



Department of
**Emergency
Medical Services**

Josh Pelonio, Director

2020 ANNUAL REPORT



Presented to
the Skagit County Board of County Commissioners

March 2021

Table of Contents

	Page
Director’s Message.....	3
EMS Department Overview.....	4
EMS Department Mission & Vision.....	5
System Performance.....	6
Ambulance Transport.....	7
Delivering Quality Care.....	8
Patient Primary Impression Summary.....	9
COVID-19 Pandemic Response.....	10
Training & Education.....	12
Awards & Recognition.....	14
Notable Events.....	15
2021 Strategic Objectives.....	16



Director's Message

I am pleased to present the Emergency Medical Services (EMS) Department 2020 Annual Report to the Skagit County Board of County Commissioners.

2020 presented some unique challenges, some of which we will continue to face well into the new year. The COVID-19 pandemic has highlighted the importance of planning, coordination, communication, and collaboration with all of our community and EMS system stakeholders. It has allowed us both to strengthen existing partnerships and forge new partnerships with our colleagues from around the region in public safety, public health, and healthcare. Together, we have worked hard to ensure the health and safety of our personnel and our community and to follow and implement best practices while maintaining a proactive response to COVID-19 in Skagit County.

Despite the challenges associated with the COVID-19 pandemic, our EMS system has continued to evolve and our emergency responders have continued to demonstrate their resilience, dedication, and commitment to serving our community.

I would be remiss if I didn't mention that in the midst of continuously-changing guidance related to COVID-19 and caller screening, our partners at Skagit 9-1-1 successfully completed Emergency Medical Dispatch certification training while also learning a new radio system and a new EMS call-taking software. We are grateful for their perseverance and recognize the critical role they play in our EMS system.

I appreciate the opportunity to share with you this reflection on our EMS system and the important work being done on a daily basis by our 911 dispatchers, volunteer firefighters, Emergency Medical Responders, Emergency Medical Technicians, and Paramedics. Thank you for taking the time to read this annual report and for your continued support of Skagit County EMS.

Respectfully,



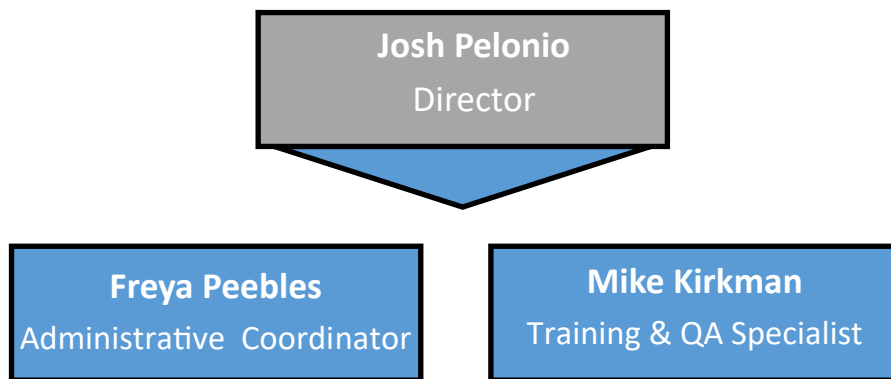
Joshua C. Pelonio, BS, NREMT, MPO
Director
Skagit County EMS



EMS Department Overview

The Skagit County Emergency Medical Services (EMS) Department is an oversight, quality assurance, and support agency that serves the residents and visitors of Skagit County by: monitoring the performance of contracted county EMS providers, facilitating a standardized countywide patient care reporting system, and providing a standardized EMS ongoing training and evaluation program. Other responsibilities include overseeing EMS credential initial issuance and recertification, and providing administrative support to the EMS Physician Medical Program Director.

Organizational Chart



Physician Oversight

Medical Program Directors are physicians appointed by the Department of Health who are recognized to be knowledgeable in their county’s administration and management of pre-hospital emergency medical care and services. Skagit County contracts with two physicians who provide clinical oversight to the EMS system.

Dr. Matthew F. Russell, M.D.
EMS Medical Program Director

Dr. Rachel Mank, D.O.
EMS Medical Program Director Delegate

2020 Budget Summary

Skagit County Emergency Medical Services	
Budgeted Expenses	\$8,635,274.00
Actual Expenses	\$8,312,400.88
Budgeted Revenue	\$9,337,118.00
Actual Revenue	\$9,442,738.53

EMS Department Mission & Vision

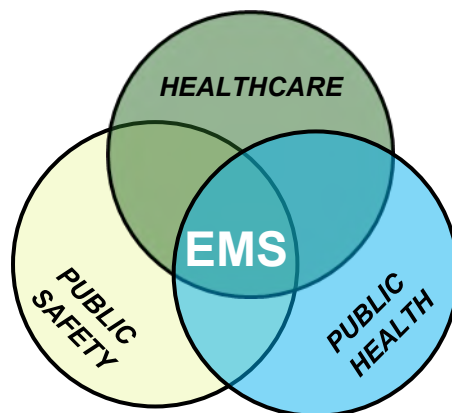
Mission

To support a system of innovative, patient-centered, pre-hospital care through:

- Supervision of initial and ongoing EMS education and training for Skagit County EMS personnel
- Support of public access to health, safety, and injury prevention training programs
- Development and implementation of patient care protocols and standard operating guidelines
- Data collection and analytics, system-wide focused initiatives and quality assurance measures

Vision

Assuring a comprehensive, reliable, and sustainable EMS system based on continuous quality improvement, clinically exceptional and culturally competent care for our community.





System Performance

From the time the first EMS unit is notified by Skagit 911 to when the unit is responding is an average of **1 minute and 45 seconds** (chute time). Once the unit is responding, it takes an average of **8 minutes and 31 seconds** (response time) to arrive at the scene (keeping in mind that some responses only take a minute or two, while others may take over twenty - especially in the more rural areas of the county). Once on scene, EMTs and paramedics assess the patient, provide appropriate treatments, and package them for transport - which averages out to **17 minutes and 15 seconds** (on scene time) - before they begin transporting to a hospital (when applicable). From start-to-finish (dispatch-to-available), the average call takes **37 minutes and 6 seconds** to complete.

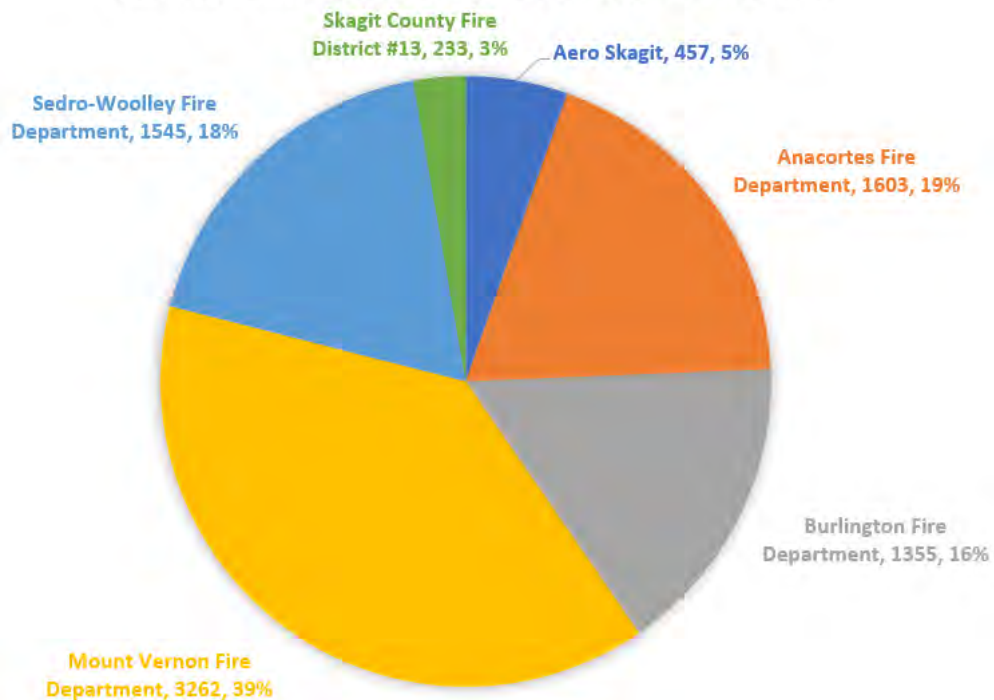
EMS Call Volume by Month and Year			
	MONTH	2019	2020
15,469 EMS Calls	JANUARY	1272	1390
	FEBRUARY	1322	1320
	MARCH	1402	1289
	APRIL	1250	1050
	MAY	1479	1215
	JUNE	1310	1381
	JULY	1212	1400
	AUGUST	1424	1401
	SEPTEMBER	1284	1273
	OCTOBER	1346	1226
	NOVEMBER	1271	1272
	DECEMBER	1205	1252
	TOTALS	15,777	15,469

COVID-19 had a notable impact on EMS call volume trends in 2020, not only in Skagit County, but throughout the state and the country.

Ambulance Transport

<p>3</p> <p>In-County Hospital Emergency Departments Received 99% of transported patients in 2020</p> 	<p>8,476 patients were transported to 4 hospitals</p>  <p><u>Skagit Valley Hospital</u> 4,910 patients</p> <p><u>PeaceHealth United General Hospital</u> 1,922 patients</p> <p><u>Island Hospital</u> 1,623 patients</p> <p><u>PeaceHealth St. Joseph Medical Center</u> 21 patients</p>
---	---

GROUND AMBULANCE TRANSPORT BY AGENCY



Delivering Quality Care

15,469 Total EMS Calls

81%	Responses with Lights & Siren to the Scene
19%	Responses without Lights & Siren to the Scene

10%	Transported with Lights & Siren to the Hospital
90%	Transported without Lights & Siren to the Hospital

80%	Success Rate IV Therapy
4484	Total IV Therapy Attempts

30%	Witnessed (non-traumatic) Cardiac Arrest Survival Rate
154	Total Cardiac Arrest Calls with Resuscitation Attempted

4309	Individual Medication Doses Administered
12%	Most-commonly delivered: Ondansetron (Zofran) - For anti-nausea

50%	Cardiac Arrest Survival Rate Shockable Rhythm AND Bystander Intervention (CPR/AED)
18	Total Cardiac Arrest Calls Shockable Rhythm AND Bystander Intervention (CPR/AED)

90%	On-Scene Time Less Than 20 Minutes
17:15	Average On-Scene Time for All EMS Responses

7:49	Arrival-to-ECG Average Time for Patients with Chest Pain >35
16:25	Average Time On-Scene for Patients with a Suspected Heart Attack

94%	Success Rate Supraglottic Airway Placement
106	Total Supraglottic Airway Placement Attempts

33	Patients with a STEMI Alert Notification to the Hospital
89	Patients Who Did Not Meet Selection Criteria but Were Suspected of Having a Heart Attack

79%	Success Rate Endotracheal Intubation
103	Total Supraglottic Airway Placement Attempts

216	Patients with a Stroke Alert Notification to the Hospital
138	Patients Who Did Not Meet Selection Criteria but Were Suspected of Having a Stroke

Patient Primary Impression Summary

20%

GENERAL MEDICAL SYMPTOMS (~3094 calls)

Weakness, nausea, sepsis, pregnancy-related, allergic reactions, flu-like symptoms, diabetic issues, and other generalized symptoms

14%

PSYCHIATRIC/BEHAVIORAL SYMPTOMS (~2166 calls)

Overdose, suicidal ideations, anxiety, depression, excited delirium, and substance use related issues

14%

TRAUMA (~2166 calls)

Falls, bleeding/hemorrhage, fractures/broken bones & sprains/strains, burns, electrocution, and other traumatic injuries

13%

NEUROLOGICAL SYMPTOMS (~2011 calls)

Stroke, syncope/fainting, seizures, paralysis

12%

NO COMPLAINTS / NON-INJURY ASSIST ONLY (~1856 calls)

Includes persons who deny injury or illness, welfare checks, and non-injury patient/life assistance

11%

CARDIAC SYMPTOMS (~1702 calls)

Chest pain, cardiac arrhythmias/irregular heart rhythms, hypertension, hypotension, and cardiac arrest

9%

PAIN SYMPTOMS (~1392 calls)

Abdominal pain, kidney stones, generalized pain, and other non-traumatic or non-cardiac related pain

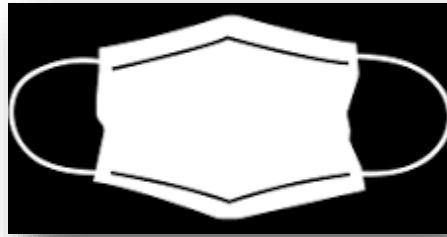
7%

RESPIRATORY SYMPTOMS (~1083 calls)

Shortness of breath, pulmonary edema, asthma, bronchitis, COPD, known or suspected COVID-19

COVID-19 Pandemic Response

In response to the pandemic, EMS personnel were initially challenged with having to adjust response and patient assessment practices by performing a “doorway triage” assessment on every patient encounter—while donning additional personal protective equipment (PPE)- in order to limit potential infection exposure. Each ambulance also required thorough decontamination after the transport of a potential COVID-19 patient in order to protect both responders and other patients in our community.



473

Total Patients Encountered with COVID-19 or Influenza-Like Illness

Initial COVID-19 response required EMS crews to wear at a minimum, protective eyewear and respiratory protection (N95 mask) for every patient encounter.

404

Total Patients Transported by EMS with COVID-19 or Influenza-Like Illness

When transporting patients with known or suspected COVID-19, EMS crews donned additional PPE such as face shields, and a protective gown or coveralls.

**COUNTLESS
MORE**

Patients Encountered Initially Suspecting COVID-19 or Influenza-Like Illness

Early into the spread of COVID-19, 911 dispatchers and EMS crews began screening patients for COVID-19 and take appropriate measures to reduce exposure risk and prevent EMS and hospital system overload.

COVID-19 Pandemic Response (continued)

Unanticipated impacts as a result of this global pandemic have been prominent around **decreased call volume, medical supply chain hardships**, and **clinical practice deviations** from normal patient care procedures and interventions. All of these have resulted in an increased need for personal protective equipment (PPE), process changes for COVID-19 symptom screening, and social/physical distancing measures affecting all aspects of an otherwise relatively close-contact industry.



Skagit County EMS worked in coordination with the EMS Medical Program Directors, Public Health Department, and EMS provider agencies to adopt aggressive changes to our PPE requirements, and to increase decontamination and cleaning processes in ambulances and other emergency vehicles as well as fire stations to prevent additional spread of the virus. This required an extensive amount of planning, partnership, and collaboration between multiple agency's, external stakeholders, supply vendors, and local, state, and national subject matter experts.

We are fortunate to have had an engaged and committed group of stakeholders that was able to work together to help ensure an adequate supply of both disposable and re-usable personal protective equipment as well as decontamination equipment and other infection control supplies for use by EMS providers.

We owe a special "Thank You" to Burlington Fire Department for their assistance in producing a public education video for the Conversations COVID-19 Series on the impacts of COVID-19 on First Responders.



Training & Education

As you can imagine, COVID-19 was the focus of EMS training and ongoing education in 2020. Skagit County EMS personnel completed numerous hours of virtual learning assignments to keep them updated on the ever evolving pandemic and impacts on EMS operations. The material that was covered included donning and doffing of personal protective equipment, decontamination and infection control to prevent disease transmission and continuous updates on best practices to stay safe while providing effective patient care.

Following industry best practices and expert guidance, in-person psychomotor skills training for EMS personnel in Skagit County was suspended during a majority of the COVID-19 pandemic as a preventative measure to help keep all providers healthy



and ensure the capacity and functionality of the EMS system.



Whenever possible, alternative methods were used to conduct essential training virtually, remotely, or in small groups with personal protective equipment and social distancing measures in place.

The 2020 spring EMT course was cancelled due to COVID-19. After re-tooling the course to a hybrid format, the fall EMT course sponsored by Skagit County EMS and conducted at Skagit Valley College were successful with 24 of students completing the program! The course was

held using a blended virtual learning / socially distanced hands-on practical format to protect the health and safety of students and staff. Due to the diligence of SVC staff and course participants, there were no exposure incidents related to the EMT course.

Initial EMS Credential Applications Processed: 25 EMT, 3 Paramedic

Recertification Applications Processed: 9 Emergency Medical Responder, 22 EMT, 9 Paramedic

Training & Education (continued)

With social distancing requirements and restrictions on indoor gatherings, crews from Burlington and Mount Vernon Fire Departments took advantage of several days of nice weather for some outdoor helicopter landing zone training with our three primary air transport providers: Airlift Northwest, Life Flight Network, and NAS Whidbey SAR.

The nearest Air transport providers to Skagit County are based in Coupeville, Arlington, Bellingham, and Oak Harbor.

Skagit County EMS providers can utilize air transport resources when patient condition requires rapid transport to a specialized facility such as Harborview Medical Center, the Level I Trauma Center or Children's Hospital in Seattle, when vehicle access to the patient is not possible, such as a wilderness location, or when there would otherwise be a long ground transport time.

Safety is of the highest importance when conducting helicopter operations and this training allows crews to review and practice landing zone setup, radio communication with the pilot and flight crew, and safe approach to the aircraft for transfer of patient care.

We appreciate the engagement of our air transport providers and their willingness to help us to ensure we are prepared in the event we need to utilize their services to expedite the transport of a high acuity EMS patient from the field.



Awards & Recognition



Dr. Ron Richeson Life Saver Awards

Katelynn Mathias

Sabrina Frank

Elizabeth Hillaire

Jerry Gardner

Ryan Tesarik

Shannon Moore

Angela Ochs

Jobina Moran

Pat Huggins

Rogene Seidel

Gavin Grant

Vicki Royal

Laurie Fellers

Sedro-Woolley High School Students and Staff
For their role in a successful cardiac arrest resuscitation incident at Sedro-Woolley High School (February 2020).

Letters of Recognition

- ⇒ **Deputy Emily Passovoy, SCSO** for her role in a successful cardiac arrest resuscitation incident (May 2020)
- ⇒ **Deputy Josh Murdock, SCSO** for his role in a successful cardiac arrest resuscitation incident (June 2020)
- ⇒ **EMT Dominic Herrick and Lake Cavanaugh Fire Department** for their outstanding performance in the rapid treatment of a trauma patient (July 2020)
- ⇒ **Deputy Chris Rogers** for his assistance on a high acuity EMS call in a rural part of the county (September 2020)

Stork Pins

- ⇒ **EMT Dylan Witzel, Sedro-Woolley Fire Department** for his role in the field delivery of newborn during transport to the hospital (June 2020).
- ⇒ **Paramedic Steve Larsen, EMT Sonny Taylor, EMT Helen Ovenell, Aero Skagit** for their role in the delivery of newborn twins during transport to the hospital (November 2020).
- ⇒ **Blair Wilds, Skagit 911 Dispatcher** for his role in the delivery of a newborn over the phone (December 2020).



Notable Events

Spillman Quickest Routes Module Implementation	July 2020	Software implementation at Skagit 911 to allow the 911 CAD system to determine the closest appropriate EMS unit to respond to a call based on actual drive time and driving route from its current location.
International Academies of Emergency Dispatch Emergency Medical Dispatch Certification Completed	November 2020	Required certification for all Skagit 911 dispatchers to utilize ProQA. Designed to ensure that high standards of customer service, care, and public safety are met during EMS call-taking.
ProQA Criteria Based Dispatch Implementation	December 2020	Software implementation at Skagit 911 to standardize EMS call-taking, utilize accredited protocols and provide effective data collection and quality assurance measures.

2021 Strategic Objectives

TRAINING

- ◆ Data-Driven Training Initiatives
- ◆ High-Fidelity Mannequin Simulation Training
- ◆ Mass Casualty Incident Plan & Scenes of Violence Policy
- ◆ COVID-19 Vaccination Administration

QUALITY

- ◆ New Video Laryngoscope Evaluation
- ◆ Protocol Update and Integration of Evidence-Based Practices
- ◆ Continued Standard Operating Guideline Development
- ◆ Hospital Data Exchange Implementation



COMMUNITY

- ◆ Patient Utilization Review & Partnerships
- ◆ Explore Community Risk Reduction & Engagement Opportunities
- ◆ Participation in Opioid Workgroup Leadership Team (OWLT) and Population Health Trust (PHT) Advisory Board

PLANNING

- ◆ EMS System Strategic Planning and Stakeholder Collaboration
- ◆ Ambulance Transport Rate Evaluation
- ◆ CAAS Accreditation Preparation



Skagit County Emergency Medical Services

2911 East College Way, Suite C

Mount Vernon, WA 98273

Phone: 360-416-1830

Email: emedservices@co.skagit.wa.us