2021 ESO EMS INDEX:

MID-YEAR UPDATE

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OVERVIEW

At the beginning of the year, we released our **2021 ESO EMS Index.** We looked at data across six metrics from January 1, 2020 – December 31, 2020:

STROKE ASSESSMENT PERFORMANCE

KETAMINE ADMINISTRATION WITH WEIGHT RECORDED

NON-TRANSPORT DISPOSITIONS

TRANSPORTS WITHOUT LIGHTS AND SIREN

PERCENT OF PATIENTS WITH SUSPECTED OVERDOSE

COVID-19 AND INFLUENZA-LIKE ILLNESS IMPRESSIONS

INTENT

For the Mid-Year Index, we look at the same six metrics for the first half of 2021 (January 1, 2021 – June 30, 2021) to see how they compare to the 2020 numbers. We've also added one more metric—bystander CPR.

Why do we produce the Index? The intent is threefold:

- **TO SHARE UPDATED, NATIONAL, AGGREGATE DATA ACROSS SEVEN METRICS THAT ARE INFORMATIVE AND DIRECTIONAL.**
- **TO SHOWCASE THE POWER OF DATA AND ANALYTICS AS A MEANS TO PROVIDE ACTIONABLE INSIGHTS.**
- **TO HELP EMS LEADERS ACROSS THE COUNTRY ANSWER THE FOLLOWING QUESTIONS, AMONG OTHERS:**

Is my organization aligned with other organizations when it comes to responding to certain events, such as stroke identification and assessment?

Are we above or below the national average when it comes to overdose events?

How do we compare to other agencies when it comes to documentation surrounding ketamine administration?

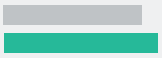
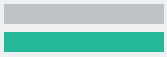
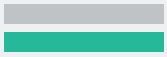
We continue to hear from many of you about the value of the Index and how you are using the report to drive internal process and procedure change, including when and how you perform stroke assessment, how you document ketamine administration, how you conduct and update training, and how you are preparing for this next round of COVID-19. We love the feedback. Please provide us your thoughts and ideas so we can continue to refine and improve the Index each year.

For this mid-year update, the data are based on more than 4.6 million 911 records from January 1, 2021 – June 30, 2021.

MID-YEAR UPDATE

The table below shows the comparison between the **Index** released earlier this year based on 2020 numbers and the mid-year update based on numbers from the first half of 2021. Overall, we've seen performance holding steady or even a slight improvement across the board. However, one metric that requires ongoing attention and conversation is overdose rate. In 2020, patients with suspected overdose were at 2.7% (the highest we've seen since creating the Index). The first half of 2021 sees that number jump even higher to 2.8%. This is greater than the percentage of calls for COVID-19/ILI in the second quarter of this year.

CHART 1

METRIC	2020 / 2021 MID-YEAR UPDATE	NARRATIVE
DOCUMENTED STROKE ASSESSMENT COMPLETION RATE	 72% 80%	We continue to see a positive upward trend around stroke assessment and documentation, rising eight percentage points from 2020 through the middle of 2021.
KETAMINE ADMINISTRATION WITH WEIGHT RECORDED	 83% 83%	Ketamine continues to be a hot-button issue. It's encouraging to see patient weight is being recorded 80%+ of the time, but it would be ideal to see this number higher.
NON-TRANSPORT DISPOSITIONS	 22% 22%	This number is remaining steady from 2020 through the first half of 2021. We don't anticipate a spike in non-transports going forward.
TRANSPORT WITHOUT LIGHTS AND SIREN	 83% 83%	The National Highway Traffic Safety Administration (NHTSA) have suggested a target of less than 5% lights and siren use during transport for a safer experience for patients, clinicians and communities.
OVERDOSE RATE	2.7% 2.8%	Overdoses continue to trend upward, highlighting the need for treatment resources for opioid use disorder. **Identifying and documenting** opioid encounters is an essential element to combat the epidemic.
COVID-19 AND ILI IMPRESSIONS	 6.8% 6.9%	We've seen COVID-19/ILI impressions drop from 6.9% in January to 2.0% in June (the lowest in the last 17 months). However, with new variants of COVID-19, we are currently in a surge.
BYSTANDER CPR	 N/A 46%	It takes a system to save a life. We look specifically at the number of cardiac arrest encounters and how often CPR was initiated prior to EMS arrival.

SEVEN BEST PRACTICES TO IMPROVE OUTCOMES

STROKE

A complete and appropriately documented stroke assessment has never been more important. Given extended treatment windows and the introduction of emergent thrombectomy, the EMS evaluation can literally be the difference between a successful or unsuccessful patient outcome.

OVERDOSE

Monitor incidents involving suspected overdose in your community and anticipate trends. Look for geographic hotspots in your community (based on data from your ePCR) to create preventative and harm reduction programs in areas with particularly dense activity.

KETAMINE

Ensure accurate weight estimates are recorded to guide dosing and serve as supportive documentation after the EMS encounter.

COVID-19/ILI

Use EMS data to help inform local surveillance as part of an overall public health effort.

NON-TRANSPORT

Use objective criteria to risk stratify patients when making transport/ non-transport decisions.

BYSTANDER CPR

Make sure to document any CPR activity that occurred before you arrived at the scene. Conduct CPR community outreach events in areas with low bystander CPR rates.

TRANSPORT

Create policies and guidelines around judicious L&S use during response and patient transport.

METHODOLOGY

The dataset for the ESO EMS Index is real-world data from the ESO Data Collaborative, comprised of more than 2,000 agencies across the United States. The data for the mid-year update are based on 4.6 million anonymized 911 patient encounters between January 1, 2021 and June 30, 2021.

4.6 MILLION RECORDS

LIMITATIONS

This Index is retrospective and looks at aggregate data from the first half of 2021. There are no universal rules around these measures. The purpose of the Index is to be informative and directional, but it is not intended to be a scientific study. Nor is it intended to be comprehensive in nature. We hope it serves as a body of literature that adds to the discussion and conversation around best practices for each of the measures identified in this Index to improve positive patient outcomes.

WHAT'S NEXT?

So, where do we go from here? Similar to what we recommend earlier this year, organizations should continue to use this information to understand why metrics are important and which metrics and drivers have the biggest effect on your organization and the patients you serve. With the rich data from the Index as a foundation, you can run your own analysis to serve as the basis for other modeling and outcomes.

The metrics shown in this study are by no means exhaustive. Every organization is unique and has its own strengths, structure, and goals. Because of these attributes, results achieved by one organization may not be attainable by another for a variety of reasons. However, these metrics should provide a foundation to compare your measurements and outcomes to what we are seeing nationally.

About the ESO Data Collaborative

ESO's mission is to improve community health and safety through the power of data. One of the ways that ESO puts its mission into practice is through the ESO Data Collaborative.

The ESO Data Collaborative is comprised of data from more than 2,000 EMS agencies, fire departments and hospitals across the United States that have voluntarily agreed to allow use of their de-identified records for research and benchmarking purposes. It represents one of the largest prehospital databases in the world. ESO's world-class research team constantly analyzes this data to provide insights on the most up-to-date trends, research, and studies to help the industry adapt and advance.

THE ESO DATA COLLABORATIVE RESEARCH DATASET MAY BE REQUESTED FOR USE IN RESEARCH PAPERS OR PRESENTATIONS AT NO COST. FOR MORE INFORMATION ABOUT REQUESTING THE DATASET, OR TO JOIN THE ESO DATA COLLABORATIVE, VISIT:

WWW.ESO.COM/DATA-AND-RESEARCH

ABOUT US

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**.