FROM SIX DAYS TO THREE MINUTES:

HOW CHILDREN'S HOSPITAL COLORADO AUTOMATED DATA INTEROPERABILITY TO IMPROVE PEDIATRIC CARE WHILE SAVING $40,000 A YEAR

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> The ability to open a chart and see EMS documentation in real time is a game changer for our Emergency Department management. We can see the time of interventions, the patient's response, and the details in the care. All this paints an important picture for the patient prior to our evaluation and is a key component of functioning in a system of healthcare.
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> *– Kathleen Adelgais, MD, MPH, FAAP, FAEMS*
> *Emergency Medicine – Pediatrics*
> *Director Colorado EMS for Children Program*
> *Children's Hospital Colorado*

Children's Hospital Colorado is known for adopting innovative technologies to meaningfully impact pediatric patient outcomes. Consistent with their commitment to patient-centered innovation, Children's Hospital Colorado knew they had ongoing challenges in bridging the gap between their prehospital and in-hospital care.

For years prior, they relied on manual workflows to match EMS clinical data to hospital medical records. Through a tedious process involving phone calls, faxes, and emails, the hospital received the EMS report three to five business days after the patient's arrival. The report would then be manually entered into the hospital's medical record, which would take another two to three days. This process proved excessively administrative and time-consuming, affecting their ability to efficiently collect prehospital clinical data.

This internal friction ultimately placed a time burden on their trauma teams, limited access to next-level data, opened vulnerabilities in reporting accuracy, and exposed the institution and providers to undue risk.

Children's Hospital Colorado made progress against these problems over the years, but only with the solutions at their disposal. While each move was a step in the right direction, it inadvertently introduced more complexity to their existing system, slowing down the transfer of their data more and more.

For these reasons, the team knew they needed to make a change to keep up with the speed of patient care evolution and ensure immediate data interoperability.

MODERNIZING THEIR PROCESSES

Children's Hospital Colorado decided to automate their data process between EMS and the hospital using a system with built-in interoperable processes. This incredible shift in efficiency was a game changer, allowing clinical care teams access to EMS records while the patient is receiving care in the emergency department, which helped facilitate more evidence-based decision-making through a consolidated, near-time view of records. This ultimately led to improved patient outcomes, cross-team collaboration, and proactive performance.

By modernizing their process with a data interoperable solution, Children's Hospital Colorado is now able to:

Raise the bar on care

They now easily exceed regulatory requirements for capturing and integrating EMS and hospital data – with little to no manual burden on their teams.

Get a 360-degree view

Automatically receive insights into interventions, responses, and prehospital reports at patient handoff, reducing potential harm and ensuring overall better care.

Reduce the burden of manual processes

Capture 95% of EMS records from the scene of the incident automatically (versus the previous 70% of records manually captured).

Get patient data almost instantly

EMS patient data is available within three minutes following completion (compared to the average six-day wait previously).

Enhance their relationship with EMS partners

Real-time automated loop closures (with hospital outcome data) for 95% of EMS patient transports.

Spend more time on patient-centered care

Manual staff effort to collect EMS run sheets went from six days to just a few minutes – amounting to an incredible $40,000 in annual staff productive hours for the health system. Those productive hours are now used to focus on patient-centered care.

WHAT LED THEM TO CHOOSE ESO?

Children's Hospital Colorado decided to use ESO Health Data Exchange (HDE) and the suite of ESO products to unlock these efficiencies and improve patient care. These were the criterion the team was looking for when selecting a partner:

Security

ESO contracts with Microsoft Azure to provide the secure Tier 1 data storage that Children's Hospital Colorado could trust.

Connected Data

ESO has the ability to connect the patient's journey across the continuum of care.

Efficiency

ESO was able to help them automate processes so their team could focus on providing the best care possible.

Full Accreditation

Working with ESO ensures Children's Hospital Colorado accreditation and verification requirements are met for the Joint Commission, State of Colorado and the American College of Surgeons.

Growth Mindset

Children's Hospital Colorado wanted a provider that matched their culture of proactive performance improvement and they found that in ESO.

ESO Health Data Exchange has been helpful in bridging the gap between prehospital provider follow-up and in-hospital care. This process opens the door for bi-directional feedback and collaboration while enhancing these essential relationships.

- Lana Martin, MHL, BSN, RN, TCRN, CPEN, CEN, CPSTI Director of Trauma Programs Children's Hospital Colorado – Enterprise

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WHAT'S NEXT?

Continuing their tradition of clinical technology adoption and innovation, Children's Hospital Colorado is embarking on three additional projects:

(1) Children's Hospital Colorado is implementing EMPI, which will maximize efficiency by automatically matching patient records. EMS teams will no longer need to capture the hospital's patient encounter number in their patient care record, which will ensure records are matched even faster with less effort. EMPI has been used to match over 50 million records in various healthcare settings over the past decade.

(2) They've joined the ESO Patient Registry beta program – furthering their data interoperability to ensure trauma clinicians can gather, absorb, and act on clinical data more efficiently. This will give meaningful access to valuable insights and knowledge that can impact pediatric care in real time.

(3) Children's Hospital Colorado is piloting ESO Activities to track injury prevention, community education and other outreach areas, helping them take a more holistic approach to improving community health and safety – giving a global view of injury surveillance.

About ESO

ESO (ESO Solutions, Inc.) is dedicated to improving community health and safety through the power of data. Since its founding in 2004, the company continues to pioneer innovative, user-friendly software to meet the changing needs of today's EMS agencies, fire departments, hospitals, and state EMS offices. ESO currently serves thousands of customers throughout North America with a broad software portfolio, including the industry-leading ESO Electronic Health Record (EHR), the next generation ePCR; ESO Health Data Exchange (HDE), the first-of-its-kind healthcare interoperability platform; ESO Fire RMS, the modern fire Record Management System; ESO Patient Registry (trauma, burn, and stroke registry software); and ESO State Repository. ESO is headquartered in Austin, Texas. For more information, visit www.eso.com.

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