2014

OREGON
EMS for Children

OREGON EMERGENCY MEDICAL SERVICES FOR CHILDREN

PERFORMANCE MEASURE REPORT



PUBLIC HEALTH DIVISION
EMS and Trauma Systems

Oregon Health Authority

PURPOSE

The following report summarizes Oregon Emergency Medical Services for Children (EMSC) performance measure data. It also communicates program information to current and potential stakeholders and partners. The EMSC performance measures quantify the long-term progress of federal and state programs (page 5). Performance measures guide priorities and spending, set benchmarks, and ultimately aim to improve pediatric emergency care. All EMSC performance measures align with Healthy People 2020 objectives.

Each year, 25 million children visit emergency departments across the nation. Children account for approximately **20 percent** of all ED visits. As a result, the average emergency care provider has much less experience with children than with adults. Other challenging aspects of pediatric care include a lack of standardized dosing and equipment for pediatric patients; communication issues; and anxiety associated with caring for children that increases safety risks, mortality and morbidity in comparison to adult patients.

The EMS for Children initiative is designed to reduce child and youth disability and death due to severe illness or injury. The goals are:

- To ensure that state-of-the-art, family-centered emergency medical care is available for all ill or injured children and adolescents;
- For pediatric services to be well integrated into the emergency medical services (EMS) system; and
- For children and adolescents to receive the entire spectrum of emergency services, including primary prevention of illness and injury, acute care and rehabilitation.

The National EMSC Data Analysis Resource Center collaborated with Oregon EMSC to collect the data presented in this report.

For further information, please contact philip.p.engle@state.or.us.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS

AmeriCorps VISTA coordinators: Stephanie Busch and Acadia Osborne

Oregon EMS agencies and hospitals

EMS for Children Advisory Committee

Oregon EMS and Trauma Systems staff

National EMSC Data Analysis Resource Center staff

This project is supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under H33MC06700, EMSC Partnership Grants. This information or content and conclusions are those of the author and should not be construed as the official position or policy of, nor should any endorsements be inferred by HRSA, HHS or the U.S. Government.

EMSC PROGRAM OVERVIEW

The **Emergency Medical Services for Children (EMSC) Program** aims to ensure that all children receive appropriate and excellent care in health emergencies. The federal program has provided grant funding and support to 50 states, the District of Columbia and eight U.S. territories since it began in 1984.

Oregon is one of the original grantees. We have **a rich history of more than two decades** of EMSC activities and legislative efforts. The program currently serves 890,000 children. In 2001, Oregon Senate Bill 243 (Emergency Medical Services for Children):

- Solidified the EMSC Program;
- Established the EMSC Advisory Committee; and
- Called for creating guidelines to care for critically ill and injured children.

Oregon EMSC develops statewide programs and systems necessary to **improve the care of severely ill and injured children.** Goals include:

- Developing, implementing and evaluating a system that recognizes delivery of quality pediatric hospital care;
- Establishing educational and patient care standards and guidelines; and
- Integrating pediatric care considerations into the state EMS system. EMSC's placement within the Oregon Health Authority Public Health Division also helps link its work with other division programs including the Hospital Preparedness Program and the Injury and Violence Prevention Program.

ADVISORY COMMITTEE

The 19 members of the **Oregon EMS for Children Advisory Committee** represent urban, rural and frontier populations. Members contribute diverse perspectives on pediatric emergency medical services. The committee serves as a resource to the EMSC Program and the EMS and Trauma Systems Program.

The committee meets quarterly to:

- Establish statewide adoption of standards, policies and pediatric guidelines;
- Analyze data related to injury prevention and illness;
- Monitor the EMSC Program and recommend improvements;
- Advise health care facilities and other providers;
- Promote activities that ensure optimal delivery of care;
- Advise on pediatric education;
- Advise the EMS and Trauma Systems Program on best methods to enact legislation and accomplish grant objectives.

COMMITTEE MEMBERS

Robert Moore, M.D.
Pediatrician, Chair

Tamara Bakewell
Family Advocate

Michael Belair, R.R.T., R.C.P. Transport Respiratory Therapist

Cynthia Cristofani, M.D.
Pediatric Intensivist and Hospitalist

Patricia O'Sullivan
Oregon Association of Hospitals and Health Systems

Denise Langley, R.N.
Pediatric Emergency Nurse

Justin Sales, M.D.
Pediatric Emergency Physician

Jane Burke, R.N., C.E.N.
Emergency Department Manager

Jacqueline M. DeSilva, R.N.
Trauma Coordinator

Ruth Harshfield
Injury Prevention

Kelly Kapri
Transportation Safety Division

Steve Myren, EMT-I
EMT

Scott Shepherd, EMT-P
EMS Training Director

Troy John Thom, EMT-I
Tribal EMS

Carl Eriksson, M.D., M.P.H.
Emergency Preparedness

Erik Kola, R.N.
Behavioral Health Specialist

OHA STATE STAFF

Dana Selover, M.D., M.P.H.
Director, EMS & Trauma Systems

David Lehrfeld, M.D.
Medical Director, EMS & Trauma Systems

Candace Hamilton, EMT-P
Manager, EMS & Trauma Systems

PERFORMANCE MEASURES

The U.S. Health Resources and Services Administration (HRSA) requires grantees to annually report on specific performance measures for grant-funded activities. The following performance measures help evaluate EMSC initiatives' long-term progress:

PRE-HOSPITAL MEASURES
PM 71: Pre-hospital provider agencies have **online pediatric medical direction** available.
PM 72: Pre-hospital provider agencies have **offline pediatric medical direction** available.
PM 73: Ambulances carry essential **pediatric equipment and supplies.**

HOSPITAL MEASURES
PM 74: A percentage of hospitals are **recognized** through a standardized system as able to stabilize and/or manage **pediatric medical** emergencies.
PM 75: A percentage of hospitals are **recognized** through a standardized system as able to stabilize and/or manage pediatric trauma emergencies.
PM 76: Hospitals have **inter-facility transfer guidelines** that cover pediatric patients and include eight specific components of transfer.
PM 77: Hospitals have **inter-facility transfer agreements** that cover pediatric patients.

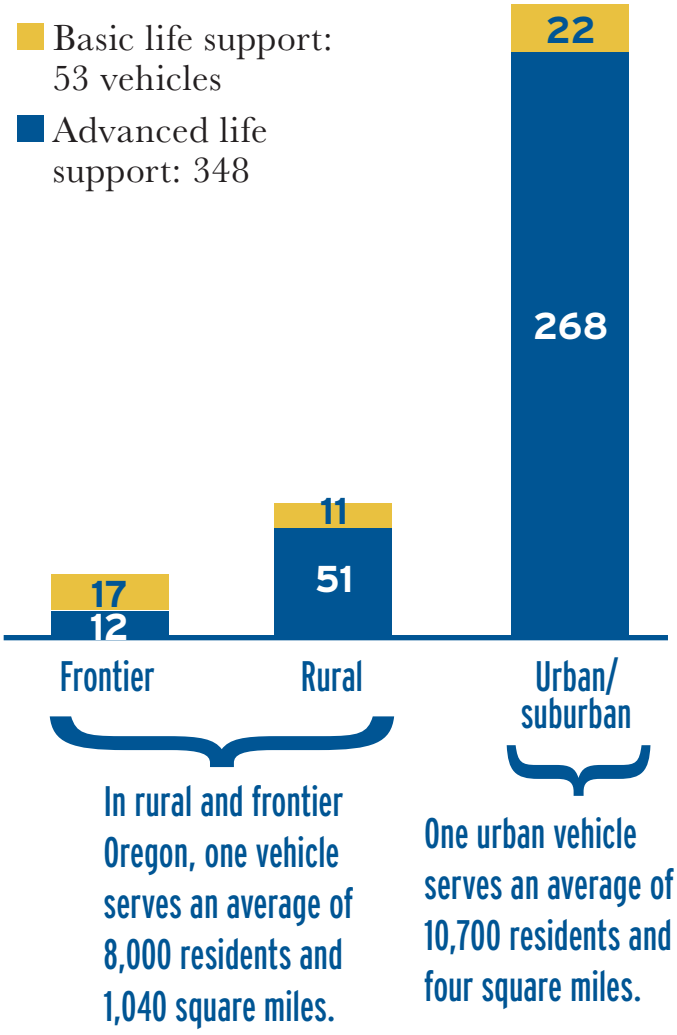
SYSTEM MEASURES
PM 78: The state adopts requirements for **pediatric emergency education** in licensing and certification renewal of pre-hospital providers.
PM 79: EMSC permanence in the state EMS system is established through an advisory committee, a mandated pediatric representative on the EMS Board and a full-time program manager.
PM 80: EMSC permanence is established in the state EMS system by integrating EMSC priorities into **statutes and regulations.**

PRE-HOSPITAL PERFORMANCE MEASURE DATA

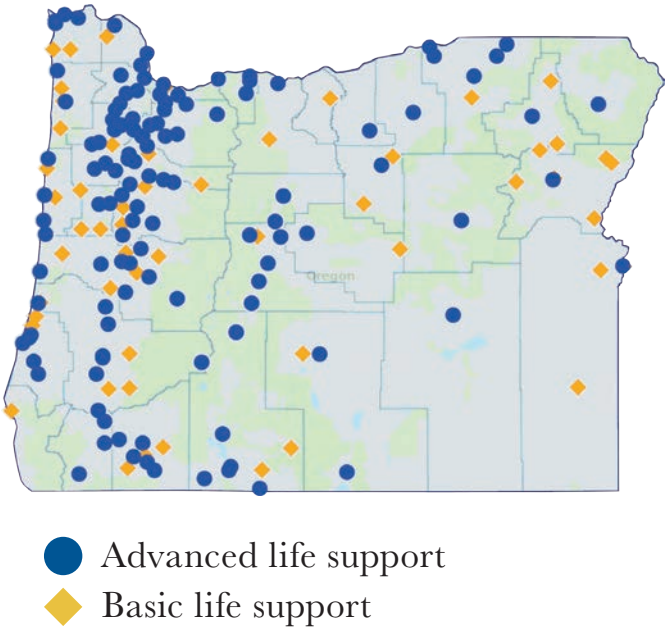
In 2013, the EMS for Children Program distributed a nationwide assessment to 8,000 EMS agencies. In 2013, 107 transport and 77 non-transport Oregon agencies responded. The 2013 sample size was larger than the 2011 sample, which makes it difficult to precisely compare the two years' data. Some discrepancies in the data from 2011 to 2013 may be due to an increased sample size of non-transport agencies. The EMS assessment inquired about:

- Pediatric online medical direction (PM 71);
- Pediatric offline medical direction (PM 72);
- Pediatric equipment (PM 73).

GEOGRAPHIC DISTRIBUTION OF OREGON EMS VEHICLES, 2013 EMS ASSESSMENT



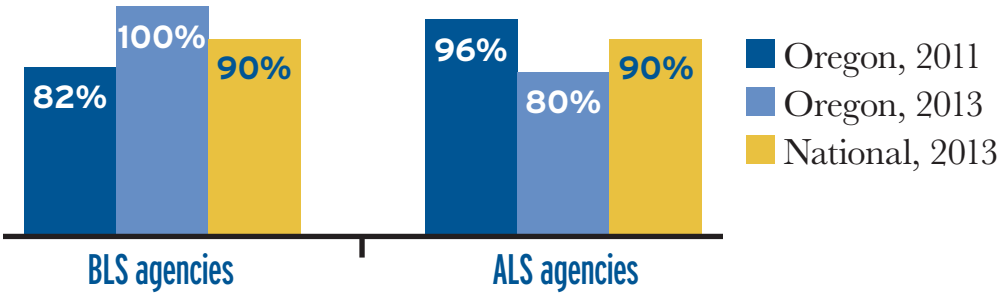
OREGON RESPONDING AGENCIES, BY HIGHEST LEVEL OF SERVICE



ONLINE AND OFFLINE MEDICAL DIRECTION

PM 71 target: 90 percent of Oregon's basic life support (BLS) and advanced life support (ALS) pre-hospital agencies have **online pediatric medical direction** available from dispatch through patient transport to a definitive care facility.

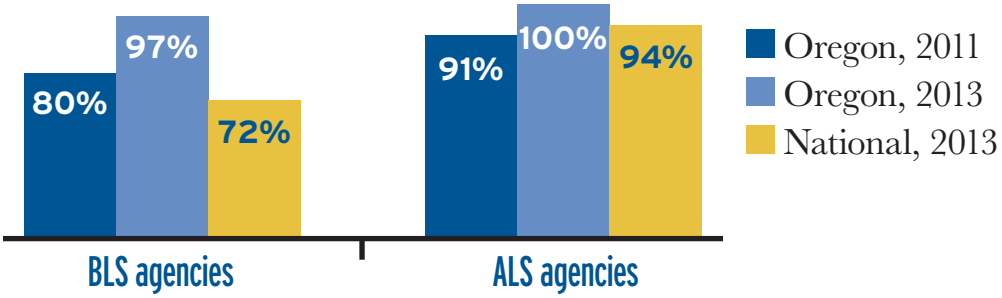
Percent of agencies reporting available pediatric online medical direction



Source of data: 2011 and 2013 EMS assessments

PM 72 target: 90 percent of Oregon's BLS and ALS pre-hospital agencies have **offline pediatric medical direction** (written guidelines or protocols) available from dispatch through patient transport to a definitive care facility.

Percent of agencies reporting available pediatric offline medical direction

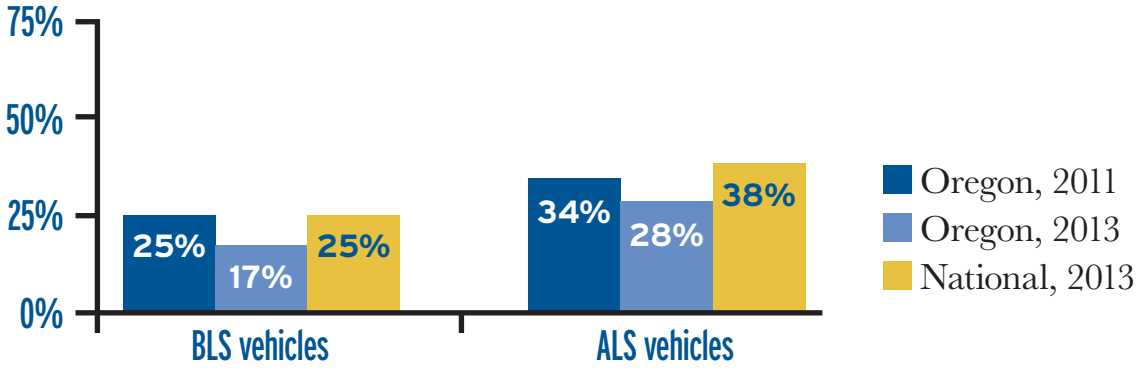


Source of data: 2011 and 2013 EMS assessments

PEDIATRIC EQUIPMENT

PM 73 target: 90 percent of Oregon's BLS and ALS patient care units (ambulances) carry all **essential pediatric equipment** and supplies. These materials are outlined in the national guidelines of the Joint Policy Statement for Equipment on Ground Ambulances (American Academy of Pediatrics).

Ambulances carrying all nationally recommended pediatric equipment



Most commonly missing equipment

OREGON BLS: COMMONLY MISSING ITEMS		% UNITS CARRYING
1	Pulse oximeter with pediatric probes	68%
2	Neonate-size suction catheter	81%
3	Neonate-size mask for bag-valve mask	81%
4	Child-size suction catheter	83%
OREGON ALS: COMMONLY MISSING ITEMS		**% UNITS CARRYING**
1	Child-size nasal cannula	71%
2	Neonate-size mask for a bag-valve mask	83%
3	Nasal airway, pediatric size	88%
4	Child-size mask for bag-valve mask	89%

Source of date: 2011 and 2013 EMS assessments

HOSPITAL PERFORMANCE MEASURE DATA

In June 2013, the National Pediatric Readiness Project assessed more than 4,000 emergency departments in 50 states and nine territories. Fifty participating Oregon emergency departments (88 percent response rate) were among those scored on a 100-point scale of **readiness to care for pediatric patients.**

This assessment included evaluation of two EMSC hospital performance measures:

- Inter-facility transfer guidelines (PM 76);
- Inter-facility transfer agreements (PM 77).

PEDIATRIC READINESS CATEGORIES

Administration and coordination
- (19 points)

QI/PI in the emergency department
- (7 points)

Policies, procedures and protocols
- (17 points)

Physicians, nurses and other ED staff
- (10 points)

Pediatric patient safety
- (14 points)

Equipment, supplies and medications
- (33 points)

OREGON'S AVERAGE SCORE: 2.2/7
OREGON EDS SHOWED DEFICIENCIES IN QUALITY IMPROVEMENT PROCESSES.

OREGON'S AVERAGE SCORE: 30/33
OREGON EDs SCORED HIGHEST IN EQUIPMENT, SUPPLIES AND MEDICATION.

OREGON'S PEDIATRIC READINESS PROJECT RESULTS

National PRP Pediatric Readiness Project
Ensuring Emergency Care for All Children

SCORE OUT OF 100 POINTS:

Oregon median n=50	National median n=4,143
68	69

PEDIATRIC FACILITY RECOGNITION

PM 74 target: 25 percent of Oregon hospitals are recognized through a statewide standardized system as able to stabilize and/or manage pediatric medical emergencies.

Oregon does not recognize hospitals and emergency departments for varying capabilities for pediatric emergency care. However, categorizing health care facility resources is not a new concept; trauma, burn, perinatal and stroke systems have existed for years. Facility categorization is also associated with regionalization, which is the identification of available health resources within a given area to coordinate health care services and meet specific patient populations' needs.

PEDIATRIC TRAUMA DESIGNATION

PM 75 target: 50 percent of Oregon hospitals are recognized through a statewide standardized system as able to stabilize and/or manage pediatric **traumatic** emergencies.

Of Oregon's 57 hospitals, 44 (77%) are designated trauma centers. Oregon EMSC works closely with the Oregon Trauma System Program, State Trauma Advisory Board and Area Trauma Advisory Boards to ensure that pediatric care is integrated into trauma statute and considerations.

Trauma Level I	2 HOSPITALS
Trauma Level II	4 HOSPITALS
Trauma Level III	11 HOSPITALS
Trauma Level IV	27 HOSPITALS

INTER-FACILITY TRANSFER GUIDELINES AND AGREEMENTS

PM 76 target: 90 percent of hospitals in Oregon have written **inter-facility transfer guidelines that cover pediatric patients** and include eight specific components of transfer.

PEDIATRIC TRANSFER GUIDELINE COMPONENTS	% OF OREGON HOSPITALS WITH COMPONENT
Defined roles of referring facility and referral center	50%
Selection of appropriate care facility	52%
Selection of appropriately staffed and equipped transport	58%
Plan for process of patient transfer	58%
Plan for transfer of medical record	58%
Plan for transfer of signed transport consent	52%
Plan for transfer of personal belongings	54%
Provision of directions and referral information to family	56%

In Oregon, 44 percent of hospital guidelines specify all the above components.

Nationally, 50 percent of hospital guidelines specify all components.

PM 77 target: 90 percent of hospitals in Oregon have written **inter-facility transfer agreements** that cover pediatric patients.

In Oregon, 74 percent of hospitals have inter-facility transfer agreements in place that cover pediatric patients.

Nationally, 66 percent of hospitals report pediatric transfer agreements.

Source of data: 2012–2013 Pediatric Readiness Project

PEDIATRIC EMERGENCY CONTINUING EDUCATION

PM 78 target: Oregon adopts requirements for **pediatric emergency education** for the licensing/recertification of BLS and ALS providers.

OREGON EMS PROVIDER CONTINUING EDUCATION REQUIREMENTS PER TWO-YEAR CERTIFICATION PERIOD

CONTINUING EDUCATION TOPIC	EMR	EMT	AEMT/EMT-I	PARAMEDIC
Pediatric and Obstetric Emergencies	1 hour	3 hours	6 hours	8 hours

Source: Oregon Administrative Rule 333-265-0110 Appendices 2 & 3

PERMANENCE OF EMSC

PM 79 target: EMSC is **established with permanence** in Oregon's EMS system by operation of an EMSC Advisory Committee, a pediatric specialist on the Board, and a full-time EMSC program manager.

	MEASURE MET?
Establishment of an advisory committee	**YES**
Eight core members	**YES**
Quarterly meetings	**YES**
Full-time EMSC program manager	**YES**
Pediatric representative on the state EMS Board	**NO**

EMSC INTEGRATION INTO STATUTE AND RULES

PM 80 target: EMSC is **established with permanence** in Oregon's EMS system by integrating EMSC priorities into existing state EMS or hospital statutes and regulations.

PM MANDATE IN PLACE	OREGON STATUS	NUMBER STATES ACHIEVING (2012)
Online medical direction	No	36
Offline medical direction	No	38
Pediatric equipment	No	35
System for pediatric medical emergencies	No	11
System for pediatric traumatic emergencies	Yes	42
Inter-facility transfer guidelines	No	10
Inter-facility transfer agreements	Yes	17
Pediatric education for BLS and ALS	Yes	38

ADDITIONAL FOCUS AREAS

- Safety initiatives and injury prevention, supporting Safe Kids Oregon;
- Research partnership with Oregon Health & Science University Children's Safety Initiative — EMS;
- Training for critical access hospitals and rural EMS agencies in collaboration with the Oregon Department of Transportation and the Oregon Office of Rural Health;
- Webinars for Oregon EMS provider continuing education;
- EMSC Family Advisory Network;
- Preparedness efforts.

REFERENCES AND RESOURCES

EMSC National Resource Center:
www.emscnrc.org

Federal HRSA EMSC Program:
http://mchb.hrsa.gov/programs/emergencymedical

Oregon EMSC Program:
www.healthoregon.org/emsc

Pediatric Readiness Project:
www.pediatricreadiness.org

National EMSC Data Analysis Resource Center: **www.nedarc.org**

Joint Policy Statement on Equipment for Ground Ambulances (American Academy of Pediatrics, 2013): **http://bit.ly/equipstatement**

Joint Policy Statement on Guidelines for Care of Children in the Emergency Department: **http://bit.ly/edguidelines**

PHILIP ENGLE

OREGON EMS FOR CHILDREN

PROGRAM MANAGER

800 N.E. Oregon St., Suite 465
Portland, OR 97232-2162
Desk: 971-673-0525
Fax: 971-673-0555
Philip.p.engle@state.or.us

OREGON
EMERGENCY MEDICAL SERVICES FOR CHILDREN
PERFORMANCE MEASURE REPORT

This document can be provided upon request in an alternate format for individuals with disabilities or in a language other than English for people with limited English skills. To request this publication in another format or language, contact the Oregon EMS for Children Program at 971-673-0525 or 711 for TTY.

OHA 8824 (02/15)

Oregon Health Authority
PUBLIC HEALTH DIVISION
EMS and Trauma System