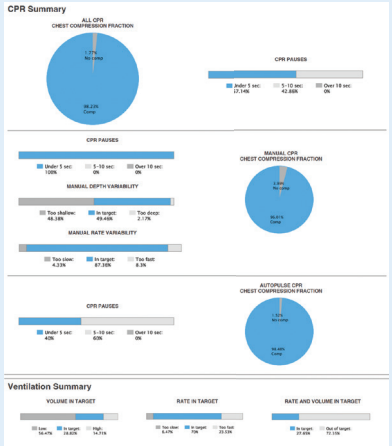
CUSTOMER USE CASE | RescueNet CaseReview

Improving Clinical Handover: Lethbridge Fire and Emergency Services

At Lethbridge Fire and Emergency Services (LFES) in the province of Alberta, Canada, Advanced and Primary Care Paramedics provide emergency medical services to a population of just over 100,000 residents. Already a high-functioning fire/EMS service, LFES wanted to do more to help their team members improve the care they deliver. In April 2021, Lethbridge adopted ZOLL® RescueNet® CaseReview software to review post-case data collected on ZOLL X Series® Advanced monitors.

With expanded access to valuable case data for QA/QI training, EMS Operations Officer Mike Humphrey and Medical Training Officer Adam Perrett expected an improved understanding of cases, timelines, protocol effectiveness, and even team member performance. They didn't realize how impactful that data would be.



CPR Summary View

Using the Vital Sign Trends feature in RescueNet CaseReview, LFES identified deficiencies in clinical handover of post-ROSC patients and worked with local hospital partners to develop choreography that ensures continuity of critical interventions.

Strengthening the chain of survival

LFES utilizes all of the features of RescueNet CaseReview — event playbacks, vital sign trends, CPR summaries, and more — to get a bird's-eye view of team performance and patient care. Mike and Adam noticed that post-ROSC patients were responding well to newly implemented protocols that direct paramedics to deliver vasopressors concurrently with fluids during out-of-hospital care. However, some were still re-arresting at clinical handover to the emergency department. Further investigation identified a problem in the continuum of care.

In Alberta, medics notify a hospital that a patient is en route but don't provide a full run down of patient vitals. Paramedics continue their interventions, prepare the patient for handover, and provide hospital staff with a patient report upon arrival at the ED. Understandably, it can take a few moments for hospital staff to get resources in place to provide appropriate lifesaving care during handover.

The data showed a lack of clear process during that period delayed clinical interventions—putting patients at increased risk.

Combined Vital Trend Overview

Making the case for change

Mike and Adam used the snippet tool and the Vital Sign Trends feature in RescueNet CaseReview to present data that illustrated changes in patient physiology during handover.

They approached their hospital partners, who needed little convincing. "When you have data, you can predict what's going to happen and approach professionals with it. RescueNet CaseReview does a really good job with that," Mike explains.

Together LFES and the local hospital developed a choreography that outlines how therapies should continue—and by whom—until the hospital staff has the proper resources in place for complete clinical handover. Simulation training and posters were rolled out to both paramedics and hospital ED staff. The choreography includes the following:

1. LFES will maintain care of the patient until verbal report handover is complete. Hospital ED staff will pause and listen to patient report before patient is transferred or connected to hospital equipment. LFES will continue to monitor vital signs and administer appropriate therapies until clinical handover is complete.

2. When handover is complete and respiratory therapy has been briefed on the ventilation strategy, the patient will be transferred to the hospital stretcher, where the ED staff will begin to switch equipment unless the patient is receiving life-sustaining treatment with the ZOLL X Series Advanced monitor (i.e., transcutaneous pacing).

3. A bag of premixed norepinephrine will be preloaded into an IV pump prior to EMS arrival, but the patient will only be transitioned to the higher concentration hospital medication once orders are received by a physician after clinical transfer of care.

With these changes to clinical handover, LFES has already seen increased safety for post-ROSC patients.

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>
> — Mike Humphrey, EMS Operations Officer, Lethbridge Fire and Emergency Services

A window into skills and clinical thinking

In a relatively short time, Mike and Adam and the team at LFES have used data from RescueNet CaseReview to improve protocols and processes in potentially life-changing ways. Within 24 hours of an event, they review high-level metrics, such as chest compression fraction (CCF), depth, and rate, from the CPR Summary report. They immediately turn to Vital Sign Trends, where they can review the patient's trending vitals and crew members' interventions across the timeline. "It's like RescueNet CaseReview lets you actually look into the mind of the provider and see if they have mastery of the pathology," Mike explains.

LFES team members and local hospital partners practicing new clinical handover choreography

In one-on-one meetings, Mike and Adam use the RescueNet CaseReview Playback feature to walk team members through cases. They discuss interventions and examine reasons for treatment choices, always in an open and non-punitive manner. They use data to answer questions, reinforce good treatment choices, and even assure members that, despite their best efforts, they may experience a detrimental patient outcome.

"'Team members ask, 'How well did I perform? How did I do? Could I have done better?' The genius of RescueNet CaseReview with Vital Sign Trends the way we use it here is I can sit down with you, the practitioner, and say, 'Hey, look at how great you performed. Nothing, nothing you did was detrimental to that patient. You performed the very best you could,'" explains Adam.

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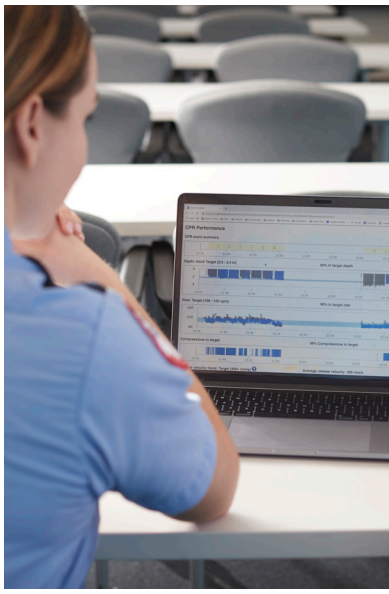
>
> — Mike Humphrey

To learn how your team can use RescueNet CaseReview to improve care, contact your local sales development team.



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