

2024 Measures Report

Enhancing Airway Management One
Measure at a Time



Prepared by
NEMSQA Measure Analysis
& Research Committee



Table Of Contents

Measure Focus: Airway

Quality Metrics

Measure Details & Performance

Airway-01

Airway-05

Airway-20

Respiratory-01

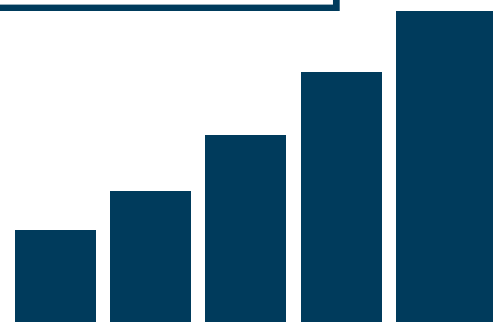
Respiratory-02

Airway-24

Meet Our Team

Acknowledgements

Contact Us





About NEMSQA

The National EMS Quality Alliance (NEMSQA) is the nation's leader in the development and endorsement of evidence-based quality measures for Emergency Medical Services (EMS). Formed in 2019, NEMSQA is an independent non-profit organization comprised of stakeholders from national EMS organizations, federal agencies, EMS system leaders and providers, EMS quality improvement and data experts as well as those who support prehospital care with the goal to improve EMS systems of care, patient outcomes, provider safety and well-being on a national level.



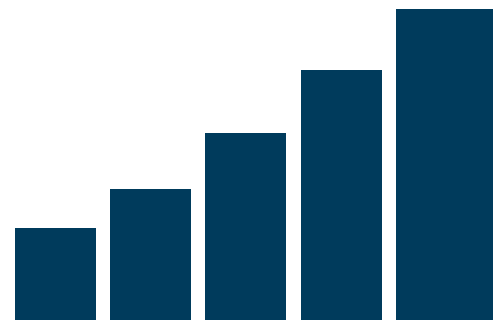
EQuIP Project

NEMSQA is not satisfied with the state of airway management safety in EMS. As you will see, the data clearly shows that we can do much better across our industry! Partnering with experts and EMS agencies around the country, NEMSQA is leading the second national EMS Quality Improvement Partnership (EQuIP), the [Airway Management Collaborative](#) to put the new NEMSQA airway measures to work.

This project is the sequel to the [Lights and Siren Collaborative](#) and will utilize the Institute for Healthcare Improvement's Breakthrough Series collaborative model.

The goal of the project is to support national improvement in the safety and effectiveness of invasive airway management by focusing on two goals:

- Reducing the adverse events such as peri-intubation hypoxia and hypotension
- Improving the use of waveform capnography to confirm and monitor all invasive airways





Measure Focus 2024

Airway

Every EMS clinician, medical director, researcher and anyone interested in patient safety in the prehospital setting, understands the challenges of managing the airway of a patient who is in respiratory distress or failure, cardiac arrest or other critical clinical situation. The field has explored the question of WHAT to use again and again, but we still don't have answers about WHAT TOOL is best for patients. What we do know is HOW patients do well when we manage their airway expertly ventilating, oxygenating and overall resuscitating to ensure that the vital function of breathing is maintained.

The National EMS Quality Alliance has drawn on all of the available evidence, the best practice guidelines and worked with experts across the prehospital emergency medicine field to crystallize a set of quality measures that reflect a simple, yet profound attention to the aspects of airway management that contribute to a positive outcome for patients.

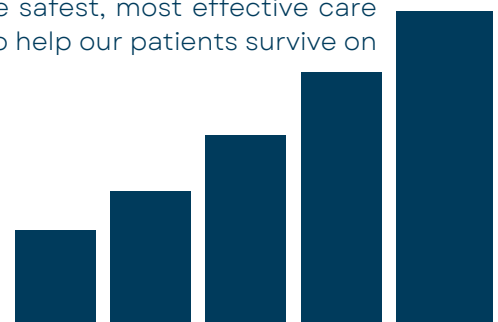
Our mission is to create measures that enable EMS to understand what **good** looks like, measure it and aim towards a goal that is worthy of our roles and responsibilities.

This annual report aims to be a status update on how EMS performs on airway management quality measures using the existing national data set (NEMSIS). We have a healthy understanding of this data, the value it provides and the challenges that we know exist in the documentation of what happens to patients during their time with EMS.

Some may be shocked by the state of data missingness or the lack of documentation or even what may first appear to be poor performance across the country, however, this report is a key step in improvement by identifying our baseline, understanding our data and taking real steps to improve it so that we can truly know the state of affairs for airway management in EMS. We owe it to our patients to get this right. We hope that this report will inspire local and national efforts to address these challenges. We know we need airway education focused on specific, achievable measures, better tools to document airway management, better connectivity to ensure our tools reflect the experience and a new way of thinking about the value that EMS provides.

Welcome to the NEMSQA annual report on Airway Measures. It starts by focusing on what matters to patients and building a system that enables all of us to provide the safest, most effective care and truly know that we have done the best possible data-driven work to help our patients survive on what may be the worst day of their life.

-Dr. Michael Redlener
NEMSQA President



Quality Metrics

EMS Agenda 2050 envisioned a future in which EMS systems are people-centered, prioritizing data-driven, evidence-based, and safe approaches to clinical care to ensure the best possible outcomes for individuals and communities. Achieving this vision will require a stepwise approach that accounts for system complexity while honestly measuring progress toward the goal. In short, it requires answering the question: **Are we doing a good job?** Quality measures are standardized metrics enabling EMS systems to address this very question.

This measures report focuses on the NEMSQA airway measures and helps define current performance in airway management. It can be viewed as a starting point in the journey towards excellence in one of the most important aspects of prehospital care. The NEMSQA airway measures span fundamental aspects of patient care and safety – respiratory assessment, administration of oxygen for hypoxia, airway confirmation with the gold standard of capnography – to more complex aspects of care such as prevention of peri-intubation hypoxia and hypotension. While the airway measures address different aspects of airway management, they share one thing in common: they all measure aspects of safe and effective patient-centered care.

This national snapshot was derived by retrospective analysis of the NEMSIS 2023 dataset. While some aspects of performance may be due to documentation, it would be ill-advised to attribute low performance to documentation alone. As you read through the report, ask yourself the following questions: What would I consider a good job? How far away are we? Why might that be? Where do we go from here? It is these questions that will motivate the EMS community to begin examining local performance, identify high-performing agencies, and share innovative practices – moving towards the vision of a people-centered EMS system that optimizes patients and outcomes.

Overall Measure Performance



The world of EMS care is a complex environment that can't always be captured by the specific data that can't always be measured - some measure goals should be 100% (Airway-05), but others, need a nuanced approach to meet optimal care for patients. Please keep reading!

National Benchmarking



View benchmarking as a starting point in the journey towards excellence in one of the most important aspects of prehospital care.

Identify Factors Associated with High Performance



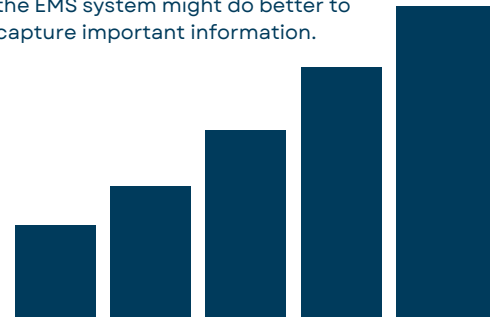
Understanding what makes an agency a high-performer and sharing those insights can help other agencies improve. For example: addition of prepacked supplies improved delivery of appropriate respiratory care.

Data Quality



The authors of this report, and anyone who understands EMS data, know that there is a significant amount of data "missingness" for some measures. This is addressed throughout the report - while it limits a full understanding of quality of care, it offers insight into where the EMS system might do better to capture important information.

-Dr. Maia Dorsett
NEMSQA Measure Analysis & Research
Committee Chair

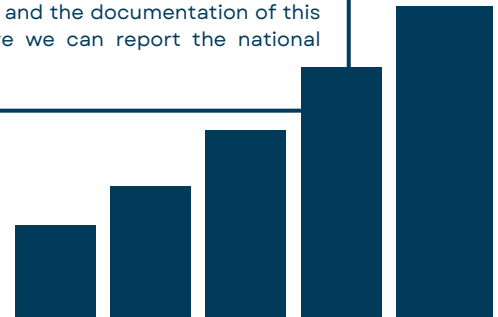


Measure Details

Measure Name	Description
Airway-01	Percentage of endotracheal intubation attempts performed during an EMS response originating from a 911 request that are successful on first attempt with neither hypotension nor hypoxia documented during the peri-intubation period.
Airway-05	Percentage of endotracheal intubation attempts performed during an EMS response originating from a 911 request in which adequate patient oxygen levels were achieved prior to intubation procedure.
Airway-20 ¹	Percentage of invasive airway procedures on EMS responses originating from a 911 request for patients who receive a successful invasive airway placement on first attempt.
Respiratory-01	Percentage of EMS responses originating from a 911 request for patients with primary or secondary impression of respiratory distress who had a respiratory assessment.
Respiratory-02	Percentage of EMS responses originating from a 911 request for patients with hypoxia during which oxygen is administered.
Airway-24 ¹	Percentage of EMS responses originating from a 911 request for patients with hypoxia and a provider impression of respiratory distress for whom SPO2 improves to greater than 90%.

¹Measure from National Association of EMS State Officials (NASEMSO) [Prehospital Airway Evidence-Based Guideline Project](#)

Note: **Airway-18** is a key measure for understanding when ventilation is successful in patients with invasive airway management. The evidence-based confirmation process with waveform capnography should be used with every airway. Because we are using the NEMSIS National Research Data Set, the required elements for this measure are NOT available at this time, but agencies should be able to evaluate the use of waveform capnography and the documentation of this key safety intervention at the local or state level. Standby for future reports where we can report the national performance on this measure.



Measure Performance

	Overall	Adult	Pediatric
Airway-01	21.4%	21.2%	28.9%
Airway-05	25.5%	25.1%	36.1%
Airway-20' All	75.5%	75.8%	66.3%
Airway-20' ET	69.9%	70.2%	60.4%
Airway-20' SGA	88.6%	88.7%	84.7%
Respiratory-01	93.6%	93.9%	89.2%
Respiratory-02	46.8%	47.1%	36.4%
Airway-24 ¹	77.7%	77.6%	81.8%



[NEMSQA Measure
Technical Documents](#)



Airway-01

FPS without Hypotension or Hypoxia

Endotracheal intubation (ETI) is a commonly performed skill in the prehospital environment, however successful performance is lower than desired.¹ Additionally, adverse events such as hypoxia, hypotension, and cardiac arrest during intubation are not uncommon.^{2,3} Failure to achieve intubation first pass success (FPS) is associated with lower survival and increased adverse events. Hypoxia and hypotension are associated with cardiac arrest and, among patients with traumatic brain injury, increased mortality. **The Airway-01 measure is the best available measure of the key components of safe intubation: first pass placement success with neither hypotension nor hypoxia.**^{4,5}

Airway-01 is a **composite measure**— meaning it consists of several elements that all need to be achieved for successful achievement.

- First ETI attempt was successful
- At least one systolic blood pressure (SBP) documented both before and after ETI attempt during the peri-intubation period, defined as the 3 minutes before and 5 minutes after ETI attempt
- At least one SpO2 documented both before and after ETI attempt during the peri-intubation period
- No SBP values are less than 90 (or age-adjusted SBP for pediatrics)
- No SpO2 values are less than 90%

This measure is calculated among patients originating from a 9-1-1 response who undergo at least one ETI attempt (denominator). Patients in cardiac arrest are excluded from this measure as are attempts made prior to arrival.

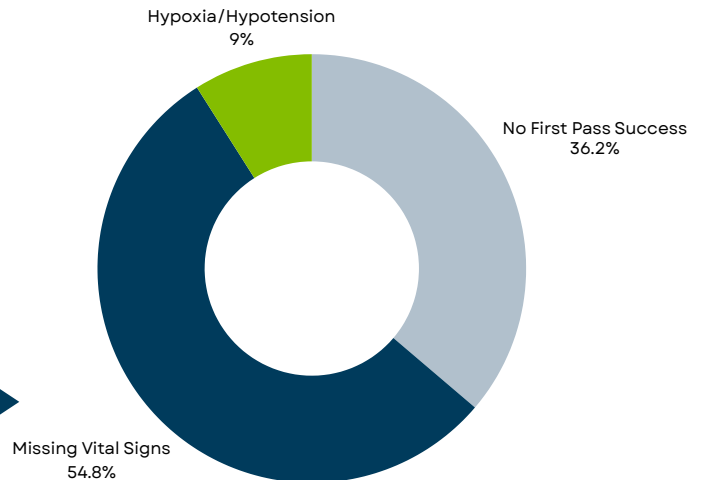
	Numerator	Denominator	Performance
Overall	10,903	50,879	21.4%
Adults	10,398	49,129	21.2%
Pediatrics	505	1,750	28.9%

Airway-01

FPS without Hypotension or Hypoxia

In this report, we see that performance on this measure is low. The most common reasons for failure were missing vital signs (SBP/SpO2) (54.8%), unsuccessful ETI on first attempt (36.2%), followed by hypoxia/hypotension (9.0%). There is tremendous opportunity to improve airway management through looking at Airway-01.

Reason for Measure Failure



Expert Recommendations for Improvement

This data tells us our biggest improvement gain for the least amount of work is to **improve the capture of vital signs**. Several suggestions for this are to assure the pulse oximetry probe is firmly attached to a finger on the opposite arm from the blood pressure (BP) cuff (pulse oximetry often loses signal during cuff inflation). Additionally, when importing vital signs into charts from monitors, most monitors only record pulse oximetry readings when a BP is measured, or an event marker is recorded. To improve this capture rate, have policies requiring monitors take BPs every two minutes. Considering the peri-intubation period is very dynamic, this is clinically appropriate.

To avoid hypoxia or hypotension, assure the patient is properly prepared before proceeding with intubation. In general, patients should have a full three minutes of continuous SpO2 $\geq 94\%$ prior to intubation and SBP of at least 100, if not higher, to assure proper preparation. Consider a goal-directed protocol that mandates achieving these goals before proceeding to maximize both patient safety and performance on this measure.

Intubation FPS is higher with video laryngoscopy than with direct.* Consider replacing direct laryngoscopy with video and mandating its use. For device failure, use a rescue SGA.

Finally, the most important step when improving anything is to get started. Do not let perfection be the enemy of better. Your data will be dirty, and you'll immediately find many problems with your data. Don't succumb to the fatalistic assumption that nothing can be done. **Roll up your sleeves and get started.** Measuring and reporting the results monthly is the first step. Improving your data is the second. Find agencies that are doing well on this measure and learn from them and then celebrate your successes!

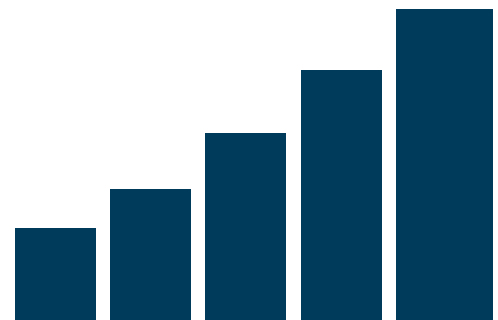
Airway-05

Adequate Pre-Oxygenation Before Intubation Attempt

Endotracheal intubation has long been included in the EMS Scope of Practice for certain levels of providers, and the training and practice of intubation as a procedure has been controversial in EMS throughout its history. Concerns around EMS providers lacking sufficient guided practice on live patients to achieve proficiency, an emphasis on “getting the tube” as a means of airway protection with a lack of awareness of overall oxygenation and ventilation diligence, the patient being properly resuscitated at the BLS level and prepared physiologically for advanced procedures, and more recent studies that call into question whether intubation can be properly performed in a pre-hospital environment given the substantial risks associated the procedure. **The Airway-05 measure allows EMS agencies to measure the achievement of adequate patient oxygenation in the peri-intubation period.**

The denominator for this measure includes all patients who have had an intubation procedure attempted, whether or not the procedure was successful. The numerator is calculated by taking all patients that have an intubation procedure attempted and subtracting the patients that did not have every documented SPO2 reading of 94 or greater in the 3 minutes before the intubation attempt.

	Numerator	Denominator	Performance
Overall	14,171	55,601	25.5%
Adults	13,455	53,616	25.1%
Pediatrics	716	1,985	36.1%

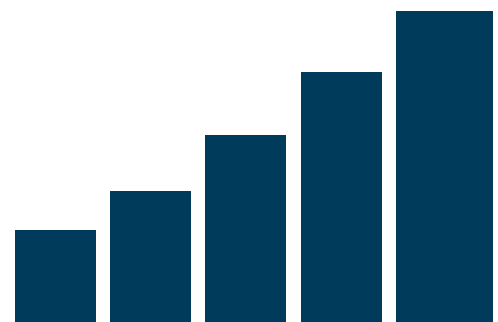
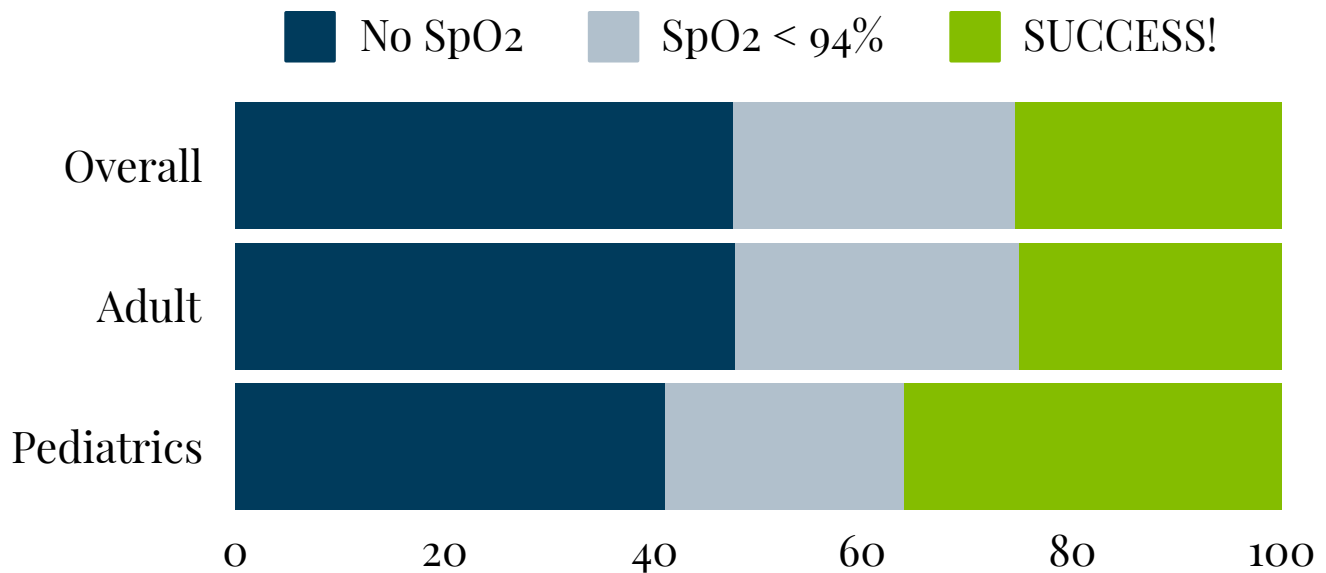


Airway-05

Adequate Pre-Oxygenation Before Intubation Attempt

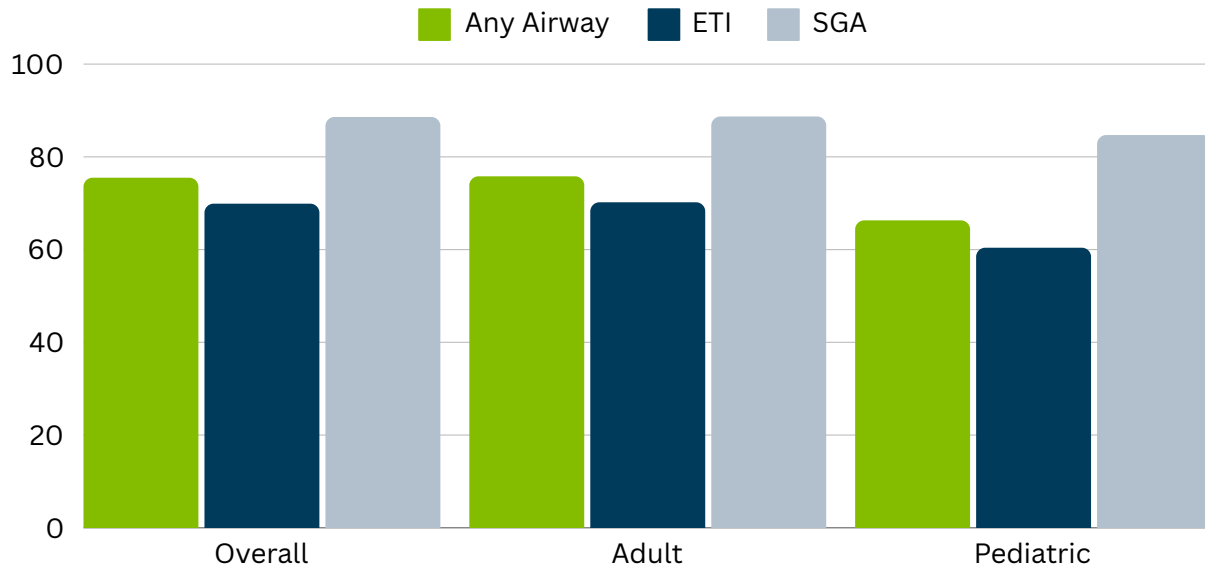
There are several likely contributors to poor performance on this measure, including a lack of documented vital signs before intubation, a lack of accuracy around the determination of the time an SPO2 was measured, and no standardized “pre-flight” process for EMS intubation that includes resuscitation to adequate oxygenation before intubation attempt.

While not directly focused on this measure, the ongoing NEMSQA EQuIP on Improving Safety and Effectiveness of Prehospital Airway Management will likely provide crossover methods for systems looking to improve performance on Airway-05. **(See page 3 for more details)**



Airway-20

First Pass Invasive Airway Success



The Airway - 20 measure provides an overall picture of the first pass success rate for invasive airway procedures. This measure includes both endotracheal intubation and supraglottic airways (SGA's) in adults and pediatrics. For this measure, patients in cardiac arrest were included. The data that was analyzed included almost 180,000 cases: 174, 392 adult cases and 5,342 pediatrics.

Overall, there was a 75.5% first pass success rate, with 75.8% in adults and 66.3% in pediatrics. It was also noted that in both adults and pediatrics there was a notable increase in the first pass success rate for SGA's as compared to endotracheal intubation.

	Numerator	Denominator	Performance
Overall	135,779	179,734	75.5%
Adults	132,239	174,392	75.8%
Pediatrics	3,540	5,342	66.3%

Respiratory-01

Documented Respiratory Assessment

Respiratory-01 is a measure designed to assess whether fundamental EMS care was provided by evaluating whether a respiratory assessment was completed during patient encounters with a primary or secondary impression of respiratory distress. **The measure focuses on two key components of the respiratory assessment: recording the patient's respiratory rate and SPO2 (oxygen saturation).**

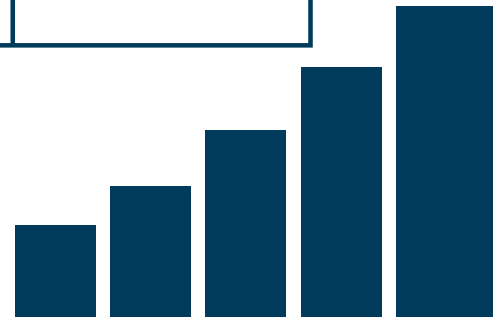
Patients are included in the denominator if EMS response is 9-1-1 request, and provider documents a primary or secondary impression of respiratory distress. Respiratory distress can include conditions like asthma, shortness of breath, or other related diagnoses. To calculate the numerator, check if the EMS provider recorded both the respiratory rate and SPO2 during the EMS response. The numerator is the number of cases where both a respiratory rate and SPO2 were documented.

While the overall performance on this measure is over 93%, the performance for pediatric patients is notably lower at 89.2%. This lower rate suggests that there may be challenges or inconsistencies in assessing or documenting respiratory assessments for pediatric patients. The lower performance in the pediatric population could be due to factors such as provider discomfort or uncertainty in assessing children, the complexity of pediatric cases, or lack of properly sized equipment.

Opportunities for Improvement

- Focus on pediatric training to boost confidence in respiratory assessments for children.
- Ensure equipment is available to assess SPO2 for all size of patients.
- Consider implementing checklists to support EMS providers during pediatric emergencies.

	Numerator	Denominator	Performance
Overall	2,711,234	2,897,403	93.6%
Adults	2,534,878	2,699,715	93.9%
Pediatrics	176,356	197,688	89.2%



Respiratory-02

Oxygen Administered for Hypoxia

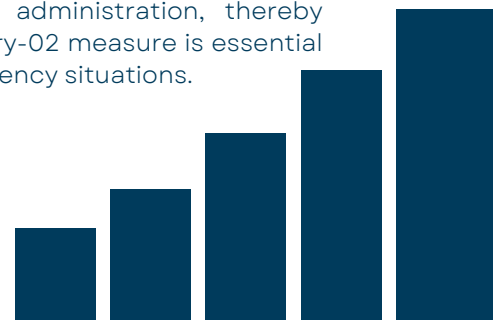
	Numerator	Denominator	Performance
Overall	1,190,753	2,543,970	46.8%
Adults	1,161,789	2,464,455	47.1%
Pediatrics	28,964	79,515	36.4%

While it uses a different denominator population, Respiratory-02 essentially is the next step to put the respiratory assessment findings into action. Respiratory-02 calculates the percentage of EMS responses originating from a 9-1-1 request where patients with hypoxia received oxygen during the emergency response. The measure aims to ensure that EMS providers are consistently applying best practices in the management of hypoxic patients, thereby improving the overall quality of care provided during emergency situations.

Recent performance data for the Respiratory-02 measure reveals alarmingly poor results, indicating significant gaps in care. To address these issues, it is essential to first identify and understand the underlying problems, which may include:

- 1.False Low Pulse Oximetry Readings: Inaccurate or unreliable pulse oximetry readings imported into electronic patient care reports (ePCR) from cardiac monitors can misrepresent a patient's condition. Addressing this issue by removing erroneous readings can significantly improve the accuracy of the data.
- 2.Failure to Document Oxygen Administration: Incomplete or incorrect documentation of oxygen administration can skew performance metrics and impede accurate assessments. Implement protocols to improve documentation practices and ensure that every instance of oxygen administration is recorded.
- 3.Failure to Treat Hypoxia: A lack of recognition or treatment of hypoxia during EMS responses can result in poor performance on this measure. Enhance training and protocol adherence to ensure that hypoxia is promptly identified and managed according to established guidelines.

By addressing the identified issues and implementing targeted improvements, EMS organizations can ensure more consistent and effective oxygen administration, thereby improving patient outcomes. Improving performance on the Respiratory-02 measure is essential for enhancing the quality of care provided to hypoxic patients in emergency situations.



Airway-24¹

Correction of Hypoxia

Airway-24 calculates the percentage of EMS responses originating from a 9-1-1 request for patients presenting with hypoxia and a provider impression of respiratory distress for whom SPO2 improves to greater than 90% at conclusion of EMS care. The measure aims to evaluate the effectiveness of EMS care at correcting a critical respiratory condition.

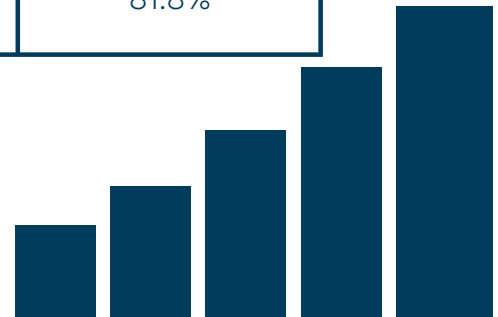
Achieving an SpO2 level greater than 90% is a crucial indicator of successful intervention in cases of hypoxia and respiratory distress. However, various factors can influence the ability of EMS teams to achieve this outcome. Understanding these variables is essential for interpreting performance data and identifying areas for improvement in EMS care.

Many factors could influence EMS's ability to correct hypoxia during EMS care:

- **Severity of Condition:** The degree of hypoxia significantly affects treatment complexity. Correcting an SpO2 level of 89% may be less challenging compared to addressing a critical level of 50%, which may require more intensive and time-consuming interventions, including advanced airway management.
- **Time of EMS Contact:** The duration of EMS contact with the patient plays a critical role. For instance, paramedics responding to a short scene call may have only a few minutes to stabilize the patient, whereas those with longer transport times may have more opportunity to administer treatments and monitor changes, potentially leading to better outcomes.
- **Ability to Reverse Underlying Condition:** The effectiveness of EMS in improving SpO2 also depends on the ability to address the underlying cause of hypoxia. Conditions such as severe respiratory infections, obstructive pulmonary events, or cardiac issues may not be fully reversible by EMS alone, and further medical intervention may be required.

Addressing these factors through targeted training focused on recognition of hypoxia and rapid intervention can help improve performance and patient outcomes in EMS care for hypoxic patients.

	Numerator	Denominator	Performance
Overall	418,647	538,907	77.7%
Adults	408,491	526,489	77.6%
Pediatrics	10,156	12,418	81.8%



The Quality Quest

Enhancing EMS Quality with Consistent Documentation

Key Take-Aways

Data Consistency & Standardization

EMS generates vast amounts of data daily, and we are only beginning to unlock its potential to transform patient care. Our industry is tackling tough questions head-on, driven by a commitment to better outcomes. Quality is at the heart of this effort, and the National EMS Quality Alliance is leading the charge.

Yet, one critical challenge we must overcome is the inconsistency of our data. Enhancing our systems and truly understanding performance depend on precise, accurate documentation. While electronic patient care records (ePCR) have opened new doors, they've also brought challenges—messy, inconsistent data. Standardization through NEMSIS has helped, but too many discrepancies remain. We need to push further, advancing standardization efforts by developing new technologies to improve ease and reliability of data capture.

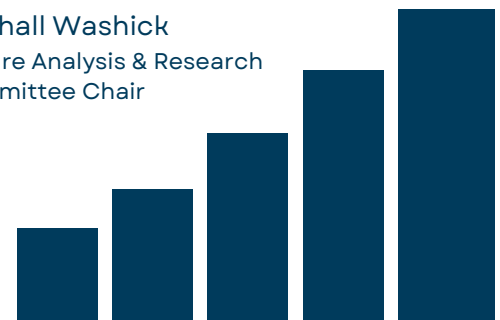
Foundational Quality Metrics

When it comes to quality metrics, we need to ask ourselves foundational questions: “What exactly are we measuring?” and “How do we measure it meaningfully?” Take the ‘Airway-01’ metric, for instance, which identifies hypotension and hypoxia before and after intubation. While this measure tracks key indicators of patient decline, it’s part of a larger process. Managing a patient in respiratory failure versus a stroke patient with airway obstruction requires different strategies—but in both cases, swift risk assessment is crucial. If intubation is on the table, then the right policies, training, and education must be in place to ensure safe, effective airway management, regardless of the patient’s condition.

Continuous Improvement & Collaborations

Improvement is a continuous journey, and it’s a journey worth taking. We need to deepen our understanding of how EMS performs across every aspect of care delivered in the field. The measures from the National EMS Quality Alliance represent major strides forward in building validated, reliable performance metrics. But success depends on all of us—our shared wisdom, our commitment to improving the status quo. By standardizing definitions, refining processes, and committing to constant improvement, we can ultimately provide better care to our communities and our nation.

-Marshall Washick
NEMSQA Measure Analysis & Research
Committee Chair



Meet Our Team



MICHAEL REDLENER PRESIDENT

Michael Redlener, MD, FAEMS is a board-certified Emergency and EMS physician, Associate Professor of Emergency Medicine at the Icahn School of Medicine and the medical director of the Emergency Department at Mount Sinai West Hospital. Representing the National Association of EMS Physicians on the NEMSQA board, he is a past chair of the NAEMSP Quality and Safety Committee and the Co-Founder of the NAEMSP Quality and Safety Course. With a focus on systems of care and quality improvement, he has worked to improve the function of care delivery in trauma and disaster preparedness, cardiac care and stroke across the continuum of care. He has a passion for creating high-value, evidence-based, patient-centered quality measures that give EMS agencies and organizations the tools to improve care for patients.



SHEREE MURPHY EXECUTIVE DIRECTOR

As the Executive Director of NEMSQA, Sheree leverages her passion for stakeholder collaboration and her expertise in standardized data collection and measure development to drive transformative improvements in prehospital care. Her journey into systems of care and EMS began with her pivotal role in implementing the American Heart Association's Mission Lifeline® for STEMI and Stroke, in partnership with FDNY in New York City. There, she was instrumental in developing and launching the city's EMS LVO stroke protocol and a regional EMS quality improvement dashboard. She has also served as a consultant with the New York State Department of Health on systems of care. Sheree is a Certified Professional in Health Care Quality, and her commitment to understanding EMS practice led her to become a certified EMT. She currently volunteers with a fire department rescue squad in New York.

Meet Our Team



JEFF JARVIS

MEASURE DEVELOPMENT CHAIR & AIRWAY EXPERT

Dr. Jeff Jarvis is the Chief Medical Officer for the Fort Worth, Texas EMS system. He is board certified in both Emergency Medicine and EMS. Dr. Jarvis began his career in EMS in 1984 as a volunteer firefighter in rural East Texas. He has worked in three states as a paramedic and maintains his active Texas paramedic license today. He teaches extensively and has authored multiple articles on EMS issues in both peer-reviewed and industry journals. His research interests include airway management and clinical performance measures. Dr. Jarvis serves on the board of directors of NEMSQA where he chairs the Measure Development committee and is the associate medical director for the National Association of EMTs. He is a proud Texas Aggie (“Fightin’ Texas Aggie Class of 1990!”), a husband to Kristi (Class of ’89), and father to two adult kids (Sydney and Jeremy) as well as two spoiled rotten Golden Doodles and several cats. He discusses the application of research in EMS on his podcast “EMS Lighthouse Project Podcast” and looks forward to hearing comments or feedback on Twitter @DrJeffJarvis.



ALYSSA GREEN

DATA SCIENCE AND ANALYTICS STRATEGIST

Alyssa M. Green is a data science and analytics strategist and paramedic who is passionate about using data to improve EMS workload, deployment, and prehospital systems of care. Alyssa’s experience includes six years as a paramedic on a 9-1-1 ambulance in a suburban EMS system and three years as a volunteer EMT for a rural EMS department and four years in phase 1 clinical research. She joined NEMSQA in 2023. Alyssa holds a Master's degree in Applied Statistics, Data Analysis and Data Science from the University of Kansas.



Meet Our Committees



MEASURE ANALYSIS & RESEARCH

CHAIRS: DR. MAIA DORSETT & MARSHALL WASHICK

The Measure Analysis & Research Committee is dedicated to demonstrating how NEMSQA measures enhance patient care, clinical outcomes, and provider safety. Our work includes conducting retrospective research, developing NEMSQA measure reports, and providing analytical support for measure development and implementation. Current projects involve the airway measure report, evaluating non-transport assessments, and engaging with EMS data analysts through an R User group. Through these initiatives, we aim to build analytical capacity and drive improvements in EMS quality.



MEASURE DEVELOPMENT

CHAIRS: DR. JEFF JARVIS & DR. BRYAN WILSON

The Measure Development Committee is responsible for creating, validating, and maintaining NEMSQA measures while upholding industry-standard measure development processes. Our work includes supporting the Florida Department of Health with a HRSA-funded rural EMS project, assisting the American College of Surgeons with the updated Field Triage Guidelines, and collaborating with NASEMSO on the prehospital airway EBG. Current projects focus on existing measure maintenance and developing new measures for post-crash care and sedation in agitation.



MEASURE IMPLEMENTATION

CHAIRS: STEVE COHEN & BROOKE BURTON

The Measure Implementation Committee enhances the adoption and accessibility of NEMSQA measures to support agency quality improvement efforts. Our current initiatives include raising awareness and providing implementation support through national, state, and regional EMS conferences, webinars with ProdigyEMS, ePCR vendor engagement, and resources such as measure office hours and the EMS Quality Improvement Partnership (EQIP) collaboratives.



NEMSIS

The 2023 Public-Release Research Dataset is a subset of the National EMS Database, a repository for EMS data collected from U.S. States and Territories. The National EMS Information System (NEMSIS) maintains the national standard for how patient care information, resulting from an emergency 911 call for medical assistance, is collected. The dataset includes 54,190,579 EMS activations submitted by 14,369 EMS agencies servicing 54 states and territories. NEMSIS is a collaborative system to improve patient care through the standardization, aggregation, and utilization of point-of-care EMS data at a local, state, and national level. NEMSIS is a program of the National Highway Traffic Safety Administration's Office of EMS and is hosted at the University of Utah.

Limitations for our report:

1. While the majority of NEMSQA measures are built for national NEMSIS elements, there are some elements that are only available at the state level or are not required national elements.
2. De-duplication: multiple agencies may care for the same patient and submit separate patient care reports. Thus, NEMSIS is a registry of EMS activations, not patients. Care must be taken when interpreting the findings of NEMSQA measures.
4. Many agencies transitioned from NEMSIS version 3.4 to version 3.5 during 2023 resulting in changes in documentation.
5. We wanted to review Airway-18 ETCO2 airway confirmation, but needed elements are collected at the state-level, not the national level.



Acknowledgements

This report represents the culmination of extensive work by the Measure Analysis and Research Committee, whose expertise and commitment have been instrumental in shaping this document especially the authors of the report:

Steve Cohen	Daniel Garner	Sheree Murphy
Bradley Cramer	Alyssa Green	Michael Redlener
Maia Dorsett	Jeff Jarvis	Marshall Washick

Thank you to our corporate sponsor and member organizations for their generous support and investment in EMS quality initiatives that have enabled the advancement of this important work.

Platinum Corporate Partners



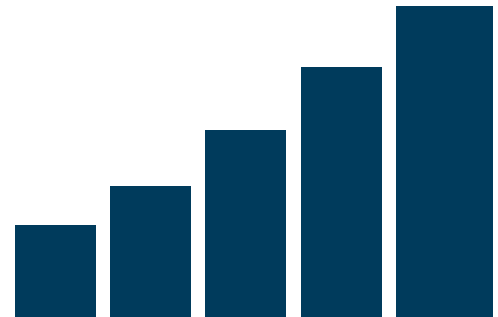
Bronze Corporate Partners



Organization Members



Together, through the combined efforts of our members and corporate partners, we are making significant strides towards excellence in EMS quality. We look forward to the continued collaboration and progress that will drive positive change in the field of emergency medical services.



Contact Us

 info@nemsqa.org

 www.nemsqa.org

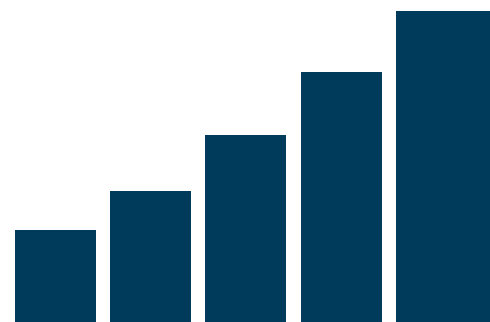
 [@QualityEMS](https://twitter.com/QualityEMS)

 [linkedin.com/company/nemsqa](https://www.linkedin.com/company/nemsqa)

 [@NEMSQA](https://www.facebook.com/NEMSQA)



Become a NEMSQA
Member today!



References

1. Wang HE, Yu MI, Crowe RP, et al. Longitudinal Changes in Emergency Medical Services Advanced Airway Management. *JAMA Netw Open*. 2024;7(8):e2427763. doi:10.1001/jamanetworkopen.2024.27763
2. Fouche PF, Stein C, Simpson P, Carlson JN, Doi SA. Nonphysician Out-of-Hospital Rapid Sequence Intubation Success and Adverse Events: A Systematic Review and Meta-Analysis. *Ann Emerg Med*. 2017;70(4):449-459 e20. doi:10.1016/j.annemergmed.2017.03.026
3. Hasegawa K, Shigemitsu K, Hagiwara Y, et al. Association between repeated intubation attempts and adverse events in emergency departments: an analysis of a multicenter prospective observational study. *Ann Emerg Med*. 2012;60:749-754 e2. doi:10.1016/j.annemergmed.2012.04.005
4. Powell EK, Hinckley WR, Stolz U, Golden AJ, Ventura A, McMullan JT. Predictors of Definitive Airway Sans Hypoxia/Hypotension on First Attempt (DASH-1A) Success in Traumatically Injured Patients Undergoing Prehospital Intubation. *Prehosp Emerg Care*. 2020;24(4):470-477. doi:10.1080/10903127.2019.1670299
5. NEMSQA. NEMSQA - Airway 0-1. NEMSQA Airway 0-1. Accessed October 11, 2021. <https://nemsqa.memberclicks.net/measures>
6. Pourmand A, Terrebonne E, Gerber S, Shipley J, Tran QK. Efficacy of Video Laryngoscopy versus Direct Laryngoscopy in the Prehospital Setting: A Systematic Review and Meta-Analysis. *Prehospital Disaster Med*. 2023;38(1):111-121. doi:10.1017/S1049023X22002254

