

# PULSE

## A HEALTHCARE UPDATE

### PERSPECTIVE

Transforming Trauma Care: India's Roadmap to Saving Lives and Building Resilient Communities

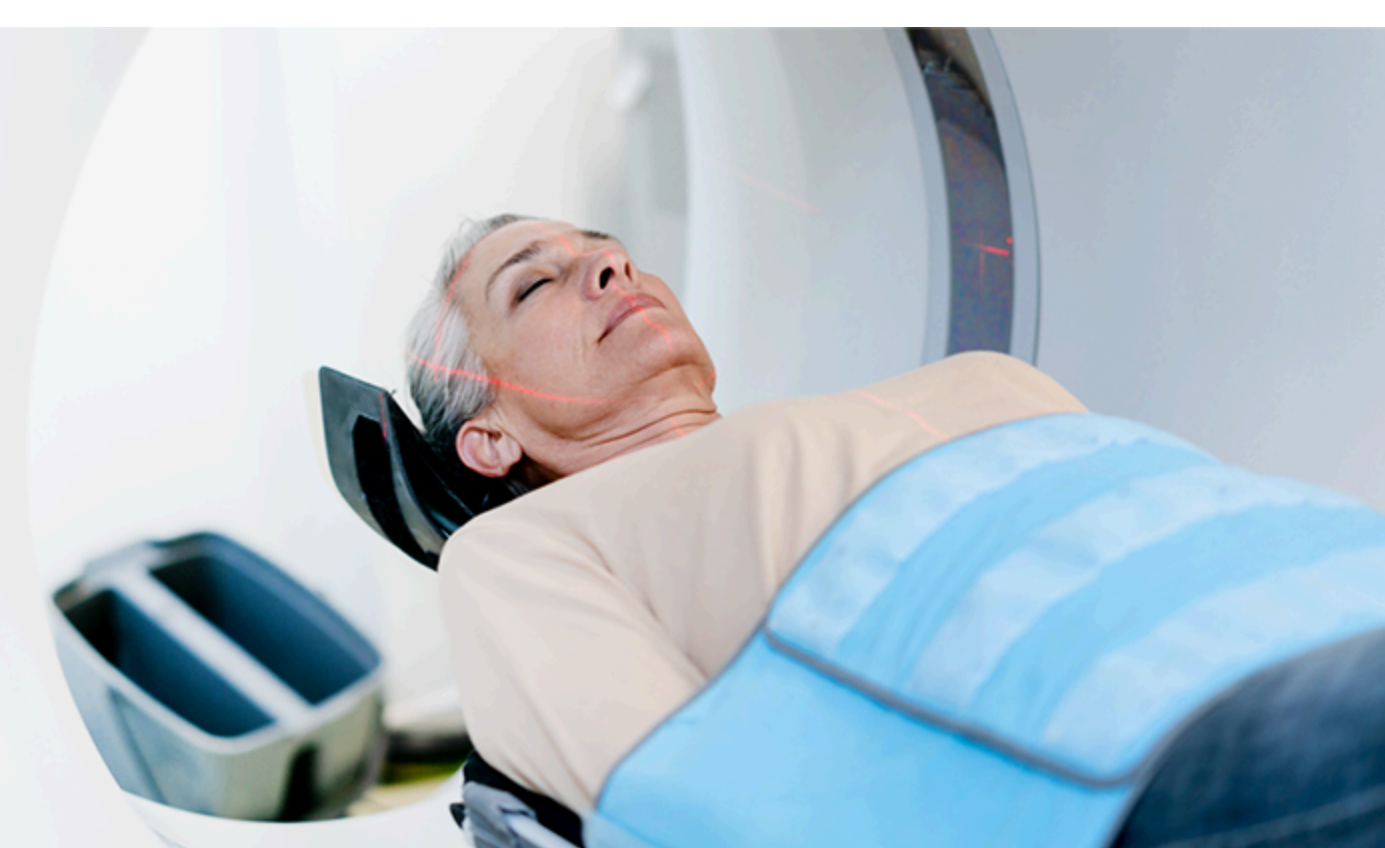
### IMPACT

Next Decade of Atmanirbharta - From Prism for Localization



### PERSPECTIVE

#### Transforming Trauma Care: India's Roadmap to Saving Lives and Building Resilient Communities



**By Dr. Raajiv Singhal**

Founding Member, Managing Director & Group CEO, Marengo Asia Hospitals

Every three minutes, a road accident occurs in India, resulting in 500,000 accidents and 150,000 deaths annually, alongside 300,000 injuries — a toll surpassing casualties from wars, militancy, and insurgencies combined. The economic impact is equally profound, with an estimated 3% of India's GDP lost to road crashes each year. However, beyond the data lies a more human tragedy of broken families, lost livelihoods, and unrealized potential. India's trauma care system, therefore, requires not just infrastructure but a compassionate, collaborative, community-driven, and technologically advanced approach.

To address this crisis, India's Ministry of Road Transport and Highways has adopted the 4Es framework — Engineering, Enforcement, Education, and Emergency Medical Services (EMS). While road design, stricter traffic enforcement, and public awareness campaigns are essential, the most immediate determinant of survival in trauma cases is timely medical intervention within the 'Golden Hour'.

Effective EMS can be the critical difference between life and death. This is where India's approach must evolve from traditional reactive models to a more proactive, tech-enabled, and inclusive system.

#### Empowering Good Samaritans: A Cultural Shift

India's Scheme for Good Samaritans is a significant step toward encouraging bystander intervention. By providing immunity from legal repercussions, the initiative aims to inspire every citizen to become lifesavers. However, the success of this scheme depends on sustained public education campaigns and on-ground implementation. Training a maximum number of people in basic first aid and emergency response could not only significantly enhance bystander confidence but also help achieve the objective of saving the maximum number of lives. Additionally, mobile apps that connect Good Samaritans with emergency responders in real time could bolster the effectiveness of this initiative.

India can further strengthen this initiative by developing indigenous, AI-powered mobile applications and IoT-enabled emergency response systems. By leveraging homegrown technology, we can ensure affordability, scalability, and accessibility for a nationwide rollout.

#### Global Partnerships and Knowledge Sharing

India's leadership in trauma care was evident at the International Conference on Trauma and Acute Care, hosted by Marengo Asia Hospitals. The event brought together global experts from Massachusetts General Hospital, Queen Elizabeth Hospital, and Indian counterparts, including NGOs, policymakers, healthcare providers, government authorities, clinicians, public and private entities, and lawmakers. One of the most significant takeaways was the call for global collaboration to enhance India's trauma care capabilities. By leveraging international best practices and fostering collaborative research, India can fast-track the development of next-gen trauma systems.

#### Smart Ambulance Networks: Redefining Pre-Hospital Care

The next frontier in India's trauma care is the development of a smart ambulance network. By integrating GPS-enabled tracking, AI-powered decision support, and telemedicine capabilities, smart ambulances can drastically reduce response times. Imagine an ambulance's route being dynamically optimized in real time, with emergency rooms alerted in advance of patient arrival. Such technological advancements could ensure that hospitals are ready with the required medical resources upon patient arrival, improving survival outcomes.

A key enabler of this transformation should be the promotion of India-made ambulance technologies and telemedicine platforms. Encouraging Indian startups and MedTech companies to innovate in this space can significantly reduce costs while ensuring technology suited for the local ecosystem.

#### Expanding Advanced Trauma Centres

Specialized trauma centres are vital to India's healthcare ecosystem. Currently, access to such centres is limited to metropolitan areas, leaving vast rural regions underserved. India must prioritize the establishment of trauma centres along national highways, where most accidents occur. These centres should be equipped with 24/7 critical care facilities, surgical units, and emergency medical staff. Public-private partnerships (PPPs) can play a crucial role here, ensuring operational efficiency, technological upgrades, and seamless coordination with EMS.

#### The Aarogya Maitri Initiative: India's Global Footprint

India's healthcare diplomacy has been on full display through the Aarogya Maitri initiative, which deploys self-sustaining portable emergency medical units known as BHISHM Cubes to disaster-stricken regions worldwide. These cubes are capable of supporting 200 emergency cases and 10 to 15 surgeries, daily. Their deployment in Ukraine and the ability to para-drop them at 15,000 feet highlight India's growing leadership in humanitarian aid. This same model can be replicated within India's borders, especially in remote, disaster-prone regions.

#### Call to Action: Building a Trauma-Resilient India

India's vision for trauma care is rooted in timely intervention, global collaboration, and community-driven action. The roadmap is clear — empower Good Samaritans, establish smart ambulance networks, build specialized trauma centres, and embrace global partnerships.

Public awareness, regulatory clarity, and investment in technology must go hand in hand. Policymakers should set clear operational targets. Hospitals and healthcare providers must prioritize digital transformation to enable real-time coordination. Civil society organizations should spearhead public education campaigns on first aid and emergency response.

By integrating 'Make in India' into trauma care, we can not only reduce reliance on imports but also create a sustainable ecosystem of indigenous medical innovation, job creation, and economic growth. Transforming trauma care is not just a healthcare agenda; it is a national imperative. If India's model succeeds, it could become a blueprint for developing nations worldwide. By combining compassion with cutting-edge technology, India can lead the world in reimagining trauma care — saving lives, restoring livelihoods, and building resilient communities for generations to come.

### IMPACT

#### Envisioning the Next Decade of Atmanirbharta From the Prism for Localization

**By Chaitanya Sarawate**

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What started in the September of 2014, the imprint of Make in India story completed a decade this year. From the PLI scheme to the National Medical Devices Policy, Ayushman Bharat centres reaching over 1,72,000 to the focus on R&D, 2024 witnessed an unprecedented shift in the way India envisions healthcare. The 10 years of R&D was also defined by the remarkable penetration of digital solutions leading to an integrated healthcare ecosystem.

That said, India continues to fight a threatening burden of non-communicable diseases, is the most populous country in the world and home to an ageing population. The facts demand an ecosystem that promises quality healthcare accessible to the last citizen. How can we solve for the world's largest population in a country that is also among the top 20 MedTech markets, globally?

'Make in India' is the path from strategies on paper to policies in practice. Access to care is not complete by just placing 'Made in India' technology in smaller towns. We need to ensure improved patient safety, better outcomes by delivering high-quality medical technology. Localization has opened more opportunities for domestic players, however, there are bottlenecks that must be addressed to ensure made-in-India products achieve cost and quality competitiveness.

We must also address the roadblocks in the way of local procurement. In private procurement, we have incentives for buying locally — via custom duty differential between duty on import of parts versus finished devices. However, the customs duty differential is not uniformly applied for all parts used in medical devices, making it insufficient, and discouraging local procurement.

We must find ways to incentivize domestic industry and private players to strengthen Make in India. Just like some states offer rebates to healthcare facilities built in non-metros for buying MedTech products to make quality care reach the last mile, the prospect of healthcare facilities receiving additional rebates for buying made-in-India MedTech could be beneficial.

Similarly, if lower rebate be given for products on the import-approved list, it will potentially enhance access to quality care in remote areas. Additionally, we must also ensure that made-in-India products meet quality standards throughout their life cycle which, building the confidence for made-in-India products across global markets.

The vision of a 'Viksit Bharat' catapulted to heights with Make in India in the last decade. As the country aims to become the global manufacturing and MedTech hub, the next leg will be driven by solutions of the future with collaboration from all sectors of the industry.

