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Japan – Community Training

Simulation Training for Teachers to Save the Students from Cardiac Arrest in Schools: Japan's Amagasaki Project

BRIEF BACKGROUND

The Utstein Osaka Project reported that 68% of cardiac arrest cases in schools presented with shockable rhythm. In these cases, school teachers were expected to provide CPR rapidly to increase the chance of survival. To accomplish successful resuscitation, a well-coordinated team approach is essential. However, standard CPR training designed did not focus on providing CPR in a team-based manner.

STEPS TAKEN

The Amagasaki General Medical Center, Amagasaki City Fire Department and Amagasaki City Board of Education developed a simulation training program focused on enhancing teachers' coordinated CPR when cardiac arrest occurs in schools.

The program was developed to give teachers not only a better understanding of the importance of a team-based approach to CPR, but also an opportunity to recognize improvements leading to effective protocol for medical emergencies in schools. The simulation training was 90-120 minutes, including a briefing and CPR demonstration by instructors, two cases of scenario-based simulation training and debriefing and feedback.

During the simulation training, the teacher was expected to check responsiveness and breathing, to initiate CPR and to ask those playing student roles to call for other teachers in the faculty room, retrieve an AED and to call 119 (emergency call in Japan). The teachers in the faculty room were not informed in advance of what was happening in the simulation room. Therefore, they had to obtain information on the victim, make the decision to call 119, and notify the parents. A dispatcher from the local FD answered telephone calls in the simulation room. One scenario ended when local EMTs arrived at the simulation room eight minutes after the dispatcher took the emergency call.

CHALLENGES

As of June 2019, eight schools finished the simulation training course in 14 months. One of the ongoing challenges is to finish the training course in all 60 Amagasaki public schools over the next few years.

RESULTS

Since the program launched in January 2018, simulation training was held in 10 schools. It showed the time interval from collapse to initiation of CPR, use of AED and the emergency call were longer than anticipated. The median time to initiate CPR was 60 seconds and delayed up to 180 seconds even in teacher-witnessed scenario cases. There were only three cases that the

first electrical shock was delivered within three minutes. The median time interval between collapse and emergency call was 210 seconds, from 77 seconds up to 453 seconds.

OUTLOOK

The goal of the project is to develop an effective protocol for medical emergencies in schools involving the three institutions by using data from the simulation training.

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