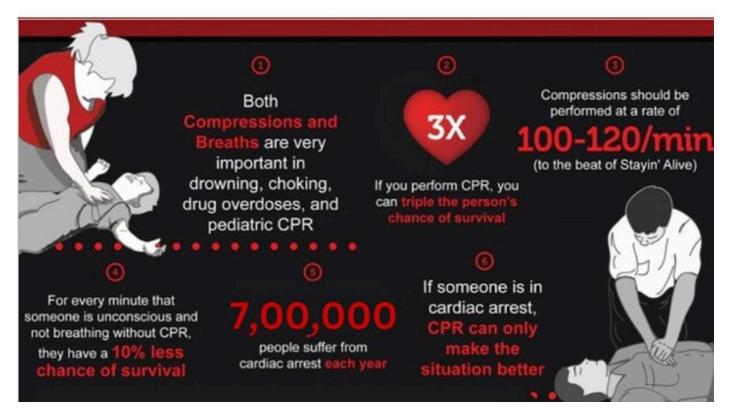
# The cost of not knowing CPR in India: understanding how low awareness of life-saving skills exacerbates health disparities

While CPR training requires a modest one-time investment of ₹1,500-4,000, the cost of not having this knowledge can run into lakhs of rupees, devastating families financially and creating a significant economic burden on society

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Knowledge of Cardiopulmonary Resuscitation (CPR) among bystanders therefore, could mean the difference between life and death | Photo Credit: Advanced Study Institute of Asia

Sudden Cardiac Arrest (SCA) is a common issue affecting more than 4 million people worldwide every day. In India, it is estimated that every day, thousands of people die due to cardiac arrest, often due to a lack of knowledge about what to do in such situations.

Around 20 to 40 out of every 1,00,000 people aged 35 and older experience Sudden Cardiac Arrest (SCA) deaths, which is approximately 7,00,000 (10.3%) deaths each year in India. SCA is not the same as a heart attack; it results from an electrical malfunction in the heart rather than a blockage in blood flow. Above 90% of sudden cardiac arrest cases occur at home and in public places. The majority of out-of-hospital cases occur in individuals aged between 51 to 60 years, with a predominance of males.

About 90% of SCA cases are out-of-hospital cardiac arrests (OHCA) and have an overwhelmingly low survival rate translating to a staggering 6,40,000 who die after these cardiac incidents. These numbers represent a public health crisis and a profound failure of our emergency response system and public health education and point to the importance of a national cardiac registry database.

#### Human and economic costs

The cost of this knowledge gap is both human and economic. While we meticulously calculate the financial burden of cardiac care—ranging from ₹50,000 to ₹2,00,000 for hospitalisation—we often overlook the preventable losses that occur in those critical minutes before medical help arrives. In India, the average ambulance response time is 10 to 20 minutes. Additionally, out of all the ambulances available, only a small fraction—ranging from just 1% to 12.5%—are equipped with Automated External Defibrillators (AEDs) and staffed by trained personnel in Basic Life Support (BLS).

Knowledge of Cardiopulmonary Resuscitation (CPR) among bystanders therefore, could mean the difference between life and death. Bystanders administering CPR significantly improves survival and discharge rates for out-of-hospital cardiac arrest, compared to when no one performs CPR.

# A simple solution

The irony lies in the simplicity of the solution: CPR training costs between ₹1,500 and ₹4,000, a sum that might save lives and prevent cardiac emergencies from flowing down the value chain to ruin families. On the other hand, the existing situation is unsettling: it shows a low range of 1.3% - 27.8% of bystanders administering CPR during emergencies, with many places reporting rates below 10%. This is far below the 62% target set by the American Heart Association. Addressing this significant gap between what could be a potential benefit and its actual implementation spells a public health challenge.

There are multifaceted barriers to widespread CPR adoption in India. Cultural myths and fears of legal liability often discourage willing lifesavers, even though the Good Samaritan Law protects those who come forward to help. Recent studies from Kerala found that although media exposure and BLS sessions improve CPR knowledge, confidence to perform the procedure remains low, prompting a need for practical, hands-on training.

Some measures give much-needed hope. The Indian Government has taken measures to raise CPR knowledge and training in schools and the workplace, while organisations like the Indian Resuscitation Council began efforts on Compression-Only Life Support in schools. The ultimate effect of The Compulsory Training of Cardiopulmonary Resuscitation (CPR) in Schools Bill, 2019, if implemented successfully, would be in training an entire generation of Indians to save lives.

However, these efforts, though laudable, are not enough to address the magnitude of the problem: The 90-minute CPR training based on Indian guidelines for doctors, covering theoretical knowledge and hands-on practice using mannequins, is a good start but results in a low CPR passing rate. More extensive sessions are needed to ensure all doctors and Emergency Medical Services (EMS) personnel achieve life-saving competency.

## **Mandatory CPR training**

India needs a comprehensive approach that places CPR literacy on a par with other public health campaigns. This should include mandatory regular CPR training in medical colleges with mannequins, and for first responders like traffic police. The incorporation of CPR training into workplace safety protocols can increase the pool of trained people exponentially.

The success of India's polio eradication campaign offers a template for what can be achieved through sustained public health initiatives. A similar nationwide campaign for CPR awareness could transform our response to cardiac emergencies. This would require government intervention and active participation from healthcare institutions, educational bodies, and corporate entities.

The cost of not knowing CPR is in lives lost, families devastated, and economic potential unrealised. As we boast of our advanced healthcare infrastructure and medical tourism industry, we cannot afford to miss this most fundamental gap in our capability to respond to emergencies. Every Indian deserves access to advanced cardiac care and the knowledge to be a potential lifesaver in those crucial minutes when professional help is on the way.

The time has come for a national awakening to the importance of CPR training. This is a matter of public health policy and a fundamental right to life-saving knowledge. The investment required is minimal compared to the potential returns in lives saved and the reduced burden on our healthcare system. In making this investment, we choose to save lives and build a more resilient and prepared society.

### The bottom line

The cost of not knowing CPR extends far beyond immediate medical expenses. While CPR training requires a modest one-time investment of ₹1,500-4,000, the cost of not having this knowledge can run into lakhs of rupees, devastating families financially and creating a significant economic burden on society. CPR can improve survival rates by three to four times, minimising the need for extensive medical care and reducing the overall economic burden. The return on investment for CPR training can be as high as 1:30, meaning every rupee invested in CPR training could save up to ₹30 in potential medical and social costs.

CPR is a simple and effective life-saving method. However, due to a lack of knowledge and hands-on training, it is still largely unknown and underutilized. Although it is undoubtedly stressful situation, the public health system does not function efficiently, making it essential to address these existing gaps.

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