

CASE STUDY

A Tale of Two Cardiac Arrests

Same night, same city, same setting—less than two hours apart



Being prepared by having an AED Plus® on hand saved the life of one hockey player, and not being prepared may have cost the life of another.

First Situation

5:30 pm, April 5, 2011. A call is placed to Ottawa Paramedic Service. A 52-year-old man has collapsed due to sudden cardiac arrest while playing hockey at the Tom Brown Arena. City staff at the arena began performing CPR and shocked Claude Senecal's heart back to life with the AED Plus that was available at the recreational center.

Second Situation

6:50 pm, April 5, 2011. Another call is placed to Ottawa Paramedic Service. A man in his 30s has collapsed from cardiac arrest while playing ball hockey at a school in the west end of the city. Bystanders began performing CPR; however, no AED was available. The man did not survive.

First Rescue

Claude collapsed on the bench while taking a break off of the ice. "There was a commotion down at the bench and we skated over," said Tim McLaughlin, 49, who was playing against Senecal. "He was lying between the bench and the boards face down." Staff members at

the Tom Brown Arena had been trained in CPR and the use of AEDs by the Ottawa Paramedic Service. City staff at the arena began performing CPR and yelled to Brian Neilsen, another staff member, to grab the AED Plus. They were able to shock Claude's heart back to life while waiting for the paramedics to arrive. Before leaving the scene, Claude was conscious and talking to paramedics.

Second Rescue

After his collapse, bystanders began performing CPR in an attempt to resuscitate the victim. Paramedics later arrived on scene and continued the resuscitation efforts, to no avail. It was noted early on in the rescue that no AED was available. "Who knows for sure, but a 38-year-old man is usually a good candidate for early defibrillation," said paramedic Supt. Paul Morneau.

The Aftermath

Although Claude Senecal did not have an easy recovery—he had the opportunity to have a recovery. He had the opportunity to return to his family and possibly continue playing hockey.

The victim from the second incident that night had a different fate. As friends and family mourned his passing, they could not help but wonder what could have been if an AED was available at the school where he was playing hockey that night—especially knowing an AED had saved Claude just hours before. The silver lining is that the victim's wife has become an advocate for the use of AEDs and has raised more than \$12,000 for the purchase of automated external defibrillators.

“The science is quite clear: The chance of survival is only as strong as the weakest link in the Chain of Survival,”

- Supt. Paul Morneau, Ottawa Paramedic Service

The AED Plus provides voice and visual feedback on the quality of chest compressions, such as “Push Harder” and “Good Compressions.” The adaptive metronome helps the rescuer maintain the correct rate.



The Lesson



AEDs should not be optional. Ottawa is a “Heart Safe” city, with over 800 AEDs in place in various locations. But if this city, considered one of the most prepared to treat victims of sudden cardiac arrest in North America can still be faced with a story like the second one, it's clear that more effort is required to ensure that AEDs are available in all public places. We may never know for sure if an AED would have saved the 38-year-old man's life, but we do know it saved Claude Senecal and could have given that younger victim a fighting chance at survival.

Early defibrillation and CPR are key links in the American Heart Association's Chain of Survival. “The science is quite clear: The chance of survival is only as strong as the weakest link in the Chain of Survival,” said Supt. Morneau. Since that April day in 2011, Ottawa has seen over 12 saves with the AED Plus, including four in one week. Heart Safe cities such as Ottawa should be celebrated for their attention to cardiac safety. Spreading the word about the importance of the use of AEDs is key to ensuring that we have more communities like Ottawa—and potentially improving the “save” statistics there and elsewhere.

ZOLL Medical Corporation develops and markets medical devices and software solutions that help advance emergency care and save lives, while increasing clinical and operational efficiencies. With products for defibrillation and monitoring, circulation and CPR feedback, data management, fluid resuscitation, and therapeutic temperature management, ZOLL provides a comprehensive set of technologies that help clinicians, EMS and fire professionals, and lay rescuers treat victims needing resuscitation and critical care.

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