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St. John Ambulance Western Australia – Culture of Excellence

Improving OHCA Outcomes in Western Australia via Whole System Buy-in

BRIEF BACKGROUND

St. John Ambulance Western Australia (SJAWA) began OHCA improvement strategies during 2016-2017, adopting the Resuscitation Academy's Ten Steps for Improving Survival from Sudden Cardiac Arrest as a template for action. As of 2018, it has achieved remarkable survival results, with two select areas aligned with steps two and six — beginning telephone CPR and an AED program for first responders — playing a direct role in this success.

STEPS TAKEN

SJAWA sought to understand how 000 emergency call-takers were performing in relation to recognizing cardiac arrest and instructing CPR. They audited OHCA emergency calls, and a quality assurance officer was tasked to listen and subjectively timestamp various key events. The times of interest were:

- Time from call answer to evidence emerging that the call-taker recognized cardiac arrest
- Time from call answer to CPR being offered or instructed

The community first responder system already had processes in place for establishing, mapping and activating community-based AEDs. SJAWA sought to increase AED numbers, particularly 24/7 availability, through marketing, public reporting locations of unregistered devices, as well as a staff AED program. They pursued lottery grants and established a project for a regional city that had no 24/7 AEDs. The team set themselves a 10,000 defibrillator target.

CHALLENGES

Sustaining the increase in STHD numbers presented some ongoing challenges. SJAWA acknowledged the need to sustain quality improvement initiatives and innovate constantly. However, auditing each cardiac call was time-intensive and unsustainable. This method was also subjective, relying on the judgement of the reviewer. However, it demonstrated the value in measuring markers of interest.

Achieving the 10,000-defibrillator target has proven difficult. As SJAWA strives to maintain program momentum, funding initiatives and community motivation strategies need to be constantly refreshed to maintain interest and support.

RESULTS

Overall, SJAWA achieved a 50.4% increase in survival to hospital discharge in 2018 over 2017. In 2018, there were 173 survivors from 1,146 commenced cases (all etiologies), compared to 115 in 2017 from 1182 commenced cases. Utstein performance similarly rose to 37.9% (n=81/214) in 2018 from 29.6% (n=47/159) in 2017.

From January-June 2018, the median time where the need for CPR was recognized was 43.8 seconds, compared to 47.8 seconds for July-December 2017. This improvement had a positive effect on dispatch time. CPR was offered or instructed in a median time of 70 seconds in 2018. It was 97 seconds from July-December 2017, an improvement of 27 seconds.

Community AEDs totaled 2,834 in December 2018, of which 422 were publicly available 24/7. In 2017, there were 1,834 and 206 public AEDs, respectively. More bystander AED shocks were delivered in 2018. Of the 173 survivors in 2018, 60 patients received a shock, of which 40 survived STHD (67%), compared to 41 patients in 2017, of which 17 survived (41%).

OUTLOOK

SJAWA aims to conduct further quality improvement within the dispatch environment, and enhance infrastructure to support location verification to help shorten paramedic dispatch times. The agency will continue to promote lottery grant funding and encourage communities to apply for it. Their efforts will also focus on a reiteration of the importance of AEDs in community first aid training and underpin it with CPR recognition factors.

CONTACT

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