

## Training of school children on Cardio Pulmonary Resuscitation (CPR) through the School Health Program

When a person's heart stops beating, they are in cardiac arrest. During cardiac arrest, the heart cannot pump blood to the rest of the body, including the brain and lungs. Death can happen in minutes without treatment.<sup>1</sup> In 2015, approximately 357,000 people experienced out-of-hospital cardiac arrest (OHCA) in the United States.<sup>2</sup> In India, for every one lakh person, there are 4500 cases of cardiac arrest, while the USA has only 60-110.<sup>3</sup>

Cardiopulmonary resuscitation (CPR) is an emergency procedure that can help save a person's life if their breathing or heart stops. CPR uses chest compressions to mimic how the heart pumps. These compressions help keep blood flowing throughout the body. Currently, about 9 in 10 people who have cardiac arrest outside the hospital die.<sup>2</sup> The location of Out of Hospital Cardiac Arrests (OHCA) most often occurs in homes/residences (73.4%), followed by public settings (16.3%), and nursing homes (10.3%).<sup>4</sup> Bystander CPR was associated with a significantly lower risk of brain damage or nursing home admission than that associated with no bystander resuscitation.<sup>5</sup> If it is performed in the first few minutes of cardiac arrest, CPR can double or triple a person's chance of survival.<sup>6</sup>

Taking a note of the high number of deaths of Indians in cases of sudden cardiac arrest, Sri Venkaiah Naidu, the Honorable Vice President of India, speaking as the chief guest of an event hosted by Swarna Bharat Trust in Vijayawada, in 2022, said that "every citizen of India should be trained in Cardio Pulmonary Resuscitation (CPR)".<sup>7</sup>

Although several efforts by individuals or institutions have been undertaken to teach CPR to volunteers, and other occupational groups, there has been no organized efforts towards dissemination of CPR knowledge among the population. The reason for the failure of spreading the widespread knowledge regarding CPR, has primarily been due to the non-identification of a target population that would be easy to reach and lack of resources to initiate a parallel program.

These difficulties can be overcome to a great extent by training high school children, studying in the 11<sup>th</sup> and 12<sup>th</sup> standard as the target population, so as to provide a huge number

of individuals with knowledge regarding CPR. The children will also be available for CPR, if need be, at their homes.

Several countries have demonstrated by providing CPR training to school children as young as under 12 years of age has a significant impact on survival rates of out of hospital cardiac arrest.<sup>8</sup> Training school children are easy, cost effective, and currently it is a worldwide initiative. Repeated training improves performance and retention but the format and frequency of repeated training is yet to be fully determined. In countries where CPR training is mandatory in schools, lay resuscitation occurs 60-75% of the time, compared to 20-40% in countries where school children do not learn CPR.<sup>9</sup>

The best way to reach and teach children and adolescents is through schools. as schools serve as an ideal platform to impart education on health issues, instituting in them healthy behaviours, forge linkages with services and reach parents and community through the students. Recognizing the importance of schools, the Government of India has launched "School Health Program" under **Ayushman Bharat to strengthen health promotion and disease prevention intervention**. It is a joint initiative of Ministry of Health and Family Welfare and Department of School Education & Literacy, Ministry of Human Resource & Development.<sup>10</sup>

Evidence shows that school health programme offers high cost-benefit ratio and schools can be used to efficiently implement health activities. Integration of CPR training into the ongoing *School Health and Wellness Program* of the government of India, through training of the school health team members, will minimize the use of additional resources.

The SHP already has a provision, for training both high school students and teachers, the basics of first aid so as to be able to respond to emergencies. Additional training of the children (and teachers) in CPR will help these students attend emergency in need.<sup>11</sup> Since our target population forms a substantial part of the general population, this training, over the years, will be able to generate a large number of individuals with the desired CPR skills.

*Abhijit Mukherjee*  
Associate Professor, Department of Community Medicine,  
Nil Ratan Sircar Medical College and Hospital, Kolkata,  
West Bengal.

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