

Oregon EMS Data Strategic Plan

2018–2020



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Introduction

Within the Oregon Health Authority, the Emergency Medical Services and Trauma Systems Section, in partnership with the Injury and Violence Prevention Section, oversees Oregon’s emergency medical services (EMS) data. EMS data systems include EMS agency and personnel licensing, EMS agency prehospital patient care reporting, and hospital trauma registry reporting. Other related data systems that may be integrated in the future include the following: hospital emergency department data, hospital discharge data, syndromic surveillance data, specialty registry data (cardiac arrest, myocardial infarction, stroke, etc.), emergency medical dispatch data, rehabilitation data, and health information exchanges.

Oregon’s EMS data program has made significant achievements in the past five years:

- ✓ The adoption of Senate Bill 52 (2017), which mandates EMS reporting by licensed EMS agencies
- ✓ Implementation of a new EMS agency and personnel licensing system
- ✓ Improved communication with licensees, associations, and other stakeholders
- ✓ Implementation of a NEMSIS 3-compliant prehospital patient care reporting system
- ✓ Substantial funding through the Centers for Medicare & Medicaid Services (CMS) Health Information Technology for Economic and Clinical Health (HITECH) Act to establish and strengthen EMS data system interoperability

There’s always more work to do. In order to focus our efforts, OHA pursued a strategic planning process in summer 2016. The strategic plan laid out three strategic focus areas for Oregon’s EMS data for three years (2017–2019). Within each area, goals and objectives were established, along with how progress will be measured in the future.

This 2018 update to the strategic plan includes the following updates to reflect progress and respond to challenges and opportunities for the next three years (2018–2020):

- Removes goals and objectives that have been fully accomplished:
 - Implement a new EMS agency and EMS personnel licensing system
 - Upgrade the state trauma registry
 - Establish prehospital data system performance measures
 - Create and test methods for linking datasets using crash, EMS, hospital, trauma, and vital records (death) data
 - Implement real-time, secure health information exchange between the prehospital data system and the trauma registry data system
- Adds a few new goals, objectives, measures, and milestones
- Removes 2016–2017 milestones, modifies some 2018–2019 milestones, and adds 2020 milestones for uncompleted work

OHA will track the strategic plan and continue to make adjustments along the way.



OHA Vision

A healthy Oregon

OHA Mission

Helping people and communities achieve optimum physical, mental and social well-being through partnerships, prevention and access to quality, affordable health care.

OHA Values

Service Excellence

Partnership

Innovation

Leadership

Integrity

Health Equity



The Emergency Medical Services and Trauma Systems Program develops and regulates systems for quality emergency medical care in Oregon. This ensures that EMS Providers are fully trained, that emergency medical vehicles are properly equipped, and emergency medical systems are functioning efficiently and effectively.

Strengths, Weaknesses, Opportunities, and Threats

Strengths

- Increased communication and trust with stakeholders
- Strong public health mindset
- Dedicated interdisciplinary staff with a unified vision
- Legislated mandatory prehospital data reporting

Weaknesses

- Lack of consistent communication of vision and goals
- Lack of reliable dedicated funding and position authority for EMS data management
- Lack of strong project management
- Limited staff resources for EMS data management

Opportunities

- Recent developments in Mobile Integrated Healthcare–Community Paramedicine (MIH-CP) and the CMS ET3 pilot reimbursement models to potentially broaden funding mechanisms for EMS agencies
- Stakeholders want education about EMS data
- Opportunity to form and nurture partnerships
- Grant funding availability

Threats

- Lack of permanent funding for EMS data systems
- Lack of quality assurance and feedback mechanisms in EMS agencies and data systems

Gap Analysis

State Traffic Records Assessment

In 2015, the National Highway Traffic Safety Administration (NHTSA) conducted an assessment of Oregon’s traffic records systems, including the EMS data systems.¹ The maturity of the EMS data systems was comparable to that of the state’s crash, driver, and roadway data systems.

Figure 1. Grading of Oregon's traffic records systems, including EMS data systems (ideal: 100%)



The greatest opportunity for improvement in Oregon’s EMS data systems, as identified by the traffic records assessment, is quality control: “a formal, comprehensive quality management process that includes quality control metrics and quality control reports... [to ensure that data systems are] timely, accurate, uniform, complete, integrated, and accessible.”²

Figure 2. Grading of key aspects of Oregon's EMS data systems (ideal: 100%)



¹ National Highway Traffic Safety Administration Technical Assessment Team, *State of Oregon Traffic Records Assessment* (2016), <http://www.oregon.gov/ODOT/TS/docs/TRCC/Oregon%20TRA%20Final%20Report.pdf>.

² National Highway Traffic Safety Administration, *Traffic Records Program Assessment Advisory* (2012), <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/811644>, 101.

Stakeholder Voices

The strategic planning process included 13 hours of interviews with 46 individuals throughout the state, from EMS agencies, hospitals, county governments, state government, and others.

Stakeholder voices included the following key themes:

Give us Data

“I’ve never dealt with state data. We are not aware of what’s available.”

—EMS Agency Administrator

“It’s important to have a user-friendly interface for people to do reports and write their own queries. Access is important.”

—County EMS Administrator

“Report data in a visible way.”

—University Researcher

Integrate

“I’ve seen untold benefits to patient care from bridging the gap between EMS agencies and hospitals.”

—Hospital Administrator

Ensure Data Quality

“I’m surprised I haven’t heard from the state saying, ‘why haven’t you uploaded data?’”

—EMS Agency Administrator

We’re Ready for Performance Improvement

“Come up with measures, and allow us to benchmark our agency with the rest of the state. Then we can give ourselves goals to attain.”

—EMS Agency Administrator

Lead

“Why do they need the data? Why are we giving them data?”

—EMS Agency Administrator

“The EMS office is stronger and more stable than it has been in a long time.”

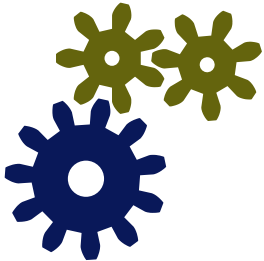
—Coordinated Care Organization (CCO) Administrator

Strategic Focus Areas



Leadership

Through policy leadership, OHA will make EMS a public health priority, communicate with public health leadership, establish policy partnerships, and promote advocacy of EMS data. Through operational leadership, OHA will strengthen our organizational structure, solidify staffing, establish operational partnerships, and improve communication with stakeholders.



Data System Operations

OHA will collect, share, disseminate, link, analyze, and integrate data. OHA will evaluate the performance of our EMS data systems.



Data Use

OHA will implement state-level EMS system performance improvement, and we will encourage and support regional and local performance improvement. OHA will use data for EMS system development, workforce development, and clinical care. OHA will use EMS data to support public health policy, prevention, and practice.

Goals, Objectives, Measures, and Milestones

The following sections establish the work to be accomplished with Oregon’s EMS data systems in 2018–2020, organized by strategic focus area.

Leadership

Goal: Integrate EMS data systems into public health modernization

Objective: EMS data leadership will identify the appropriate place to include EMS data systems in Oregon’s public health modernization initiative

Measure: EMS data leadership have identified where EMS data fit within the public health modernization plan

2018	2019				2020			
Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
								<input checked="" type="checkbox"/>

Objective: EMS data leadership will achieve the inclusion of EMS data systems in the public health modernization plan

Measure: EMS data systems are included in the public health modernization plan the next time it is updated

2018	2019				2020			
Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
								<input checked="" type="checkbox"/>

Objective: EMS data leadership will increase awareness of EMS data among the leadership of Oregon’s Quality Health Outcomes Committee (QHOC)

No measures for 2018–2020.

Objective: EMS data leadership will establish participation in the Oregon Health Leadership Council (OHLC)

Measure: EMS data leadership have presented about EMS data at OHLC

2018	2019				2020			
Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
								<input checked="" type="checkbox"/>

Measure: A report evaluating the possible inclusion of EMS data in the OHLC Emergency Department Information Exchange (EDIE) initiative

2018	2019				2020			
Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
								<input checked="" type="checkbox"/>

Goal: Identify and obtain needed resources to implement EMS data systems and ensure that they are sustained and able to grow with health system needs over time

Objective: EMS data leadership will complete an assessment of needed resources to support EMS data systems

Measure: Needs assessment completed

2018	2019				2020			
Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
								<input checked="" type="checkbox"/>

Objective: EMS data leadership will obtain dedicated resource allocation for EMS data

Measure: Receipt of Oregon Department of Transportation (ODOT) funding for EMS data system maintenance and development

2018	2019				2020			
Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
		<input checked="" type="checkbox"/>						

Goal: Create and implement a communications plan for the development and maintenance of the EMS data systems

Objective: EMS data leadership, with the participation of Public Health Division (PHD) center administrators, will create a communications plan

Measure: The communications plan has been updated annually

2018	2019				2020			
Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
		<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		

Goal: Create stakeholder advisory workgroups for EMS data

Objective: EMS data leadership will create a stakeholder advisory workgroup for prehospital EMS data

Measure: The EMS data stakeholder advisory group has been formed, with a charter and meeting schedule

2018	2019				2020			
Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	<input checked="" type="checkbox"/>							

Objective: EMS data leadership will create a stakeholder advisory workgroup for trauma registry data

Measure: The trauma registry data stakeholder advisory group has been formed, with a charter and meeting schedule

2018	2019				2020			
Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	<input checked="" type="checkbox"/>							

Objective: EMS data leadership will create a stakeholder advisory workgroup for community paramedicine data

Measure: The community paramedicine data stakeholder advisory group has been formed, with a charter and meeting schedule

2018	2019				2020			
Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
					<input checked="" type="checkbox"/>			

Data System Operations

Goal: Collect complete, accurate, and usable data

Objective: Collect NEMSIS version 3 prehospital data from EMS agencies

Measure: The percentage of licensed transporting agencies submitting NEMSIS version 3 data in a given month

2018	2019				2020			
Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
				90%	<input checked="" type="checkbox"/>			

Measure: The percentage of registered non-transporting 911 scene response agencies voluntarily submitting NEMSIS version 3 data in a given month

2018	2019				2020			
Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
				20%	<input checked="" type="checkbox"/>			25%
								<input checked="" type="checkbox"/>

Objective: Collect timely NEMSIS version 3 prehospital data

Measure: The median number of hours that it takes for a NEMSIS version 3 patient care report to be received by the state data system (from the time the EMS unit was notified to respond to the call) in a given month

2018	2019				2020			
Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
<input checked="" type="checkbox"/>	12 hours							

Objective: Collect timely trauma registry data

Measure: The median number of days from hospital discharge to acceptance of a trauma registry record in the state data system in a given month

2018	2019				2020			
Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
<input checked="" type="checkbox"/>	60 days							

Objective: Update the state prehospital data elements and data quality rules annually to meet national and Oregon needs

Measure: Updated state Schematron file published via the NEMSIS Technical Assistance Center

2018	2019				2020			
Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
		<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		

Measure: State staff have notified EMS agency administrators of the updated data quality rules and their impact on reporting

2018	2019				2020			
Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
		<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		

Objective: Update the trauma registry data elements and data quality rules annually to meet national and Oregon needs

Measure: The trauma registry has been updated to implement annual updates to the National Trauma Data Standard

2018	2019				2020			
Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
			<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	

Goal: Develop and implement a data system evaluation plan

Objective: Establish trauma registry data system performance measures

Measure: The number of trauma registry system performance measures implemented in automated reporting

2018	2019				2020			
Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
4 <input checked="" type="checkbox"/>								

Objective: Establish licensing data system performance measures

Measure: The number of licensing system performance measures implemented in automated reporting

2018	2019				2020			
Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
3 <input checked="" type="checkbox"/>								

Goal: Implement timely, secure health information exchange using EMS data and other healthcare data

Objective: Implement real-time data integration between the EMS licensing data system and the prehospital data system

Measure: The percentage of licensed transporting agencies for which licensing data has been transmitted from the licensing data system to the prehospital data system

2018	2019				2020			
Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
25% <input checked="" type="checkbox"/>					100% <input checked="" type="checkbox"/>			

Measure: The percentage of registered non-transporting 911 scene response agencies for which licensing data has been transmitted from the licensing data system to the prehospital data system

2018	2019				2020			
Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
25% <input checked="" type="checkbox"/>					100% <input checked="" type="checkbox"/>			

Objective: Implement real-time data integration between the prehospital data system and the Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE)

Measure: Patient care report data from the prehospital data system are stored in ESSENCE

2018	2019				2020			
Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
				<input checked="" type="checkbox"/>				

Measure: A data governance and data access policy has been created for the Acute and Communicable Disease Prevention and Health Security and Response Program

2018	2019				2020			
Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
						<input checked="" type="checkbox"/>		

Goal: Implement community paramedicine data reporting

Objective: Implement a community paramedicine reporting module in the state EMS data system.

Measure: The community paramedicine reporting module is available in the state EMS data system

2018	2019				2020			
Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
								<input checked="" type="checkbox"/>

Objective: Adopt a minimum data set and data dictionary for community paramedicine reporting that includes a list of data elements, definitions, data types, and other constraints

Measure: A community paramedicine dataset has been adopted

2018	2019				2020			
Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
								<input checked="" type="checkbox"/>

Objective: Collect community paramedicine data

Measure: The number of community paramedicine programs submitting data in a given month.

2018	2019				2020			
Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
								3 <input checked="" type="checkbox"/>

Goal: Train users on data entry and administration

Objective: Train users and agency administrators of the prehospital data system on submitting data and managing agency reporting to the state

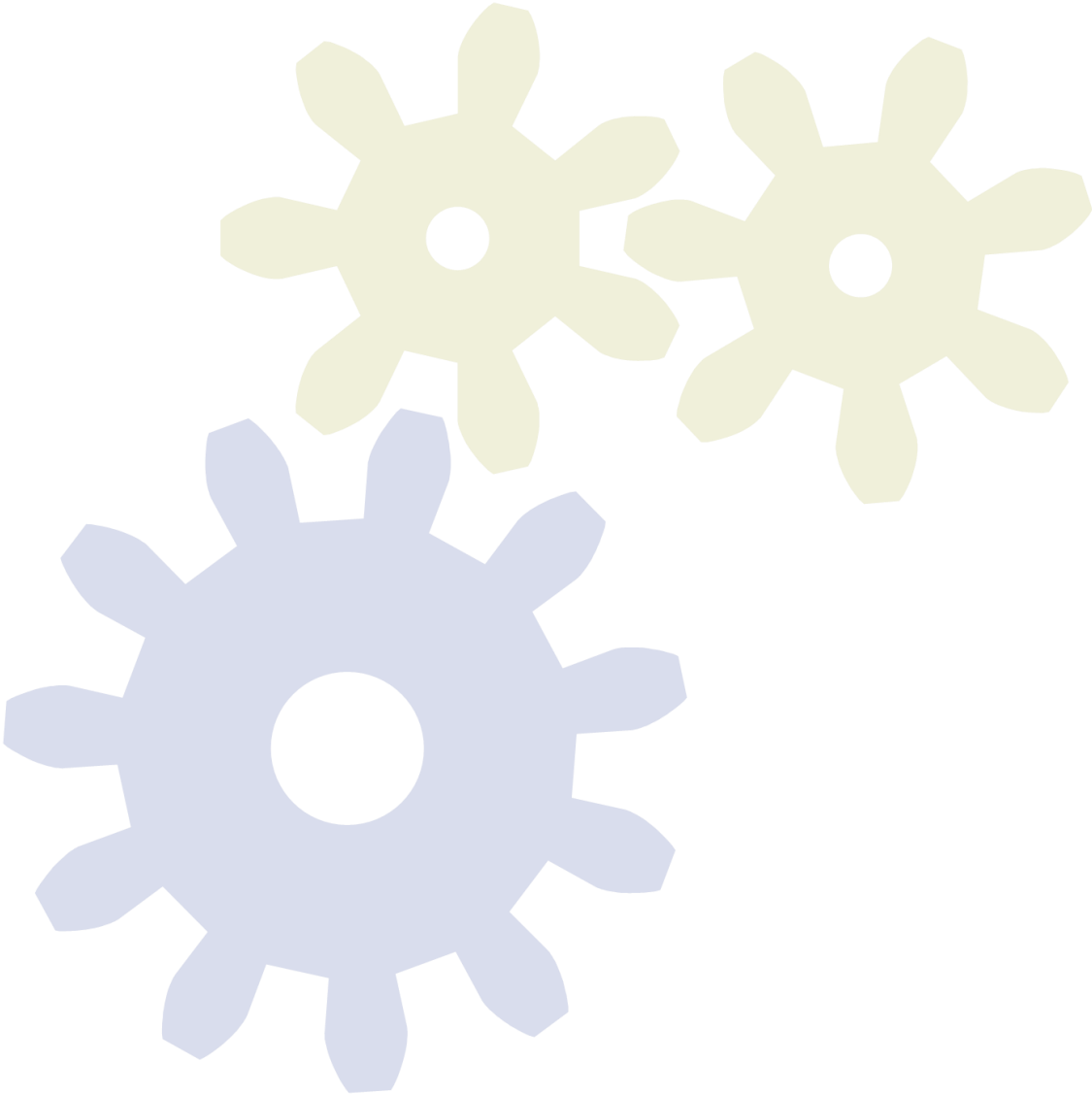
Measure: The number of training sessions conducted each year

2018	2019				2020			
Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
2 <input checked="" type="checkbox"/>				2 <input checked="" type="checkbox"/>				2 <input checked="" type="checkbox"/>

Objective: Train users and agency administrators of the community paramedicine reporting module on submitting data and managing agency reporting to the state

Measure: The number of community paramedicine data training sessions conducted

2018	2019				2020			
Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
								3 <input checked="" type="checkbox"/>



Data Use

Goal: Train users on data use

Objective: Train users of the prehospital data system on using data for performance improvement

Measure: The number of EMS agencies with people trained to use data for performance improvement

2018	2019				2020			
Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
				10				

Objective: Train hospital staff to use the hospital interface to the prehospital data system to retrieve prehospital patient care reports

Measure: The number of hospitals with people trained to use the hospital interface to the prehospital data system

2018	2019				2020			
Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	43			50				

Goal: Provide feedback to submitters

Objective: Send quarterly feedback reports to EMS agencies submitting NEMSIS 3 data

Measure: The percentage of reporting EMS agencies receiving a quarterly feedback report each quarter

2018	2019				2020			
Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
								100%

Objective: Refine the content of quarterly feedback reports based on input from EMS agency administrators

Measure: The number of survey responses to collect input from EMS agency administrators about the quarterly feedback reports

2018	2019				2020			
Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
					5			

Measure: Quarterly feedback report content has been updated based on EMS agency administrator feedback

2018	2019				2020			
Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4

Goal: Develop performance improvement

Objective: Adopt state-level operational, clinical, or public health surveillance performance measures for EMS and trauma

Measure: The number of performance measures implemented in automated reporting

2018	2019				2020			
Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
				4				<input checked="" type="checkbox"/>

Objective: Develop and disseminate a basic performance improvement framework and toolkit for use by EMS agencies

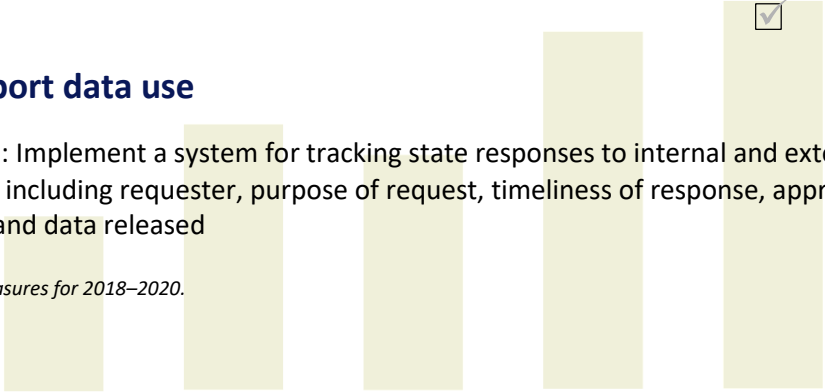
Measure: Publication of a performance improvement framework and toolkit on the EMS website

2018	2019				2020			
Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
								<input checked="" type="checkbox"/>

Goal: Support data use

Objective: Implement a system for tracking state responses to internal and external data use requests, including requester, purpose of request, timeliness of response, approval status, hours worked, and data released

No measures for 2018–2020.



Oregon EMS Data Strategic Plan
2018–2020

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Public Health Division

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