago as a result of stray dogs. Parag Desai, the Executive Director of the "Wagh Bakri Chai" Group, died on October 22, 2023, after a dog attack outside his residence. While trying to escape a pack of stray dogs during a walk, he fell, sustained a severe brain haemorrhage, and later succumbed to his injuries in the hospital at the age of 49. The incident sparked renewed public discussion and debate in India regarding the stray dog menace.

ANIMAL RIGHTS ACTIVISTS RESIST THE SC ORDER

Animal and dog lovers expressed anguish over the SC directives. They accused the court of inciting public authorities in Delhi to "ignore" the existing rules, as well as overlooking ground realities. There are over one million stray dogs in Delhi and hardly any dog shelters.

Moreover, overcrowding of these animals in shelters has the potential to trigger animal-borne diseases or zoonoses like leptospirosis, viral infections, and even the deadly rabies. And removing the sterilised and vaccinated stray dogs from their localities can precipitate the "vacuum effect" with unvaccinated, more aggressive dogs moving in.

Former Union Minister and animal rights advocate Maneka Gandhi called the plan impracticable. She estimated that building the proper infrastructure and shelters for the stray dogs would require a budget of ₹15,000 crores. She also pointed out that removing stray dogs will not only attract stray dogs from neighbouring regions to fill up the

"We should shrug off the laissez-faire approach over the years which has landed us in this stalemate and make up for lost time. The cost and resources for either option—whether dog shelters or ABC protocols with neighbourhood feeding centres—are going to be huge but are unavoidable.

vacuum but also attract other animals like monkeys and rats. She gave the example of Paris in the 1880s. When the French city removed stray dogs and cats, the place was overrun with rats. She called dogs "rodent control animals." Instead of relocation, Maneka Gandhi recommended strict enforcement of existing measures such as sterilization, anti-rabies and distemper vaccinations, and close monitoring of Animal Birth Control Centres (ABCs).

SUPREME COURT MAKES A U-TURN

In response to these concerns, the SC made a U-turn after deliberations on the issue, with the court emphasising the implementation of the existing Animal Birth Control Rules 2023, which prohibit relocation of stray dogs. The revised order excluded dogs with rabies or aggressive behaviour and also banned the feeding of stray dogs in public spaces, directing authorities to make provisions for earmarked feeding centres in every locality. On August 22, 2025, the SC reversed its earlier order and mandated that stray dogs which were captured should be returned to their original locations instead of being sent to shelters, after sterilization and anti-rabies vaccination. The SC also called for a nationwide policy on the stray dogs issue.

A MOVE FORWARD ONLY TO TAKE IT BACK—AS ANY MOVE WORSENS OUR STAND

As things stand, with these U-turns, we are going around in circles. Due to years of neglect and lack of attention to the problems of stray dogs and other animals, we have reached a situation which offers no opportunities for right moves and quick solutions. Our predicament can be compared to a casual chess player who has not moved his pieces thoughtfully and faces defeat in the endgame.

Just as building shelters for millions of dogs will incur huge costs and will take years, the ABC program, if it is to be carried out in letter and spirit, would require a large number of veterinary surgeons, operating rooms, dog catchers, other ancillary staff, and vehicles. Setting up locality-wise dog feeding centres would require additional human resources and money.

DO WE HAVE THE CORRECT FIGURES FOR RABIES—THE MOST DREADED AND FATAL CONDITION DUE TO DOG BITES?

The WHO website states that there are 18,000 to 20,000 deaths from rabies annually in India. These are estimates. But according to Indian Government figures, in 2023, 121 people died of rabies and 2,223 presumptive cases were reported. Though the number of presumptive cases of human rabies has come down from 4,885 in 2022 to 1,079 in 2024, the number of rabies deaths has increased to 180 in 2024 from 22 in 2022. These figures were given by the Animal Husbandry Ministry in the Lok Sabha on August 5, 2025.

The wide disparities in the WHO figures of 18,000 to 20,000 rabies deaths annually, and the Government of India's figures ranging from 22 to 180 confirmed deaths and 1,079 to 4,885 presumptive cases, are very perplexing. If such large disparities exist for a fatal and important condition like rabies, one cannot be certain of other disease estimates from the WHO either.

THE WAY FORWARD

We should shrug off the laissez-faire approach over the years which has landed us in this stalemate and make up for lost time. The cost and resources for either option—whether dog shelters or ABC protocols with neighbourhood feeding centres—are going to be huge but are unavoidable.

We also need to develop a robust surveillance system for rabies cases as well as other conditions, and our own estimates. We should not depend on WHO figures which appear to be gross overestimates. There should be better coordination between our Ministry of Health and the WHO to sort out such discrepancies.

(The author is a renowned epidemiologist and currently Professor Emeritus at Dr DY Patil Medical College in Pune, India. He served in the armed forces for over two decades and ranked in Stanford University's list of the world's top 2% scientists two years consecutively in 2023 & 2024. He is also the Founder Chairperson of Universal Health Organization, a registered watchdog on public health issues)

FATHER OF HOLISTIC MEDICINE

BY ABHIGYAN KUMAR TIWARY

In an exclusive interview with Double Helical, **Dr (Prof) R. K. Tuli**, popularly hailed as the "Father of Holistic Medicine", says that holistic medicne is an ultimate way of treatment. He is the unequivocal pioneer of integrative healthcare in India. He established the world's first-ever Department of Holistic Medicine at Apollo Hospitals, New Delhi, in 1995—thirty years ago. This initiative was inspired and supported by the visionary guidance of Apollo's Founder and Chairman, Padma Vibhushan **Dr Prathap C. Reddy**, who had then prophesied: "Holistic Medicine will be the medicine of the 21st century."

That prediction has since been vindicated, with the World Health Organization (WHO) endorsing integrative approaches and India incorporating holistic healthcare into its National Health Policy.

This issue of Double Helical is dedicated to **celebrating 30 years of holistic medicine** and the pioneering contribution of Dr Tuli in shaping this field.


INDIA
INDIAN HOCKEY FEDERATION

PIONEERING HOLISTIC HEALTHCARE

Modern medicine has given humanity unprecedented tools to fight disease, yet its very success has also exposed its limitations—drug side effects, spiralling costs, and the inability to offer sustainable wellness. Dr R K Tuli—pioneer of holistic medicine in India— has spent more than five decades championing an integrative, holistic approach to healthcare. After establishing the world's first Department of Holistic Medicine at Indraprastha Apollo Hospitals in 1995, he has consistently demonstrated that combining the science of modern medicine with the drug-free art of traditional systems can deliver cure, not just relief. His SOHAM model—focusing on body, mind, and spirit—seeks to redefine what health means in its true sense.

Dr Tuli has worked relentlessly to integrate drug-free therapies such as yoga, acupuncture, naturopathy, and lifestyle interventions with evidence-based modern medicine.

In a free-wheeling and comprehensive interview with Double Helical, Dr Tuli reflects on his journey, and highlights why holistic medicine holds the key to accessible, affordable, and sustainable healthcare for the 21st century.


INDIA

> **Holistic medicine treats the individual as a whole, not just a disease or body part. It is dedicated to sustainable cure, not merely palliative relief.**

YOU SET UP WHAT'S DESCRIBED AS THE WORLD'S FIRST DEPARTMENT OF HOLISTIC MEDICINE AT INDRAPRASTHA APOLLO HOSPITALS IN 1995. LOOKING BACK, DO YOU THINK THE PRACTICES AND SPECIFIC CLINICAL PROTOCOLS INTRODUCED THEN HAVE STOOD THE TEST OF TIME?

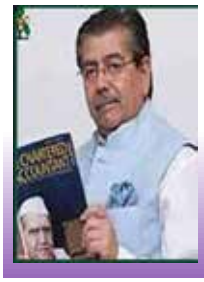
I was invited by the Founding Chairman of the Apollo Group of Hospitals, Dr Prathap C. Reddy, in 1995 while the Indraprastha Apollo Hospitals in Delhi was under construction, based on feedback from some prominent Indian influencers. These individuals, having been his regular patients at Chennai's leading hospital at the time, reported remarkable recoveries from ailments previously deemed incurable by conventional medicine. Dr Reddy was intrigued, wondering how what the world's best medical care couldn't achieve was being accomplished, as one patient after another regained health and became free of all medical support. I explained that these benefits stemmed from complementing the 'science' of modern medicine with the drug-free 'art' of various traditional

health systems, a synergy that thrilled him. He immediately exclaimed at this innovative approach and made a visionary statement: "This all-inclusive model, termed Holistic Medicine, will be the medicine of the 21st century."

He offered me the opportunity to establish the Department of Holistic Medicine at his then most advanced and upcoming flagship, Indraprastha Apollo Hospitals, which later became India's first Joint Commission International (JCI)-approved,

A Holistic Approach to Wellness for Everyone

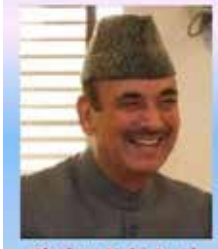
Dr. Pervez Ali Ahmed
Son of former President of India



"I have known Ravi for over five decades and have always been aware of his exceptional work in Complementary and Alternative Medicine (CAM). Recently, I experienced his expertise on a personal level, both for myself and for my wife, Dr. Anjum.
My multiple ailments included post-operative urinary incontinence following surgery for Benign Prostatic Hyperplasia (BPH). The work he is doing is commendable, and the results are outstanding and objectively obvious.

He has the knowledge, dedication, and ability to harness universal energy and utilise it for wholesome benefit. This helped me concurrently overcome all of my other problems, including: low backache; severe coccydynia and sciatica due to prolapsed intervertebral discs and L4 radiculopathy; arthralgia in the left knee and right ankle; seasonal bronchitis; and CAD post-PTCA, among others.

The reversal of all these ailments—and concurrently at that—through the synergy of natural, drug-free modalities, has tremendously enhanced my quality of life and provided relief from medications.
I promise him my full support in his mission to promote holistic healthcare."



Ghulam Nabi Azad
Fmr. Union Minister of Health, Govt. of India & Chief Minister of Jammu & Kashmir

"In year 1989, I developed a disabling **LUMBAR BACKACHE** with **Sciatica** for which I was referred to India's best & world class Spinal Expert **Dr. Dholakia** at the Bombay Hospital. He prescribed 3 months full confinement to bed with 'Pulley & Weight Traction'. On my request the bed was shifted to my residence in New Delhi with a local associate of **Dr. Dholakia** for the follow-up care. But, a common friend introduced me to the eminent Holistic Medicine Physician **Dr. Ravi Tuli** with a very versatile background. His drug-free treatment worked like a MIRACLE, as on just the 5th day I was up & about holding a Press Conference reported in INDIA TODAY along with my picture undergoing his needle therapy. By day 9 of the therapy elections were announced. I had no time to look back as I covered a total of 70,000 Kms campaigning across the country by all modes of transport including miles & miles of off-road terrains. I'm here to CERTIFY the EFFICACY of Dr. Tuli's unique therapy that has withstood the Fitness of my Spine more than 30 years later. My best wishes to you Dr. Tuli in your mission of Eradication of all sickness by complementing drug-free harmless traditional means and restoration of Positive Wellness '**BODY- MIND- SPIRIT**' in each individual."

Smt. SHEELA GUJRAL
Poetess & Wife of Fmr. Prime Minister Shri I. K. Gujral, being Felicitated by Shri K. R. Narayanan, The Hon'ble President of India

"As a life long patient of '**BRONCHIAL ASTHMA**' the condition got worsened, especially with the now advancing age. I had been dependent on Oxygen for some time, but a **multi-drug resistant infection** with copious yellow and green phlegm was very debilitating. The Head of Medicine at Ram Manohar Lohia Hospital set up an Intensive Care bed at my residence with continuous nursing care and twice a day personal visits. But, as the situation seemed to get out of control, the Respectful Physician was very amicable to the suggestion to complement ongoing medical treatment with Holistic Medicine therapy by its eminent pioneer Dr. R. K. Tuli. The latter assured that he can't do any harm as he'd use no additional medication. At the same time, he was confident to add that I'd expect some benefits within 10 sessions of his drug-free therapy with evidence of decreasing dependence on oxygen and antibiotics, etc., in coming days. VIOLA! True to his prediction, I started feeling a degree of comfort by the day. I had not moved out of home for several months. But, on day 7 with all my medical back-up, I decided to attend a function for a shortwhile. Amazingly, I delivered my address and sat through the whole event for more than two hours. It was the turning point in my life. In coming days, the so far resistant infection got totally eradicated and I could breathe better in years! My need for medication has been minimized. Through my personal experience from a hopeless situation to a total restoration of life all over, I'd recommend this drug-free therapy to all. Let's raise its demand to the extent that governments listen to consumer's voice and extend its benefits to All to achieve the state of "**स्वस्थ भारत** for **आयुष्मान भारत**". My Best Wishes to Dr. Tuli & his team in their Mission "**WELLNESS FOR ALL**" beyond Best of Modern allopathic medicine."

I AM ABLE TO WALK & TALK TODAY DUE TO DR. TULI'S UNIQUE THERAPY

Dr. Rajeev Kumar

Chairman & MD
PARAM DAIRIES

Dr. Tuli's Therapy REJUVENATED me for a New Life. I arrived at "SOHAM" in a state of most miserable health as I was diagnosed with **BIPOLAR DISORDER – OCD**. I suffered from SLEEPLESSNESS and such **FATIGUE & WEAKNESS** that my whole body SHIVERED, needing support of 1-2 persons to be able to stand or walk even a few steps with difficulty over previous 4 years; I had Very **Disturbed Digestion**, **Fatty Liver** and **Type-2 Diabetes** too. My treatment by Top Specialists at different hospitals as well as Eminent Alternative Doctors couldn't stop progressive deterioration in my health. But, once under Dr. Tuli's sincere care and with his combination of various drug-free healing modalities, I soon started feeling the improvement. By about six months of his pulsed therapy, I was so well that 3 years later I wish to share that I enjoy the '**Best-of-Health - Better-than-Ever-Before**' to say it's been a God sent REJUVENATION for me. I feel on 'TOP of the World'. My whole family PRAYS for success of Dr. Tuli's Mission 'Health For All' - as far as possible without any medication". **JAI BHARAT**

years. These protocols integrate evidence-based practices from Ayurveda, Yoga, Naturopathy, and other traditional systems with modern diagnostics, offering a holistic approach that continues to resonate with patients seeking alternatives to pharmaceutical dependency.

However, the journey has not been without challenges. Globally, including among medical peers, there is a perceived threat from the growth of holistic medicine, as its benefits derive entirely from non-pharmaceutical, natural means. Even my advocate for Holistic Medicine, Dr Reddy, could not sustain support for its evidenced benefits due to pressure from vested interests.

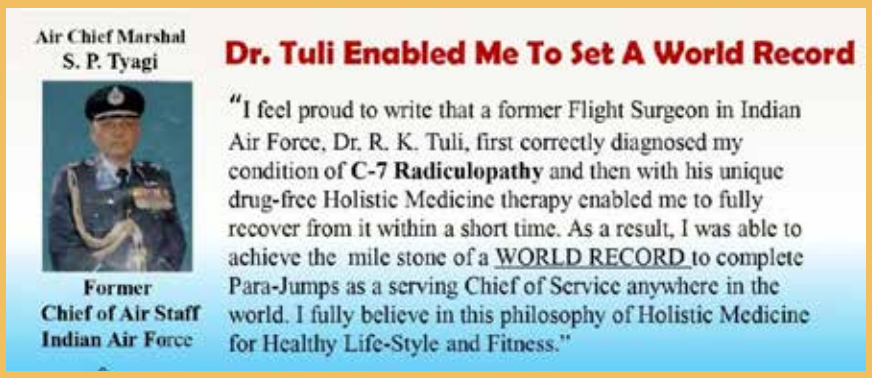
SOHAM TALKS ABOUT "POSITIVE HEALTH AND TOTAL WELLNESS" THROUGH A BODY–MIND–SPIRIT APPROACH. HOW DO YOU ACTUALLY MEASURE SUCCESS IN THIS MODEL—FOR EXAMPLE, PATIENT REPORTED OUTCOME MEASURES (PROMS), RETURN-TO-WORK DAYS, OR REDUCED DEPENDENCE ON MEDICATIONS, OR QUICKER RECOVERY?

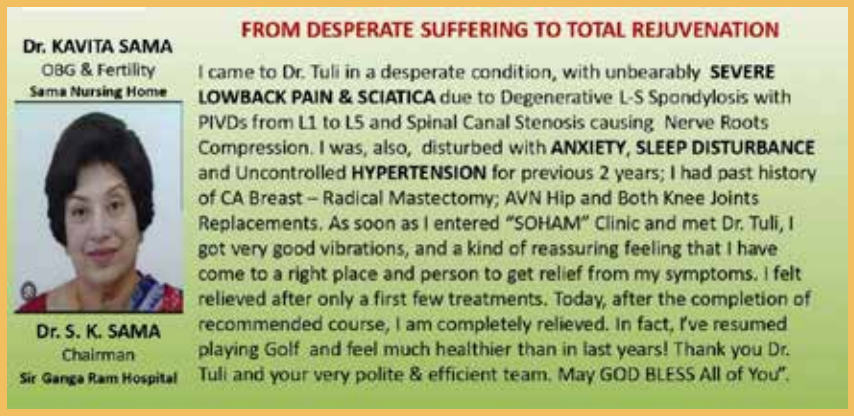
The name "SOHAM" is of Indian origin. In Sanskrit, it is translated as "I am He" or "I am That," representing the affirmation of one's microcosmic divinity and its harmony with the macrocosmic universe: every soul has a presence of God in it. God is within.

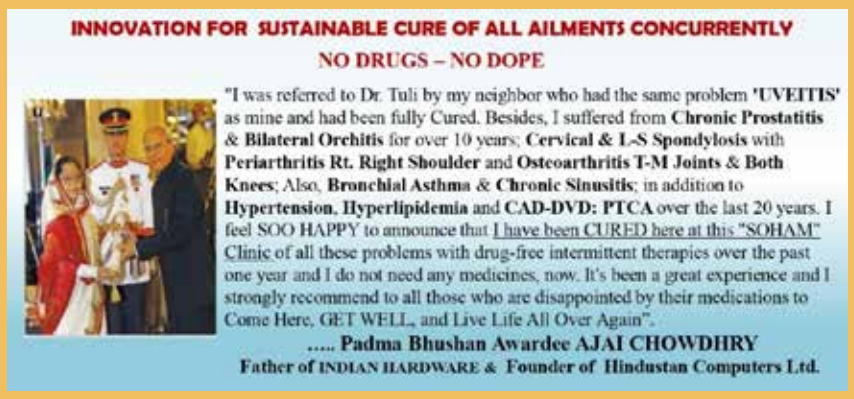
The "SOHAM" model of health is termed holistic medicine as it's dedicated to achieving positive health & total wellness 'Body–Mind–Spirit' by expanding the World Health Organization's (WHO) definition of health as a "state of physical, mental and social wellbeing" by adding to it the Charaka Samhita-enunciated "spiritual" dimension as the core concept of life.

Each of the ingredients of holistic medicine—comprising lifestyle management through Ayurvedic Dincharya and Ritucharya; detoxification massages, Bhedan Kriya further developed and presented to the modern world as Chinese acupuncture, Ashtanga Yoga, conservative management of modern medicine as well as clinical psychology & Psycho-Hypnotherapy—have their individual scientific measures of health. Holistic medicine, however, as an optimum synergy of all, enables much better benefits of all, while overcoming their respective limitations.

Thus, its measures of success are PROMs based on subjective and objective parameters: relief from disease symptoms, status of physical, mental and spiritual







wellness, independence from medication, and sustained degree of overall wellness.

The SOHAM model of holistic medicine measures outcomes through a combination of subjective and objective parameters, focusing on Patient-Reported Outcome Measures (PROMs). These measures include relief from disease symptoms, improvement in health conditions, overall well-being across physical, mental, and spiritual dimensions, freedom from medication, and long-term stability of wellness.

Healthcare utilisation, chronic disease control, quality of life assessments, and patient satisfaction are also used as indicators. By incorporating these metrics, holistic medicine provides a comprehensive understanding of outcomes and allows treatment to be tailored to individual needs.

YOU'VE SAID HOLISTIC MEDICINE CAN HELP WITH MANY CHRONIC AND INCURABLE DISEASES. WHICH OF THESE CONDITIONS HAVE SHOWN THE BEST RESULTS IN YOUR PRACTICE, AND CAN YOU SHARE ANY DATA OR PUBLISHED STUDIES TO SUPPORT THIS?

My evolution from an established versatile medical physician got initiated by observing its instant reproducible benefits in acute/emergency life-threatening situations at remote locations, far from any medical facility. Today, I've the confidence based on my experience of the past 55 years that HOLISTIC word conveys:

It takes care of the human being as a whole—'Body, Mind & Soul'—and not merely a disease or specific part of the body. It's dedicated to sustainable cure, and not merely palliative relief, of all the ailments of an individual concurrently, as far as possible, by harmless natural means.

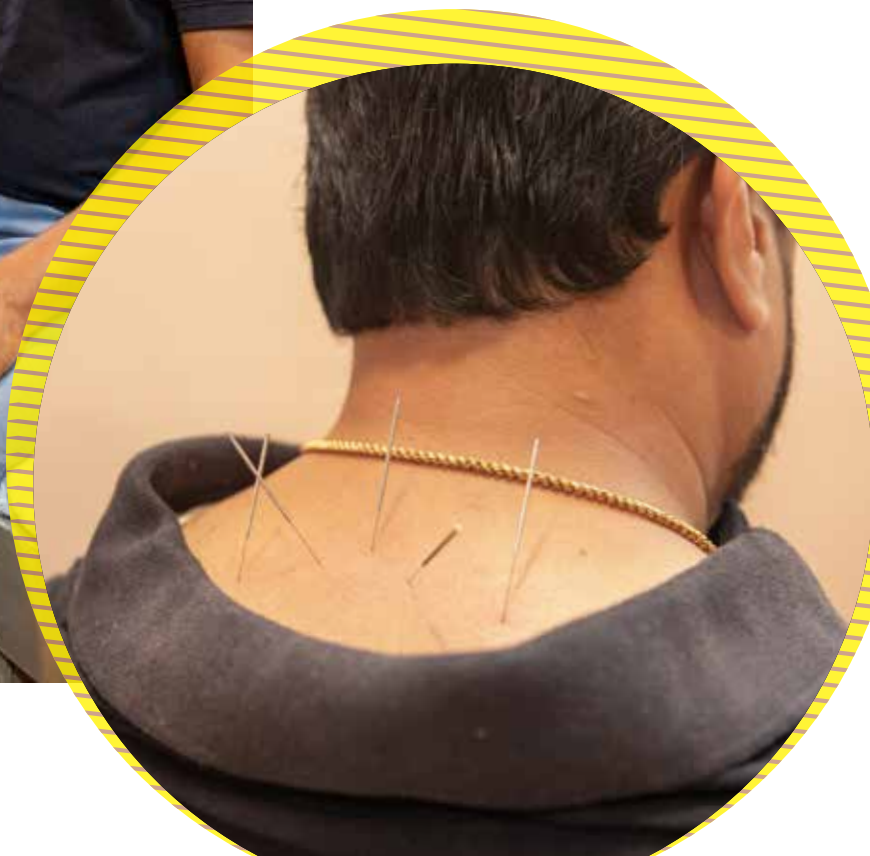
It complements best practices of modern medicine with drug-free modalities of recognised traditional (AYUSH) systems of health to achieve its objectives.

It helps to restore disturbed 'homoeostasis', thereby initiating inherent natural healing of the person. It helps to add 'life-to-years' and enhance 'quality-of-life' of each individual.

DRUG SIDE EFFECTS ARE THE BANE OF MODERN MEDICINE. HOW FAR HOLISTIC TREATMENTS, WHICH COMBINE METHODS LIKE ACUPUNCTURE, DIET, AND MIND–BODY THERAPIES, HELP TREATMENT WITHOUT ANY ADVERSE EFFECTS?

On record, no medical intervention complies with Hippocrates' dictum, "Primum Non-Nocere"—i.e., First Do No Harm. All the negative effects of medical treatments, interventions, wrong procedures or diagnoses, side effects, reactions, cumulative toxicity, hospital-acquired infections, etc., with negative effects on patient's health or wellness are collectively termed IATROGENESIS, and WHO rates it as the 3rd direct leading cause of death.

Whereas, the major benefit of holistic medicine therapy is that it uses only drug-free harmless life-force supplementing modalities of Ashtanga Yoga, Ayurvedic Dincharya & Ritucharya as lifestyle enhancement and massages for detoxification,



various modalities of acupuncture like moxibustion, reflexology, laser, etc., and Psycho-Hypnotherapy, following the principle "No Drugs – No Dope."

Besides the sustainable reversal of sickness, holistic medicine therapy improves overall physical, mental, emotional and spiritual wellness of each patient, adding 'Life-to-Years' and enhancing 'Quality-of-Life.'

GIVEN THE NEED TO INTRODUCE HOLISTIC MEDICINE INTO GOVERNMENT HEALTH PROGRAMMES SUCH AS THE NPCDCS AND MODERN HOSPITALS, HOW WOULD YOU ENSURE ITS EFFICACY AS WELL AS COST-EFFECTIVENESS AT SCALE?

Holistic healthcare at various levels with drug-free modalities essentially complements ongoing medical management without any interference. However, with clinical improvement in the patient's condition, the medical support starts progressively weaning under attending specialist care, until the patient is fully cured and regains wellness—by now well versed with a newfound drug-free lifestyle and encouraging others to follow.

Holistic medicare is best achieved by enhancing the skills of existing medical personnel at all levels: promotive and preventive health at the primary level; early detection and reversal of disease at the secondary level without resorting to long-term dependence; and complementing tertiary care for easier recovery and rehabilitation. This applies to all ailments, including those under NPCDCS.

Thus, holistic medicine with its nationwide campaign at all levels would initiate a culture of highly accessible, acceptable, affordable, and sustainable healthcare with minimal interventions or dependence on high-tech tertiary care. It would enable far higher quality of "Health for All" and lay the foundation for a healthy population to achieve the objectives of Viksit Bharat 2047.

It would also present a model of optimum healthcare to the rest of the world, restoring our nation's status as Vishvaguru Bharat.

HEALTH INSURANCE FOR HOLISTIC CARE IS YET TO TAKE TANGIBLE SHAPE. WHAT KIND OF PAYMENT OR

REIMBURSEMENT MODEL DO YOU SUGGEST TO COVER INTEGRATIVE TREATMENTS IN INDIA?

We need to establish public awareness of the WHO's recommendation for integrative holistic medicine. Its clinical application must be standardised through professional–public debate, followed by establishing credibility with large-scale multicentric pilot projects involving healthcare workers at all levels.

Progressive introduction of this subject into the curriculum of all systems of medicine is necessary, along with preventive measures to ensure it does not fall into the hands of unqualified quacks.

As a first step, it could be introduced into PM-JAY Ayushman Bharat, various government health schemes, and extended by insurance companies.

WITH DIGITAL TOOLS, TELEMEDICINE AND ARTIFICIAL INTELLIGENCE TRANSFORMING HEALTHCARE, HOW CAN SOHAM'S ASSESSMENT MODEL BE ADAPTED INTO A TECH-BASED TOOL WITHOUT LOSING THE HUMAN TOUCH THAT YOU CONSIDER ESSENTIAL IN YOUR PRACTICE?

The personalised human touch, particularly at secondary, tertiary, and rehabilitative levels, shall always retain its value. However, telemedicine and AI can be important tools to reach the masses for primary promotive, preventive, and early detection of disease while enabling simultaneous reversal.

DURING THE COVID-19 OUTBREAK, YOU SPOKE ABOUT UNCERTAIN EFFECTS OF VACCINES AND ALLOPATHIC MEDICINE. LOOKING BACK, WHAT LESSONS CAN BE DRAWN TO STRENGTHEN IMMUNITY AND ENSURE MANKIND'S SUCCESS IN FIGHTING AGAINST PANDEMICS AND OVERCOMING LINGERING SHADOWS OF CORONA LIKE LONG COVID?

Without getting into the controversy of COVID-19 vaccination, the pandemic surely taught the lesson that modern medicine didn't offer any conclusive therapeutic tools against this pandemic. It was startling to read statistics that a country like the USA with its 32 times higher GDP, spending 16 per cent of it on healthcare, had 6–8 times higher incidence as well as mortality compared to our country with its huge population, much higher density, and meagre resources.

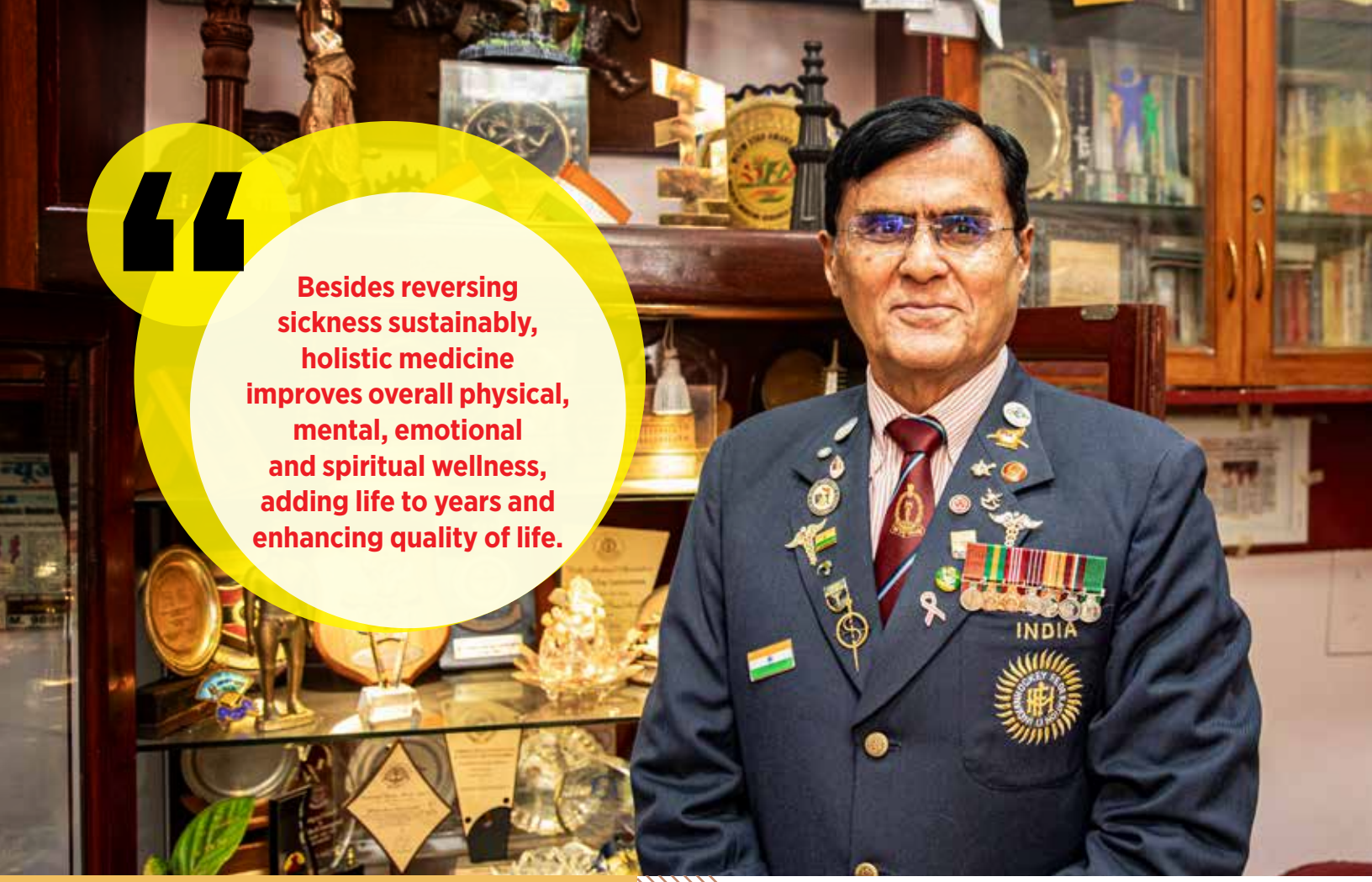
This fact cautions serious chinks in a healthcare delivery system with exclusive reliance on allopathic medicine. Thus, the WHO has revised its 2025–2034 strategy whereby it will assist member states in strengthening the evidence base for Traditional Complementary Integrative Medicine (TCIM), bolstering safety, quality and effectiveness, and, where appropriate, facilitating its integration into health systems.

Dr Prathap C. Reddy, Founding Chairman of Apollo Group of Hospitals,

As regards immunity, holistic medicine relies on the age-old gospel that human health is an outcome of its dynamic interaction with the environment and its flora, fauna and microbes, designed by nature to render mankind a symbiotic benefit. Vaccines are supposed to provide only partial, acquired artificial protection. A notable limitation of vaccination is revealed by BCG being administered all over our country for the past 70 years. Yet official statistics reveal that roughly 30 lakh people were newly affected with TB, and about 3.5 lakh people died from the disease in 2023.

Holistic medicine focuses on treating the whole person—physical, emotional, social, and spiritual—while integrative medicine combines conventional medical treatments with complementary therapies. Its drug-free modalities are appropriate to complement not only allopathic medicine but also other drug-based systems like Ayurveda, Homoeopathy, Siddha or Unani.

DO YOU THINK IT IS CREDIBLE ENOUGH TO RELY ON PATIENT TESTIMONIALS? DO YOU PROPOSE TO MOVE BEYOND ANECDOTAL EVIDENCE—FOR EXAMPLE THROUGH CLINICAL TRIALS,

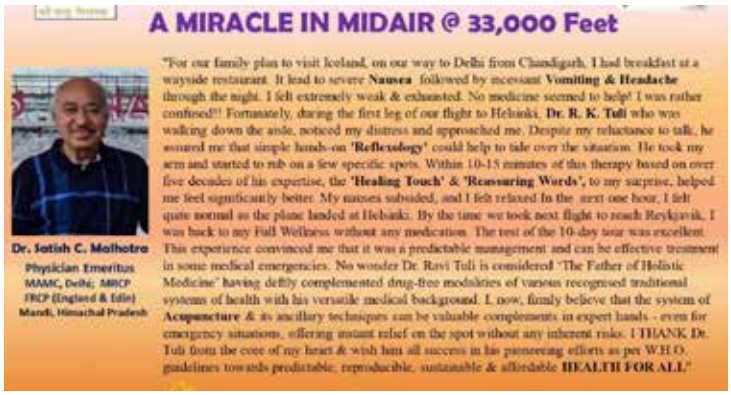


> Besides reversing sickness sustainably, holistic medicine improves overall physical, mental, emotional and spiritual wellness, adding life to years and enhancing quality of life.

REGISTRIES, OR PARTNERSHIPS WITH UNIVERSITIES—TO PUBLISH STRONG PROVEN RESULTS, R&D OR EVIDENCE?

Patient testimonials attain tremendous significance and don't remain mere anecdotal when they share predictably reproduced sustainable benefits, especially in multiple medically incurable diseases progressively deteriorating despite the best of medical care. They don't remain anecdotal when they save lives consecutively not only in remote areas, but even in failed cases in hospital ICUs. They seek attention when they are reported by the Who's Who of the country and abroad, including top-notch medical experts frustrated by conventional treatments.

In fact, all great scientific phenomena like Newton's observation of the fall of an apple or Archimedes' Eureka moment sowed seeds of revolutions that started with single episodes. Many medical procedures were also initiated from single case reports, while several drugs were discovered accidentally. Unfortunately, holistic medicine faces resistance because its benefits come entirely from non-pharmaceutical means. The truth is, nobody wants to lose their long-term revenue-generating clients, even



A MIRACLE IN MIDAIR @ 33,000 Feet

Dr. Satish C. Malhotra
Physician Emeritus
MAMC, Delhi; MRCP
FRCP (England & Edin)
Mandi, Himachal Pradesh

"For our family plan to visit Iceland, on our way to Delhi from Chandigarh, I had breakfast at a wayside restaurant. It lead to severe **Nausea** followed by incessant **Vomiting & Headache** through the night. I felt extremely weak & exhausted. No medicine seemed to help! I was rather confined!! Fortunately, during the first leg of our flight to Helsinki, **Dr. R. K. Tuli** who was walking down the aisle, noticed my distress and approached me. Despite my reluctance to talk, he assured me that simple hands-on **'Reflexology'** could help to tide over the situation. He took my arm and started to rub on a few specific spots. Within 10-15 minutes of this therapy based on over five decades of his expertise, the **'Healing Touch'** & **'Reassuring Words'**, to my surprise, helped me feel significantly better. My nausea subsided, and I felt relaxed. In the next one hour, I felt quite normal as the plane landed at Helsinki. By the time we took next flight to reach Reykjavik, I was back to my Full Wellness without any medication. The rest of the 10-day tour was excellent. This experience convinced me that it was a predictable management and can be effective treatment in some medical emergencies. No wonder Dr. Ravi Tuli is considered "The Father of Holistic Medicine" having deftly complemented drug-free modalities of various recognised traditional systems of health with his versatile medical background. I, now, firmly believe that the system of **Acupuncture** & its ancillary techniques can be valuable complements in expert hands - even for emergency situations, offering instant relief on the spot without any inherent risks. I THANK Dr. Tuli from the core of my heart & wish him all success in his pioneering efforts as per W.H.O. guidelines towards predictable, reproducible, sustainable & affordable **HEALTH FOR ALL**."

"I had followed my family legacy of DHRUPAD SANGEET managing my breathing trouble of **'asthma'** with medication all my life. But, it became so bad along with **'hoarseness'** of voice that by the year 2002 I couldn't do my 'riyaz' to the extent that it was not possible for me to even teach my pupils - depriving me of my very livelihood. At that stage, one of my students brought me to the famous Dr. Ravi Tuli for his drug-free treatment. As if a MIRACLE awaited to happen: from the very first day I could feel unexpected improvement in my voice and my breath. By about day 15, I could resume conducting classes as I received a call for a show at All India Radio which went off to my satisfaction. I regained my full health, breath & voice well before the 30 sessions of treatment prescribed by Dr. Tuli. I could, now, enjoy my health like never before - and amazingly 'No Medication' for the first time in my life!

What's even more surprising is to see happen what I had not even dreamt of and that's the 'buffalo like skin' I was born with turn supple & tender like that of a child!! It's my opinion from this personal experience that whole world should adopt Dr. Tuli's drug-free innovative HOLISTIC MEDICINE therapy as it led to restore my health to an incredible status enabling me to receive the coveted **PADMA BHUSHAN** as well as the **SANGEET KALA AKADEMI** awards by the President of India as the highest recognition for any artist."

Padma Bhushan & Sahitya Kala Akademi Recipient: RAHIM FAHIMUDDIN DAGAR, Legendary Dhrupad Vocalist & Rudra Veena Maestro, NizamuddinEast, New Delhi-110003

while professing ideals like “Patient First.”

Undoubtedly, it is essential to establish the scientific validity of holistic medicine through large-scale, multicentric, controlled studies. Over the past three decades, I have exploring every avenue, seeking support from hospitals, governmental bodies, corporations, or NGOs for scientific validation and research & development (R&D) of this universally beneficial, humane cause, but without success.

I sincerely hope that this story, featured in the prestigious health magazine ‘Double Helical’, will ignite a breakthrough revolution for the appropriate scientific development of this universally beneficial phenomenon, promising harmless and affordable ‘Health for All’.

HAVE YOU EVER DREAMT OF SETTING UP A NATIONAL CENTRE OF EXCELLENCE IN HOLISTIC MEDICINE? WHAT KIND OF ROADMAP DO YOU ENVISION FOR IT IN TERMS OF TRAINING, ETHICS, DATA STANDARDS, AND WORKING WITH MAJOR HOSPITALS?

Certainly, there is a pressing need for a ‘Centre of Excellence’ dedicated to this most humanitarian cause. My envisioned roadmap includes:

SACHEEN RAMCHANDANI
Deccan Apartments
Khar West
Mumbai-400052

"My life was Saved by Dr. Tuli with an amazing new technique, without any medication. It was our first day at Lunglay Airport on way to our trek to Everest Base Camp (**EBC**). I had just said Hello to everybody in the team and I was about to take a puff of the INHALER, being a case of **BRONCHIAL ASTHMA** since childhood. The doctor saw and asked what are you doing with this and I said that I need the puff as I'm gonna get the attack. Without waiting or asking he inserted two small pins, I didn't even feel, into me. My attack subsided faster than the inhaler, and he asked me to retain the pins for one hour. Our trek continued uninterrupted, and through the entire trip, in spite of exertion increasing and the air getting rarefied by the step, I didn't need the inhaler for rest of my trek! Now, to tell you more, on the 6th day while we were camping at 4500 meters (15,000 ft) altitude, I felt lifeless in the morning, had a heavy head, and I was not able to even open my eyes. In this near death situation no medical assistance was available. Thus, Dr. Tuli was called to my rescue. I was told that I had turned Pale & Blue, my breath was shallow, my pulse very feeble, and with SpO2 of 60%, it was a case of **ACUTE MOUNTAIN SICKNESS**. He did some Energy Transfer & Needle Free / Laser Acupuncture. Within minutes I could feel being revived; my breath picking up, as I felt "LIFE' flowing all over within me. Just half an hour later, with this drug-free healing, I was able to walk to the bright sun, Breathe deep and Enjoy my breakfast! **MESSAGE**:I would like to make a request to everyone in this time of Covid-19, including the government agencies, all doctors and hospitals to complement Dr. Tuli's drug-free Holistic Medicine Therapy to their protocols as it'd improve outcome of every patients' suffering, serious sickness or the **POST-COVID SYNDROME**."

- Training: Establishing a comprehensive curriculum that blends modern medical education with traditional healing practices, training healthcare professionals to adopt a holistic mindset.
- Ethics: Upholding strict ethical guidelines to ensure patient-centred care, transparency, and respect for all healing traditions, free from commercial bias.
- Data Standards: Implementing rigorous data collection and analysis protocols to document outcomes, ensuring standardised, peer-reviewed evidence that meets global benchmarks.
- Collaboration with Major Hospitals: Forging strategic partnerships with leading institutions like Apollo Hospitals, AIIMS, and others to integrate holistic practices into mainstream healthcare, facilitating knowledge exchange and multicentric research. This Centre of Excellence would serve as a beacon of hope, advancing holistic medicine through innovation, inclusivity, and scientific rigor, ultimately transforming global health paradigms.

I have received the highest level of personal appreciation for my dedication to this field from both peers and the public at large. Ultimately, however, the success of this initiative will be measured by its ability to scale these benefits for all, thus embodying the principle of *Sarve Bhavantu Sukhina – Sarve Santu Niramaya:* may all be happy and free from disease.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AND CODE
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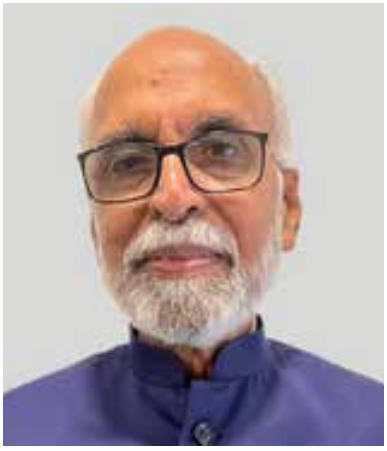
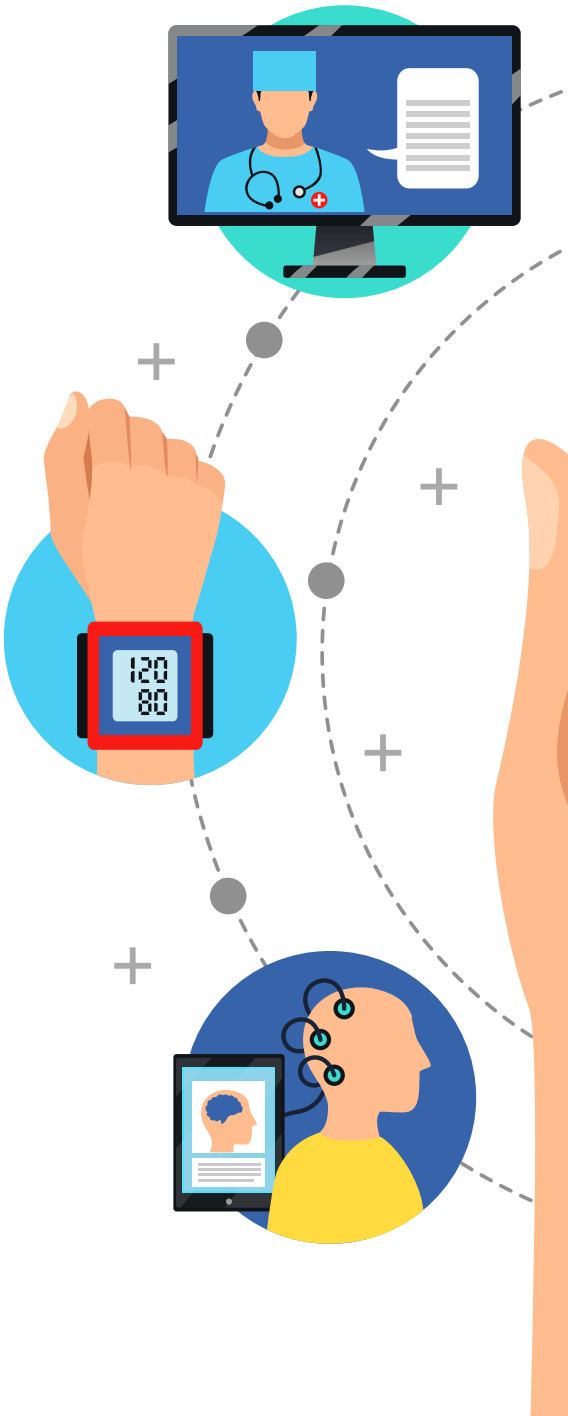


Dr Vijay Agarwal, President, CAHO

Healthcare stands on the brink of a digital revolution, yet, the true key to transformation lies not in the code itself, but in a people-first strategy. The ADKAR change management model provides a critical blueprint for guiding healthcare organisations through successful digital adoption while keeping patient care firmly at the centre.

BY DR VIJAY AGARWAL/ VISHAL GUPTA



Healthcare stands at a critical crossroads, where electronic health records, telemedicine platforms, AI-powered diagnostics, and digital workflow systems are no longer futuristic concepts—they are now essential tools for improving patient outcomes and ensuring organisational sustainability. Yet, for all their clear benefits, a great many healthcare organisations continue to struggle with the adoption of these digital solutions. This resistance stems not from the technology itself, but from the complex human element involved in any fundamental change.

The monumental shift from paper-based systems to digital platforms, from traditional diagnostics to AI-powered analytics, and from reactive care to predictive medicine is not just inevitable—it is becoming absolutely essential for modern practice. However, navigating this path forward successfully requires far more than the simple installation of new software; it demands nothing less than a fundamental transformation in how people work, think, and ultimately deliver care, making the human dimension the most critical factor for success.

UNDERSTANDING HEALTHCARE'S UNIQUE CHALLENGES

It is a profound misconception to believe that healthcare professionals are inherently resistant to change because they oppose progress; on the contrary, their hesitancy most often stems from the reality of working in incredibly high-stakes environments where any disruption, however small, can have a direct and immediate impact on patient safety. Among the most common and

legitimate concerns are a deep-seated comfort with proven systems that feel safe and effective, introducing an element of uncertainty into an arena where certainty can be life-saving. There are also very real patient safety fears, as new systems can feel inherently risky when lives hang in the balance, and the fear of technology interfering with clinical judgment or creating new, unforeseen error pathways is both real and valid.

Furthermore, digital transitions frequently increase the initial workload, adding a significant administrative burden during the critical learning phase and thereby stretching already thin resources to their limit. Past implementation failures, where early rollouts were executed with inadequate support, have also created a lasting scepticism toward new technological initiatives, while many express concerns about their clinical autonomy being overridden by digital tools that seem to impose rigid protocols on nuanced, individual decision-making.

These concerns are not just excuses; they are legitimate and must be acknowledged. But so too are the immense risks of maintaining the status quo, which include missed diagnoses, fragmented care, professional burnout from tedious paperwork, and, ultimately, a dangerous compromise of patient trust.

A BLUEPRINT FOR OVERCOMING DIGITAL ADOPTION CHALLENGES

Successful digital transformation in healthcare, therefore, demands an unequivocally people-first approach, which means organisations must consciously and deliberately undertake a series of critical steps. They must begin by openly acknowledging the natural status quo bias, recognising that professionals are comforted by what has proven to work and that change will always feel risky unless it is clearly and compellingly justified.

Building a compelling case for change is paramount, using real patient stories and hard data to show concretely how digital tools improve patient safety, reduce errors, and free up precious clinical time for what matters most—direct patient care. It is essential to involve clinicians early and authentically, engaging frontline staff in the processes of choosing, designing, and customising new systems, as true ownership invariably breeds acceptance. Training must be meticulously tailored to real clinical roles, offering practical, scenario-based learning that is directly relevant to each position rather than generic, one-size-fits-all IT sessions.

During the rollout itself, providing robust on-the-job support is non-negotiable, which means deploying super-users and rapid-response tech teams to support staff exactly when it matters most. Critically, organisations must ensure that new systems fit seamlessly into clinical workflows, not by forcing advanced technology onto outdated processes, but by redesigning those workflows to make technology a genuine enabler, not a frustrating hurdle. Change must be visibly modelled from the top down; when respected clinicians and organisational

leaders wholeheartedly embrace new tools, others will naturally and more willingly follow.

Celebrating quick wins and sharing early success stories helps to build vital momentum and demonstrates tangible benefits, while fostering an environment of psychological safety makes it safe for staff to ask questions, make mistakes, and learn without fear of reprisal. Finally, the journey does not end at go-live; organisations must reinforce and evolve continuously, improving systems based on ongoing feedback and integrating digital proficiency directly into performance development plans to ensure lasting change.

THE ADKAR MODEL: A ROADMAP FOR HEALTHCARE TRANSFORMATION

The ADKAR model, developed by Prosci, provides a powerful and structured framework for managing this complex human side of change, mapping out five essential steps that individuals must successfully navigate for any transformation to succeed. The first step is building awareness of why the change is necessary; transformation truly begins with understanding, so before introducing any new systems, leadership must clearly and convincingly explain the burning platform and necessity for change. Instead of simply announcing, "We're rolling out a new electronic health record," a more effective message would be, "Last month, three near-miss medication errors occurred due to our paper-based tracking system; this new digital system will proactively alert us to dangerous drug interactions before they happen, potentially saving lives."

This awareness must answer three critical questions: what problem are we solving, why does it matter to patient care, and how will this change help us deliver better outcomes, using real data and patient stories to create a genuine sense of urgency, because without seeing the clear need, staff will never feel compelled to change.

The second step is cultivating a genuine desire to participate in and support the change; understanding necessity is one thing, but wanting to embrace change is another, and many clinicians resist not because they don't care, but because they care so deeply about maintaining quality care. To build this desire, leaders must openly acknowledge fears, involve staff early in the process by letting them test demos and provide feedback, link the change directly to their core values of patient safety, and demonstrate unwavering leadership commitment, as when respected leaders embrace change, others are far more likely to follow and desire to adopt themselves.

The third step is imparting the knowledge of how to change; effective training must go far beyond basic "click here, type there" instructions to demonstrate clear clinical relevance through real patient scenarios, address role-specific needs, and provide multiple learning formats including videos, reference guides, peer support, and hands-on sessions, while ensuring help is readily available in the moment of need, not just during formal training.

The fourth step is ensuring the ability to implement the change on the job, especially under pressure; knowledge alone is not enough, as healthcare staff must be able to apply new skills in real-world, high-pressure situations, which requires adequate staffing support during rollout, robust IT infrastructure with fast logins and reliable connectivity, genuine workflow optimisation, and a culture of psychological safety where staff can admit struggles without fear, remembering that no one masters new systems overnight and ability grows only when people feel supported, not judged.

The fifth and final step is reinforcement to make the change stick, as the greatest danger in any change effort is relapse—reverting to old

methods under stress; this is prevented by celebrating and communicating progress, recognising and highlighting champions, responding quickly to workflow issues, integrating digital competency into formal evaluations, and committing to continuous improvement based on staff feedback, because when teams feel heard and see tangible benefits, they remain deeply invested in the transformation for the long term.

DIAGNOSING TRANSFORMATION ROADBLOCKS

A significant advantage of the ADKAR framework is its utility as a diagnostic tool; if a digital transformation initiative stalls or fails, ADKAR helps to quickly identify the root human cause of the problem. For instance, low system usage typically indicates a failure at the awareness or desire stage, suggesting staff neither understand the 'why' nor want to participate. High error rates after implementation often point to gaps in knowledge, meaning the training was insufficient or not retained.

If staff abandon the system under pressure, it is a clear sign that ability

was not properly built, as they lacked the confidence or support to perform in real-world conditions. And when teams revert to old habits after an initial period, it signals a critical weakness in reinforcement, indicating that the organisation has not done enough to make the new methods sustainable and rewarding.

THE INDIAN HEALTHCARE CONTEXT: UNIQUE OPPORTUNITIES

India's vast and diverse healthcare system, particularly in its semi-urban and rural regions, faces a distinct set of challenges, including severely limited resources, extraordinarily high patient volumes, and deeply fragmented data systems. However, this very context presents a unique and powerful opportunity to leapfrog cumbersome traditional models entirely and create a new paradigm of digitally smart hospitals that are affordable, efficient, and highly scalable from the outset.

Key strategies tailored for the Indian context include first educating hospital leadership on the tangible return on investment from digital investments and helping them define a clear long-term digital health strategy. Involving clinicians early in technology decisions is even more critical here to increase buy-in and ensure practicality. Leveraging cloud-based solutions can dramatically reduce the upfront infrastructure burden, especially in Tier 2 and Tier 3 cities where IT resources are scarce.

Starting with focused pilot projects helps to validate ROI and build confidence before committing to a full-scale, organisation-wide implementation. Furthermore, using multilingual, intuitive interfaces that are designed for mobile-first adoption is essential for success in a country as diverse as India. Collaborating with established industry bodies like NABH, CAHO, and HIMSS can provide invaluable guidance and benchmarking standards. Innovative solutions like HealthTech-in-a-Box—which combine infrastructure, software, and support services into ready-to-deploy packages—are already proving instrumental in helping smaller hospitals digitise quickly and cost-effectively, democratising access to technology.

BUILDING THE FUTURE: A UNIFIED DIGITAL HEALTH ECOSYSTEM

The ultimate future of healthcare lies in the creation of a unified, interoperable digital ecosystem where hospitals, clinics, pharmacies, diagnostic labs, and patients themselves connect and share information seamlessly and securely. Government initiatives like the Ayushman Bharat Digital Mission (ABDM) are laudably laying the foundational framework for this connected future, but real success will be achieved only when the technology itself becomes invisible—working effortlessly in the background to empower doctors to heal better, enable administrators to manage smarter, and help patients to live healthier lives.

Healthcare is no longer confined within hospital walls; today, a diagnosis may very well begin via a video consultation, a prescription may be generated and checked by AI, and a patient's entire medical history can live securely in the cloud, accessible to them and their providers from anywhere at any time. This profound transformation enables a fundamental shift from reactive, episodic care to proactive, continuous, and truly patient-centred care, which is the ultimate goal of the digital revolution in medicine.

KEY TAKEAWAYS

In conclusion, it is vital to remember that digital transformation in healthcare is not merely about installing new software or purchasing advanced hardware; at its heart, it is about transforming people—their long-established habits, their confidence in new tools, and their fundamental mindset—all without ever disrupting the high-quality care that patients need and deserve. The ADKAR model provides a timeless and human-centred framework that helps healthcare organisations maintain an unwavering focus on this most vital element of change: the human beings who make it all possible. Because the stark reality is that technology alone does not save lives; it is people using that technology wisely, compassionately, and effectively who do.

For healthcare leaders standing at this crossroads, the journey to digital transformation is not a matter of if, but how—and how quickly and empathetically it can be achieved. The time to act is undoubtedly now; the future of healthcare is irrevocably digital, and those organisations and leaders who choose to embrace it with purpose, empathy, and strategic vision will undoubtedly lead the way toward better outcomes for all stakeholders—patients, providers, and societies alike.

Embracing digital change in healthcare is not about chasing fleeting trends; it is about responding to real-world human needs with empathy, intelligence, and unwavering vision.

(The author is President, CAHO)

WHITE COATS FOR SALE

Rampant entrance exam scams, political meddling, and flawed policies have turned medical education into a marketplace, compromising educational standards and the quality of future doctors.

BY DR AMITAV BANERJEE, MD

From losing one's way and casually landing into the corridors of the medical profession in the early seventies, to the high-pressure, cut-throat competition today, not only for an MBBS seat but beyond, the price one pays to become a doctor is almost half a lifetime, with no assurance of a secure and happy life thereafter. Compounding the hardships, anxiety, and a sense of frustration, are whimsical decisions taken by our regulatory bodies, often bypassing protocol and without consulting the appropriate expert committees. Taking advantage of the confusion are various players with their own political, populist, and profiteering agendas.

SCAMS AND ANARCHY ALL THE WAY

The first major scam to surface, indicating that all was not fair in admission to medical seats, surfaced in Madhya Pradesh in the year 2013, by way of the VYAPAM scam. The acronym Vyapam stands for Vyavsayik Pariksha Mandal, the Madhya Pradesh Professional Examination Board (MPPEB).

This state-level scandal, which hit the headlines, dealt a severe blow to the credibility of entrance examinations to professional courses. While it hit the ceiling in 2013, during investigations it came to light that the irregularities were going on for many years.

At least five years prior to 2013, thousands of job and medical aspirants had paid bribes worth millions of rupees to a nexus of middlemen and political operatives to rig the examinations conducted by Vyapam — a state body that

conducted standardised tests for thousands of highly coveted government jobs and admissions to state-run medical colleges. When the scandal first came to light in 2013, it threatened to paralyse the entire state administration machinery: thousands of jobs appeared to have been obtained by fraudulent means, medical schools were tainted by the spectre of corrupt admissions, and dozens of officials were implicated in helping friends and relatives qualify by unfair means.

The investigation into the scam led to the arrest of many high-profile individuals, including politicians, government officials, and education professionals. A few political leaders and bureaucrats were also named as accused in the case. Thousands of candidates were part of the irregularities. The scam gained notoriety for several mysterious deaths among the accused, witnesses, and whistleblowers. The circumstances surrounding these deaths raised concerns and controversies. The large number of mysterious deaths among witnesses and whistleblowers might have silenced many from coming forth to testify, raising genuine concerns that many key players were acquitted.

LESSONS NOT LEARNT — NEET ROCKED BY CONTROVERSY A DECADE LATER

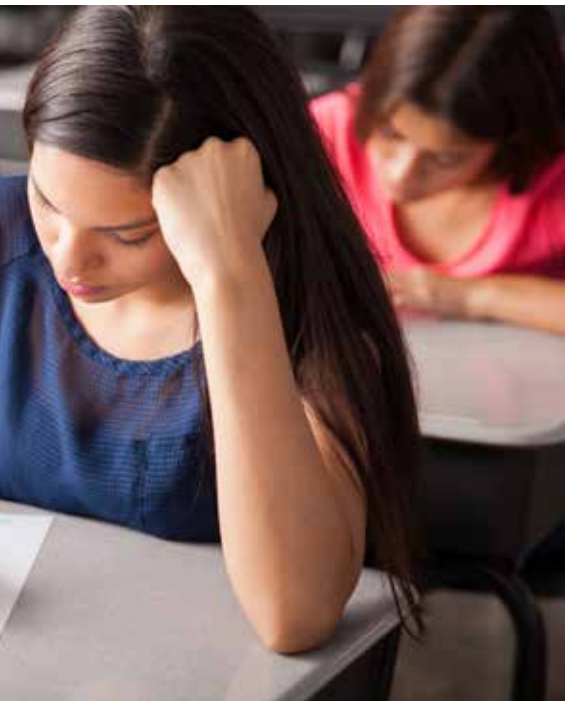
The National Eligibility cum Entrance Test (NEET) was introduced in 2013 by the Medical Council of India (MCI) with the aim of streamlining the medical admission process in the country and ensuring that students are selected based on a single, standardised test rather than multiple state-level exams.

A decade later, in 2024, the NEET for MBBS entrance was rocked by allegations of irregularities, evidenced by many bizarre patterns in the results such as: Unprecedented Scores: A total of 67 candidates scored 720/720 this year, a "black swan event." There were only two toppers who scored 720 last year, and in 2022, there were four. Concentration of Toppers: Six of the toppers were from a single examination centre in Haryana, with roll numbers close to each other. Credibility of Scores: Some candidates scored 718 and 719, which does not make sense as such scores are technically impossible. Four marks are awarded for each correct answer, while one mark is deducted for a wrong answer. So, if a student gets one answer wrong, the score will be 715; if they leave one question unanswered, the score will be 716. Questionable Explanation: When the National Testing Agency (NTA) was questioned about these scores, they explained that "grace marks" were awarded to candidates in some examination centres due to delays in starting the exams. Early Declaration: The NEET-UG results were declared on 4 June 2024, ten days earlier than the scheduled date of 14 June 2024. Some speculate this was done deliberately to suppress any protests, which would be overshadowed by the election results coming out on the same day.

For NEET PG 2023, candidates with zero and even negative marks qualified for admission, consequent to eligibility criteria being reduced to zero percentile to fill vacant seats. This highly unprecedented step was taken to fill up the large number of vacant seats, thus giving priority to filling them up and sacrificing merit.

The NEET 2024 controversy resulted in a Central Bureau of Investigation (CBI) probe, changes in the leadership of the NTA, and a Supreme Court ruling upholding the exam while directing systemic reforms.

Investigations by the Bihar Police and later the CBI confirmed that a paper leak occurred in Hazaribagh and Patna. The CBI revealed that the question paper was stolen from an exam centre just hours before the test and distributed to a limited group of students who paid significant sums. The CBI identified 144 students who benefitted from the leak and arrested numerous individuals, including the masterminds, exam centre officials, and "solvers" (MBBS students who helped solve the paper). The agency filed multiple chargesheets in the case. A major point of contention was the NTA's decision to award grace marks to 1,563 candidates to compensate for lost time during the exam. Following widespread protests and petitions, the



government and NTA cancelled the grace marks. A re-test was offered to these students on 23 June, and only about half chose to appear.

On July 23, 2024, the Supreme Court ruled against cancelling or re-conducting the entire NEET exam. It stated that while a paper leak was confirmed, there was no evidence of a "systemic breach" that compromised the exam's integrity on a widespread level. The court acknowledged that a re-test would have "serious consequences for over two million students" who appeared for the exam legitimately. It upheld the exam but ordered the NTA to correct the marking for a disputed physics question, which affected the ranks of over four lakh candidates. A re-revised result was declared on 26 July. The court also allowed individuals with unresolved grievances to approach the High Courts.

Government Actions and Reforms: In response to the crisis, the government took several steps like the dismissal of the NTA chief, and the introduction of the anti-cheating law, The Public Examinations (Prevention of Unfair Means) Act, 2024, which was notified to provide stricter penalties for exam malpractices. An expert seven-member committee, led by former ISRO chief Dr. K Radhakrishnan, was formed to recommend reforms for the NTA and the examination process.

Ongoing Legal Challenges: While the Supreme Court's verdict seemed to conclude the matter, a review petition was filed in early September 2024, arguing that new evidence indicated more widespread malpractice. The Supreme Court dismissed this review petition in November 2024.

NEET PG ENTRANCE STANDARDS FOR 2023 AND 2024 HIT A NEW LOW, WITH CANDIDATES SCORING ZERO AND NEGATIVE MARKS GETTING SEATS

For NEET PG 2023, candidates with zero and even negative marks qualified for admission, consequent to eligibility criteria reduced to zero percentile to fill vacant seats. This highly unprecedented step was taken to fill up the large number of vacant seats, thus giving priority to filling them up and sacrificing merit. This effectively removed the minimum score requirement, which was set at the 50th percentile, making anyone who appeared for the NEET exam eligible. This resulted in candidates with extremely low scores, such as some with negative marks, securing seats in high-fee private medical colleges. This brings to light a system failure where the ability to pay can be prioritised over merit. The disregard for merit compromises medical education standards and the quality of future doctors. Top scorers who cannot afford to pay the fees of private medical colleges compete for limited seats in government medical colleges, while those with the capacity to pay, regardless of merit, can secure admission. This state of affairs raises concerns about the competency level of such doctors entering the profession.

Investigations confirmed that a paper leak occurred in Hazaribagh and Patna, with the question paper stolen just hours before the test and distributed to a limited group of students who paid significant sums.

TAMIL NADU, WEST BENGAL, AND KARNATAKA HAVE OPPOSED NEET

Three states in India — Tamil Nadu, West Bengal, and Karnataka — have challenged NEET. They have pointed out that a centralised examination is a disadvantage for rural students from different states and for students passing state board exams compared to students who pursue a CBSE syllabus.

Tamil Nadu passed a resolution calling for exemption from NEET, suggesting that admission should be based on Class 12 marks. The state has also implemented a 7.5 per cent reservation for Government School Students who clear the NEET examination. Karnataka passed a resolution to scrap NEET and replace it with its State Level Common Entrance Test (CET). West Bengal passed a resolution to scrap NEET, arguing that it was never in favour of the national exam and prefers to revert to its old system of admissions.

While these states have passed resolutions challenging NEET, as yet, in practice, no state offers admission to undergraduate MBBS programs without a qualifying NEET score. All state-level and national-level medical admissions must comply with the

Politics, profit, and populist measures like Hindi medium MBBS courses or integrated BAMS-MBBS courses should be held in abeyance till the mess in medical education is cleared.

National Medical Commission Act, which mandates NEET.

STATE QUOTA SEATS VS. ALL INDIA QUOTA (AIQ)

The confusion about non-NEET states often arises from the distinction between different seat quotas:

All India Quota (AIQ): The Medical Counselling Committee (MCC) conducts counselling for 15 per cent of the seats in government medical colleges and 100 per cent of the seats in central/deemed universities, based entirely on NEET scores.

State Quota: States manage the counselling for the remaining 85 per cent of their government medical college seats. While admission still requires a NEET score, state governments can apply their own reservation policies, including domicile rules, to fill these seats.

COMPOUNDING THE PROBLEMS: MBBS IN HINDI MEDIUM AND INTEGRATED DUAL MBBS AND BAMS DEGREE COURSE

Adding to the complex problems of medical admissions, some states have taken unprecedented initiatives. States like Madhya Pradesh, Chhattisgarh, and Rajasthan have initiated MBBS courses in Hindi medium. Madhya Pradesh was the first to initiate a Hindi medium MBBS course in 2022, for which only 30 per cent of the students opted. There were multiple hurdles to this implementation, with requirements for bilingual textbooks and integrating medical terminologies in Hindi for a seamless learning experience. Many students admitted to the Hindi medium course chose to take the examination in English medium even after studying in Hindi.

Recently, it was announced that the Jawaharlal Nehru Institute of Post Graduate Medical Education and Research (JIPMER), Pondicherry, may offer India's first integrated BAMS-MBBS program. The aim is to train doctors in both modern medicine and Ayurveda. The course duration will be five years, with a one-year internship.

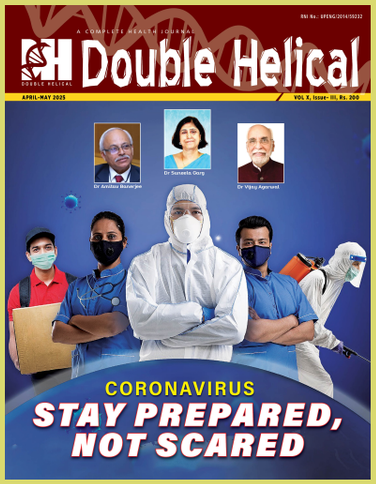
Experts have raised legal, regulatory, and patient safety concerns. Surprisingly, the National Medical Commission and the National Commission for Indian Systems of Medicine were not consulted while preparing this proposal. Legally, there is no provision for a dual degree course. Such a drastic step, without the nod of regulatory bodies, raises doubts about the academic process and legitimacy of the course. Perhaps consequent to these concerns, JIPMER issued a statement that no such course is being offered presently.

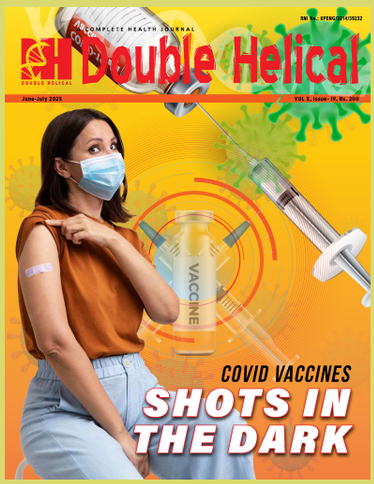
THE WAY FORWARD

The country must urgently streamline the entire process of medical admissions, making it free of corruption, providing a level playing field, and rewarding meritocracy. For this, it must address the supply-demand mismatch by creating more government and affordable seats for meritorious students in private medical colleges. Politics, profit, and populist measures like Hindi medium MBBS courses or integrated BAMS-MBBS courses, should be held in abeyance till the mess in medical education is cleared.

(The writer is a renowned epidemiologist and Professor Emeritus at Dr DY Patil Medical College in Pune, featured in Stanford University's list of the world's top 2 per cent scientists (2023, 2024). He chairs the Universal Health Organization (https://uho.org.in/ and is the author of Covid-19 Pandemic: A Third Eye.)

Your Guide to Healthy Living





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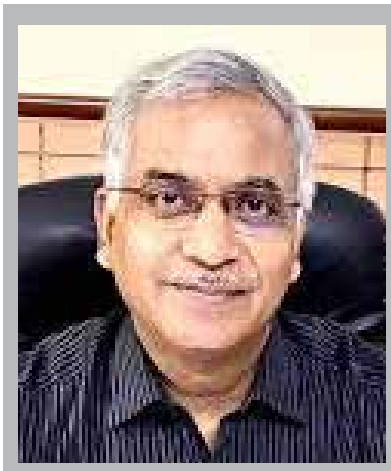


Primum NON-NOCERE

The 72nd World Health Assembly in May 2019 truly lived up to the Hippocratic wisdom, while adopting the WHA resolution on Global action on patient safety (WHA72.6). The resulting Global Patient Safety Action Plan 2021-2030 transforms this timeless medical oath into a concrete global commitment

BY PROF SUNEELA GARG/
DR ARVIND GARG

Healthcare, designed to heal and comfort, sometimes inadvertently causes harm through preventable errors, system failures, and inadequate safety measures. Recognition of this reality has sparked a worldwide commitment to fundamentally redesign how

healthcare is delivered, measured, and continuously improved.

The 72nd World Health Assembly in May 2019 marked a watershed moment for patient safety. The Assembly adopted the WHA resolution on Global action on patient safety (WHA72.6), formally recognising patient safety as a global health priority for the first time. It established an annual World Patient Safety Day on 17 September, creating a dedicated platform for worldwide awareness and action. The resolution invited international organisations and other relevant stakeholders to collaborate with Member States in promoting and supporting patient safety initiatives, fostering unprecedented global cooperation. Most significantly, it requested the Director-General to emphasise patient safety as a key strategic priority in WHO's work across the universal health coverage agenda.

This mandate set in motion an intensive global consultation process that would culminate in the most comprehensive patient safety framework ever developed. The Global Patient Safety Action Plan 2021-2030 was submitted to the 74th World Health Assembly in January 2021,

approved by the 74th WHA decision in May 2021, and formally launched in August 2021, marking the beginning of a new era in global healthcare safety.

A VISION OF ZERO HARM

The WHO Global Patient Safety Action Plan (2021-2030) embodies an ambitious yet achievable vision: "A world in which no one is harmed in healthcare, and every patient receives safe and respectful care, every time, everywhere." This vision represents more than an aspiration—it establishes the ultimate aim to achieve zero avoidable harm in healthcare.

The plan is built on fundamental guiding principles that reshape how healthcare systems approach safety. It emphasises engaging patients and families as active partners in care, recognising that those receiving care are often best positioned to identify potential problems and contribute to solutions. The framework calls for building safety culture across all levels of health systems, transforming organisational environments from reactive problem-solving to proactive safety management.

Integration of safety into all aspects of healthcare delivery ensures that safety considerations are woven into every decision, process, and interaction rather than treated as separate add-on activities. The plan places equity, inclusiveness, and compassion as core values, recognising that safe care must be accessible to all patients regardless of their background, condition, or circumstances.

THE SEVEN PILLARS OF TRANSFORMATION

The Global Patient Safety Action Plan is structured around seven strategic objectives, each representing a pillar that collectively supports the transformation of healthcare systems:

Professional education must incorporate patient safety as a core competency, ensuring that future healthcare workers enter practice with both the knowledge and commitment necessary to deliver safe care. Continuing education programs must keep current practitioners updated on evolving safety science and emerging best practices.

1. Make Safety a National Health Priority

This foundational pillar calls for governments to integrate patient safety in policies, regulations, and legislation. It recognises that sustainable change requires political commitment and regulatory frameworks that prioritise safety at the highest levels of governance.

2. Build High-Reliability Health Systems

This objective focuses on strengthening governance, accountability, and leadership for safety. High-reliability systems are characterised by consistent performance, proactive risk management, and the ability to function safely even under challenging conditions.

3. Ensure Safe Clinical Practices

This pillar emphasises the adoption of standardised evidence-based practices across critical areas. These include medication safety protocols that prevent drug errors, surgical safety procedures that reduce operative complications, maternal and newborn safety measures that protect vulnerable populations, and infection prevention strategies that halt the spread of healthcare-associated infections.

4. Engage and Empower Patients and Families

Recognition of patients and families as partners ensures communication, transparency, and respect in all care interactions. This pillar transforms the traditional provider-patient relationship into a collaborative partnership where patients are empowered to participate actively in their safety.

5. Inspire and Strengthen Health Workforce Capacity

This objective emphasises training in safety science, teamwork, and system thinking while creating supportive and blame-free work environments. Healthcare workers

must be equipped with both the knowledge and tools necessary to deliver safe care, supported by organisational cultures that encourage learning and improvement.

6. Improve Information, Measurement, and Learning

Developing indicators and metrics to track safety progress while encouraging reporting and learning from adverse events creates the foundation for evidence-based improvement. This pillar recognises that what gets measured gets managed, and systematic data collection enables targeted interventions.

7. Invest in Research, Innovation, and Technology for Safety

This pillar promotes innovations such as digital health solutions, safer technologies, and design improvements that can prevent errors and support healthcare workers in delivering safe care. Technology serves as a powerful enabler of safety when properly implemented and integrated into care processes.

CROSS-CUTTING PRIORITIES FOR MAXIMUM IMPACT

The Global Patient Safety Action Plan identifies four cross-cutting action areas that demand attention across all healthcare settings and represent the highest-impact opportunities for improvement:

Medication safety, aligned with WHO's "Medication Without Harm" challenge, addresses one of the most common sources of preventable harm in healthcare. Medication errors can occur at multiple points in the care process, from prescribing and dispensing to administration and monitoring, making systematic approaches essential.

Infection prevention and control represents a fundamental aspect of safe care, protecting both patients and healthcare workers from preventable infections. Effective infection control requires comprehensive programs that address everything from hand hygiene and environmental cleaning to isolation procedures and antimicrobial stewardship.

Surgical safety and obstetric safety focus on high-risk, high-volume procedures where standardised protocols and safety checklists have proven highly effective. These areas offer opportunities for dramatic improvements in outcomes through relatively straightforward interventions.

Patient engagement and health literacy empowers patients to participate actively in their own safety. When patients understand their conditions, treatments, and potential risks, they become valuable partners in preventing errors and improving outcomes.

IMPLEMENTATION APPROACH: FROM GLOBAL VISION TO LOCAL ACTION

The Global Patient Safety Action Plan is designed for adoption by all Member States with national adaptation to local contexts and priorities. Implementation follows a phased approach with short-, medium-, and long-term targets extending through 2030. This timeline recognises that transforming healthcare systems requires sustained effort and allows for progressive development of capabilities and infrastructure.

The plan emphasises learning, sharing best practices, and building resilience in healthcare systems. This collaborative approach ensures that innovations and lessons learned in one setting can benefit healthcare systems worldwide, accelerating progress toward the shared vision of zero avoidable harm.

ESSENTIAL ELEMENTS OF EFFECTIVE PATIENT SAFETY ACTION PLANS

Successful implementation of patient safety initiatives requires comprehensive action plans that address multiple interconnected elements:

LEADERSHIP AND GOVERNANCE

Strong commitment from leadership to make safety a priority forms the foundation of effective patient safety programs. This includes establishing patient safety committees or governance bodies that provide oversight and direction, while defining clear accountability and responsibility at every level of the organisation.

CULTURE OF SAFETY

Promoting a "no blame, no shame" environment for reporting errors represents perhaps the most critical cultural transformation. This approach encourages open communication between staff, patients, and families while providing

regular training to build and sustain safety culture throughout the organisation.

RISK IDENTIFICATION AND REPORTING

Systematic reporting mechanisms for adverse events, near-misses, and unsafe practices enable organisations to learn from problems and prevent recurrence. These systems must include anonymous, non-punitive reporting channels that encourage staff to share safety concerns without fear of punishment. Root Cause Analysis (RCA) for critical incidents helps identify underlying system factors that contribute to errors.

STANDARDISATION OF PRACTICES

Evidence-based clinical protocols and guidelines reduce dangerous variability in care processes. The use of checklists, such as surgical safety checklists and medication safety checklists, provides systematic approaches to complex procedures. Standard handover communication tools, such as SBAR (Situation, Background, Assessment, Recommendation), ensure critical information is effectively communicated between care providers.

CAPACITY BUILDING AND TRAINING

Ongoing education of healthcare staff on safety protocols ensures that all team members understand and can implement safety measures effectively. Simulation-based training for high-risk scenarios provides opportunities to practice emergency responses and complex procedures in safe environments. Inclusion of patient safety in orientation programs ensures that new staff members understand safety as a core organisational value from their first day.

PATIENT AND FAMILY ENGAGEMENT

Involving patients in their care planning and safety checks creates an additional layer of protection against errors. Educating patients about medications, procedures, and discharge instructions empowers them to participate actively in their care. Encouraging patients to speak up about concerns transforms them from passive recipients of care into active safety partners.

Data, Monitoring and Evaluation

Regular audits of adverse events, near-misses, and compliance with

protocols provide objective measures of safety performance. Safety indicators and benchmarks enable organisations to measure progress and identify areas needing improvement. Feedback loops for continuous improvement ensure that lessons learned translate into better practices and outcomes.

SAFE USE OF TECHNOLOGY

Implementing electronic medical records (EMR) with decision-support tools can prevent medication errors and provide clinical decision support at the point of care. Barcode systems for medication safety reduce errors in drug administration. Alarm systems for critical alerts must be carefully designed and managed to provide essential warnings while avoiding alarm fatigue.

Medication and Infection Safety

Double-checks for high-risk drugs provide additional verification before administration of medications that carry significant potential for harm. Antimicrobial stewardship programs ensure appropriate use of antibiotics and reduce the development of resistant organisms. Infection prevention and control measures, including hand hygiene protocols, isolation procedures, and sterilisation practices, protect both patients and healthcare workers.

CONTINUOUS QUALITY IMPROVEMENT

Plan-Do-Study-Act (PDSA) cycles provide systematic approaches for testing safety interventions before full implementation. Benchmarking with national and international safety goals, such as those established by WHO and accreditation organisations like the Joint Commission, helps organisations measure their performance against recognised standards. Periodic review and updating of action plans ensures that safety programs evolve based on new evidence and changing conditions.

At the national level, governments must integrate patient safety into health policies, provide necessary resources, and create regulatory frameworks that support safety initiatives. Healthcare organisations must invest in safety infrastructure, train their workforce, and create cultures that prioritise safety alongside other clinical and operational priorities.

WORLD PATIENT SAFETY DAY: A GLOBAL PLATFORM FOR CHANGE

World Patient Safety Day, observed annually on 17 September, serves as a global platform for raising awareness and mobilizing action on patient safety issues. This annual observance calls for global solidarity and concerted action by all countries and international partners to improve patient safety worldwide.

The day serves multiple critical functions in advancing the patient safety agenda. It raises global awareness about specific patient safety challenges and solutions, provides opportunities for sharing best practices and innovations across healthcare systems, mobilises political and public support for patient safety initiatives, and creates platforms for healthcare organisations to recommit to safety goals and demonstrate progress.

Each year's observance focuses on specific aspects of patient safety, ensuring comprehensive coverage of the many factors that contribute to safe care. This focused approach enables deep exploration of particular challenges while maintaining connection to the broader patient safety agenda.

THE PATH FORWARD: COLLECTIVE COMMITMENT TO ZERO HARM

The vision of achieving zero avoidable harm in healthcare by 2030 represents a fundamental commitment to the principle that every patient deserves safe, respectful care. This vision is achievable through systematic implementation of evidence-based safety practices, meaningful engagement of patients and families as partners in care, and the creation of healthcare cultures that prioritise learning and continuous improvement.

The journey toward zero avoidable harm is complex and will require unprecedented coordination, but it represents one of the most important public health initiatives of our time. Every patient who enters healthcare systems deserves to receive safe, respectful care, and every healthcare worker deserves to work in an environment that supports and enables safe practice.

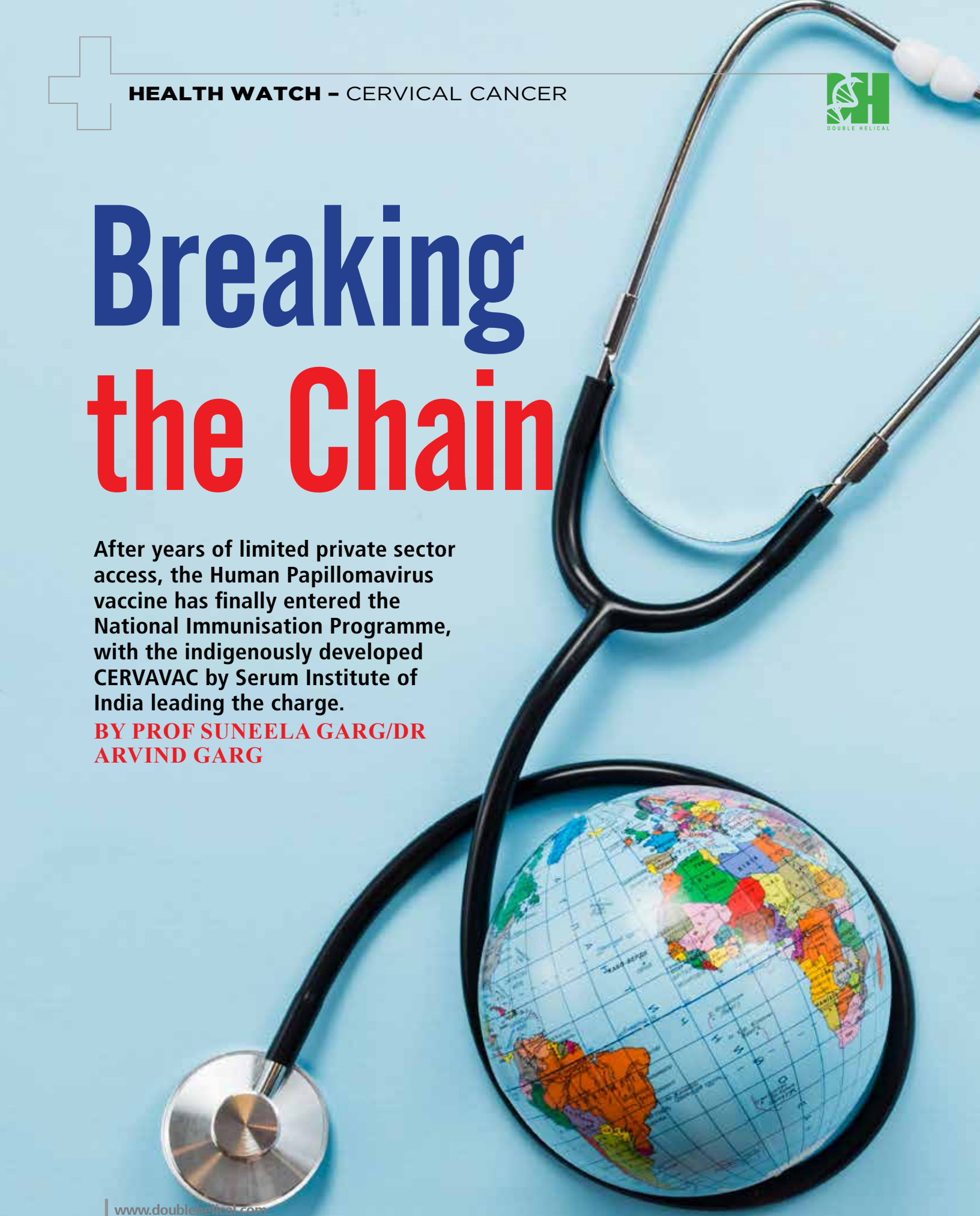
The framework exists, the commitment has been made, and the roadmap is clear. Success will ultimately depend on the collective dedication and sustained action of healthcare communities worldwide, working together toward the shared vision of healthcare that heals without causing harm.

(The authors are Chair, Programme Advisory Committee, National Institute of Health & Family Welfare (NIHFW); Director, Child Care Clinic, Noida; and Head, Paediatrics, Apollo Hospital, Noida.)

Breaking the Chain

After years of limited private sector access, the Human Papillomavirus vaccine has finally entered the National Immunisation Programme, with the indigenously developed CERVAVAC by Serum Institute of India leading the charge.

BY PROF SUNEELA GARG/DR ARVIND GARG



In a country where cervical cancer represents a devastating public health burden, India has finally launched its most ambitious women's health initiative in decades. After years of limited access through private healthcare, the Human Papillomavirus (HPV) vaccine has entered the National Immunisation Programme, promising to protect millions of young girls from a disease that claims a disproportionate toll on Indian women.

The statistics paint a sobering picture. India accounts for nearly one-fifth of global cervical cancer cases, making HPV vaccination a major public health priority. Yet this devastating toll could largely become preventable through systematic vaccination programs that target girls before they are exposed to the virus.

THE SCIENCE BEHIND THE SHIELD

Human Papillomavirus represents the most common viral infection of the reproductive tract. Persistent infection with high-risk HPV types—particularly types 16 and 18—is responsible for approximately 70 per cent of cervical cancers worldwide. Understanding this causal relationship has enabled the development of highly effective preventive vaccines.

All HPV vaccines are prophylactic vaccines made using virus-like particles (VLPs) of the L1 protein, which are non-infectious yet capable of generating robust immune responses. Three main vaccine types are available globally:

The bivalent vaccine (Cervarix) targets HPV types 16 and 18, the high-risk oncogenic types, while providing cross-protection against some other oncogenic types including 31, 33, and 45.

The quadrivalent vaccine (Gardasil-4) targets HPV types 6, 11, 16, and 18, preventing not only cervical cancer but also genital warts caused by types 6 and 11.

The nonavalent vaccine (Gardasil-9) offers the broadest protection, targeting HPV types 6, 11, 16, 18, 31, 33, 45, 52, and 58, providing coverage against approximately 90 per cent of cervical cancers.

However, the real game-changer for India has been the development of CERVAVAC, an indigenously developed vaccine launched in 2023 by the Serum Institute of India. This quadrivalent vaccine targets HPV types 6, 11, 16, and 18, and was specifically designed as a low-cost, "Made in India" solution intended for large-scale public immunisation.

For years, HPV vaccines were available only in the private sector, severely limiting access due to high costs. This created a stark disparity where families who could afford the vaccines could protect their daughters, while the vast majority remained vulnerable to a preventable disease.

This changed dramatically in 2022-23 when the Indian government announced the inclusion of HPV vaccine in the Universal Immunisation Programme (UIP/NIP). CERVAVAC, India's first indigenous, low-cost HPV vaccine, became the vaccine of choice for the National Immunisation Programme.

The program targets girls aged 9-14 years, primarily through school-based programmes, with plans to potentially include boys later for broader herd protection. The phased introduction started in 2023-24 in select states, with a nationwide rollout planned under UIP by 2025-26, prioritising adolescent girls.

HPV is the most common viral infection of the reproductive tract; persistent infection with high-risk HPV types (esp. 16 & 18) is responsible for ~70% of cervical cancers. India accounts for nearly 1/5th of global cervical cancer cases.

THE OPTIMAL VACCINATION WINDOW

The timing of HPV vaccination is crucial for maximum effectiveness. The vaccine works best when given before sexual debut, with specific dosage schedules optimised for different age groups:

For girls aged 9-14 years: a 2-dose schedule administered at 0 and 6 months. For those aged 15 years and above: a 3-dose schedule at 0, 1-2, and 6 months

Each dose contains 0.5 mL of vaccine, standardised across bivalent, quadrivalent, and nonavalent vaccines. Catch-up vaccination can be given up to 26 years of age (in some guidelines up to 45 years, though the benefit decreases after HPV exposure).

CONFRONTING MYTHS AND MISCONCEPTIONS

Despite overwhelming scientific evidence supporting HPV vaccination safety and efficacy, numerous myths and misconceptions continue to impede acceptance:

SAFETY CONCERNS

Myth: HPV vaccine is unsafe and has severe side effects. Fact: Multiple large-scale studies worldwide show the vaccine is very safe; side effects are usually mild, including pain at injection site and mild fever.

Myth: HPV vaccine causes infertility. Fact: There is no scientific evidence linking HPV vaccination to infertility. WHO, CDC, and Indian health authorities confirm it is safe for future fertility.

SEXUAL HEALTH MISCONCEPTIONS

Myth: Giving the vaccine will encourage early sexual activity. Fact: Studies show

no change in sexual behaviour among vaccinated adolescents. The vaccine is purely a cancer prevention tool.

Myth: Only sexually active girls need the vaccine. Fact: Vaccine is most effective before sexual debut, ideally at 9-14 years, before HPV exposure.

GENDER-RELATED MISCONCEPTIONS

Myth: Only girls/women need the vaccine. Fact: HPV also causes cancers in men (anal, penile, throat). While girls are prioritised in India's NIP, boys also benefit from vaccination.

CERVICAL CANCER MISUNDERSTANDING

Myth: Cervical cancer is hereditary, so vaccine cannot prevent it. Fact: Cervical cancer is caused mainly by HPV infection, not genetics. Vaccine prevents infection and hence cancer.

Myth: Regular Pap smears or VIA screening is enough; vaccine is not necessary. Fact: Screening helps detect disease early but does not prevent HPV infection. Vaccination plus screening together give maximum protection.

CULTURAL & SOCIAL MISCONCEPTIONS

Myth: HPV vaccine is not needed for unmarried girls. Fact: Vaccine is recommended irrespective of marital status; it works best if given before sexual exposure.

Myth: Traditional practices (ayurvedic/herbal remedies) can prevent HPV. Fact: No alternative medicine has been proven to prevent HPV infection or cervical cancer.

Multiple large-scale studies worldwide show the vaccine is very safe; side effects are usually mild (pain at injection site, mild fever). There is no scientific evidence linking HPV vaccination to infertility.

PROGRAMMATIC MISCONCEPTIONS

Myth: HPV vaccine is experimental or not approved in India. Fact: HPV vaccines are WHO prequalified, licensed in India, and now part of the National Immunisation Programme.

Myth: HPV vaccine must be given every year. Fact: Only 2 doses (9-14 years) or 3 doses (15+ years) are needed for long-lasting protection.

Community Engagement: The Foundation of Success

The ultimate success of India's HPV vaccination program depends on community engagement and social mobilisation. Addressing myths and stigma around HPV vaccine and screening requires sustained information, education, and communication campaigns using peer educators and mass media for awareness.

Involving men and community leaders increases acceptance of vaccination and screening programs. When fathers, community leaders, and influential figures understand and support HPV prevention, family acceptance increases dramatically. These community partnerships transform HPV vaccination from a medical intervention into a community-owned initiative supported by trusted local voices.

A HISTORIC OPPORTUNITY FOR ELIMINATION

India's HPV vaccination program represents more than just another vaccine rollout—it symbolises the country's commitment to eliminating preventable diseases and achieving health equity. The program is expected to drastically reduce cervical cancer incidence in India in the coming decades, aligning with the WHO Global Strategy to eliminate cervical cancer as a public health problem by 2030.

Success requires sustained political commitment, adequate financing, robust implementation systems, and most importantly, community acceptance and participation. The early experiences in pioneer states provide valuable lessons for nationwide expansion, while ongoing monitoring and evaluation will ensure programs adapt to local contexts and emerging challenges. With vaccination targeting girls aged 9-14 years primarily through school-based programmes, the foundation is being laid for a generation of women protected from a preventable cancer.

(The authors are Chair, Programme Advisory Committee, National Institute of Health & Family Welfare (NIHFW); Director, Child Care Clinic, Noida; and Head, Paediatrics, Apollo Hospital, Noida.)

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