

Skagit County
Department of Emergency Medical Services



2021 **ANNUAL**
REPORT

Josh Pelonio, Director

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Introduction



The Skagit County Emergency Medical Services (EMS) System is a primarily fire-based system that serves the greater Skagit County area. EMS transport provider agencies along with our fire department and fire district partners work together to provide effective emergent first response and ambulance transport to definitive care, when necessary.

EMS transport provider agencies typically staff a total of up to 10 Advanced Life Support transport units available 24 hours a day, 7 days a week across Skagit County. These units are supplemented by several Basic Life Support transport units and a number of Basic Life Support first response (non-transport) units. The system responded to approximately **16,500** EMS calls for service in 2021 with approximately **9,000** total ground and air ambulance transports to area hospitals for further care.



The Skagit County EMS System strives to be a high-performance EMS system providing efficient, effective, cutting edge medical care in a timely manner, with great concern for the community we serve. While COVID-19 has continued to test our region, it is the nature of EMS to adapt and overcome challenges in order to serve the health and safety of our community.

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**
- **Collaboration and participation in local, regional, and state stakeholder groups**

Vision

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

Director's Message



I am pleased to present the Emergency Medical Services (EMS) Department 2021 Annual Report to the Skagit County Board of County Commissioners and community.

Last year, our annual report highlighted our collaborative work with our partner agencies and various EMS system stakeholders to tackle the unprecedented COVID-19 public health crisis. Unfortunately, COVID-19 continued to challenge us through 2021 but once again, our EMS personnel demonstrated their resilience and dedication to the communities they serve.

Following breakthroughs in vaccine research and development, EMS personnel across Skagit County once again stepped up in 2021 to provide support to our Public Health Department in COVID-19 vaccine administration. Numerous EMT's and Paramedics completed specialized training and participated in mass vaccination sites and mobile vaccination efforts for months on end. We continue to remain flexible and adaptive to the health needs of the community as we look forward to seeing the COVID-19 Pandemic in the rear-view mirror and focusing on community recovery and getting back on track with some of our EMS System strategic objectives.

In 2021 we made progress on several major projects including: implementing a hospital data exchange with Skagit Regional Health to provide patient outcome information back to EMS providers, evaluating a new video laryngoscope device for Paramedic advanced airway intervention, starting an EMS Naloxone Leave Behind Program as a community harm reduction measure in partnership with Skagit County Public Health, and laying the foundation for an effective partnership to provide a tactical EMS support program within the Skagit County Sheriff's Office.

As always, 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 Emergency Medical Services in Skagit County.

Respectfully,



A handwritten signature in black ink, appearing to read "J. Pelonio".

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

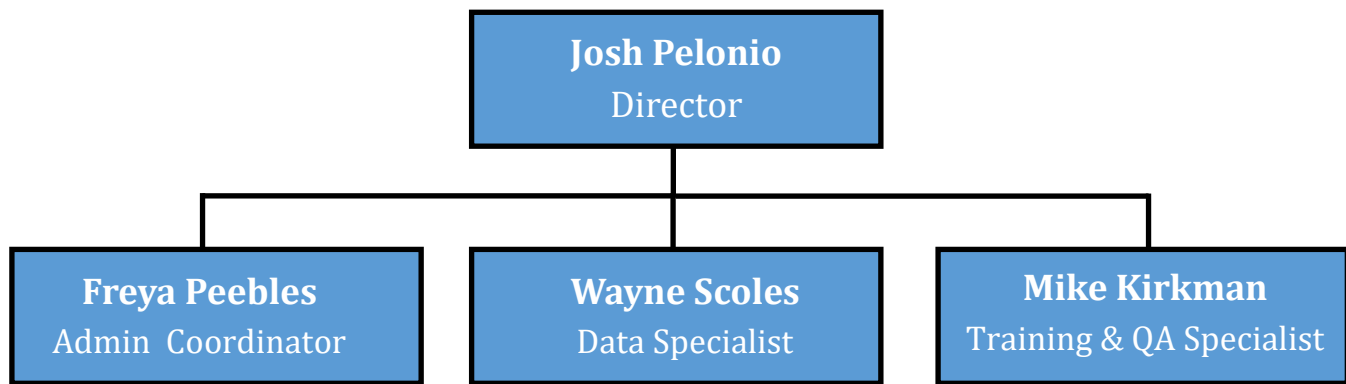


EMS Department Overview



The Skagit County Department of Emergency Medical Services (EMS) 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 facilitating collaboration among EMS system stakeholders, overseeing EMS credential initial issuance and recertification, and providing administrative support to the EMS Physician Medical Program Director and delegate EMS Physician Medical Program Director.

Skagit County EMS has 4 full-time administrative staff that consist of the following:



EMS System Overview



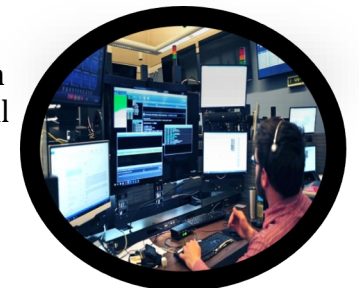
EMS System Access

A patient or bystander accesses the EMS system by dialing 9-1-1. Early recognition and access to 911 can have a significant impact on the outcome of the patient.



Emergency Medical Dispatch Triage

Calls received by the regional public safety answering point (Skagit 9-1-1) are answered by dispatchers who are certified in Emergency Medical Dispatch (EMD). Following medically approved guidelines, dispatchers determine the most appropriate response required based on the information provided. They also provide pre-arrival instructions for most serious medical emergencies including telephone CPR, emergency childbirth, bleeding control and more.



Tier One Response—Basic Life Support (BLS) First Response

Many times it is Fire Department or Fire District Firefighter/EMTs who arrive first on the scene of medical calls. EMTs perform patient assessment, begin appropriate interventions, request additional resources when needed, and relay pertinent information to other responding units including Advanced Life Support (Paramedic) units.



Tier Two Response—Advanced Life Support Response

There are five Advanced Life Support provider agencies in Skagit County who respond to provide additional advanced patient care assessment and intervention and transport to the hospital when needed.

Transfer to Definitive Care

Once a patient is initially evaluated and stabilized, EMS personnel determine whether transport to a hospital for further medical treatment is needed. Transport may be provided by an approved BLS agency, an ALS agency, or in some cases the patient may be transferred to an air ambulance provider for transport to a further away or specialized hospital for their condition.



EMS Medical Direction



EMS Medical Program Director

The Medical Program Director (MPD) is a physician appointed by the Washington State Department of Health who is recognized to be knowledgeable in their county's administration and management of pre-hospital emergency medical care and services. The MPD has the ultimate responsibility for all activities in the EMS system including clinical oversight, developing written patient care guidelines, directing patient care, and being a conduit of information from local EMS and Trauma systems to state staff for purposes of training, certification, audit, and if necessary, discipline of EMS providers.

MPD duties are required by statute [RCW 18.71.212](#) and are described in [WAC 246-976-920](#).

Skagit County contracts with two local 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

EMS Medical Control

Medical control by local Emergency Department physicians for the purposes of "on-line" medical control is authorized in writing by the Skagit County MPD and filed with the Department of Health [[WAC 246-976-920\(2\)](#)].

Medical control may be contacted at any point during EMS patient care, and if a patient's condition is unusual and is not covered by a specific guideline. When a patient's presentation is atypical and the guideline treatment may not be the best treatment for the patient or in any situation where the EMS provider is not sure about the best treatment for the patient, Medical Control contact is indicated for consultation and direction.



EMS System Partners



Skagit County has interlocal agreements in place with all fire districts and departments in Skagit County as well as Aero Skagit Emergency Service in Concrete to provide EMS first response and transport services across Skagit County.

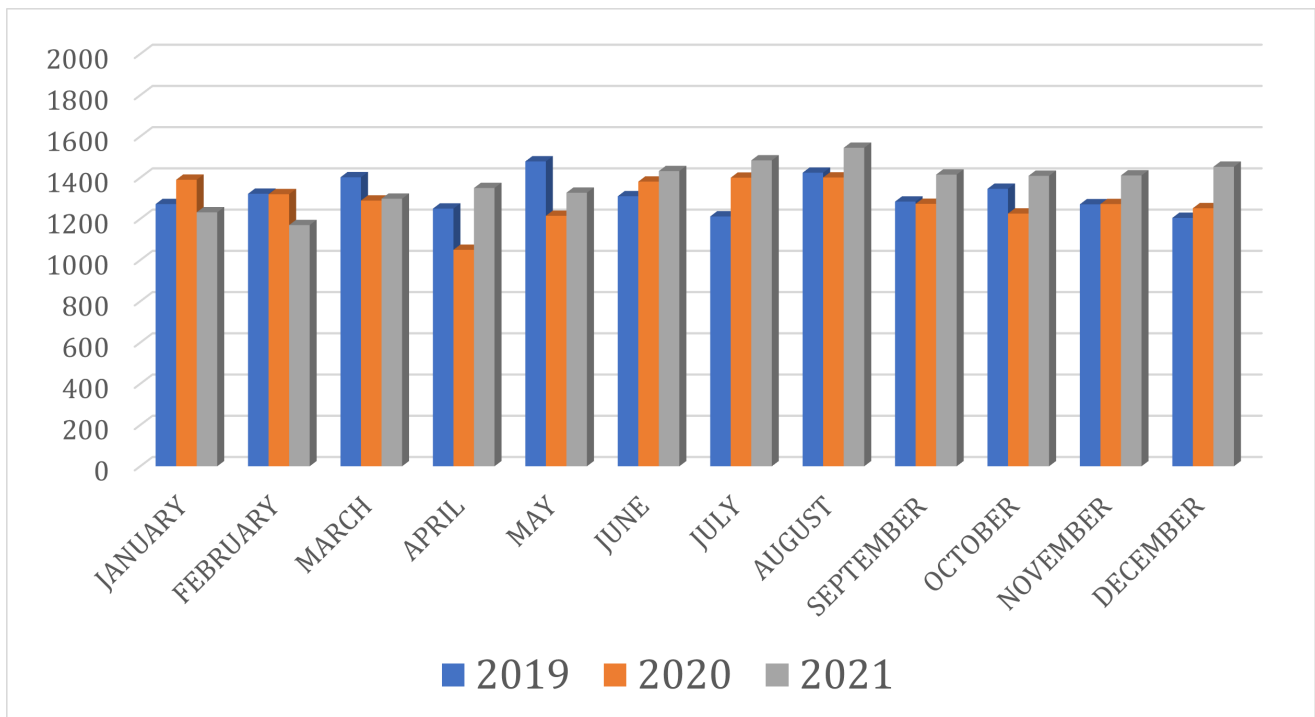
Aero Skagit Emergency Service	AMBV.ES.00000596 (ALS)
Anacortes Fire Department	AMBV.ES.00000590 (ALS)
Burlington Fire Department	AMBV.ES.60528123 (ALS)
Mount Vernon Fire Department	AMBV.ES.60013201 (ALS)
Sedro-Woolley Fire Department	AMBV.ES.60456686 (ALS)
Skagit County Fire District #2	AIDV.ES.00000567 (BLS)
Skagit County Fire District #3	AIDV.ES.00000568 (BLS)
Skagit County Fire District #4	AIDV.ES.00000569 (BLS)
Skagit County Fire District #5	AIDV.ES.00000570 (BLS)
Skagit County Fire District #6	AIDV.ES.00000571 (BLS)
Skagit County Fire District #7	AIDV.ES.00000572 (BLS)
Skagit County Fire District #8	AIDV.ES.00000573 (BLS)
Skagit County Fire District #9	AIDV.ES.00000574 (BLS)
Skagit County Fire District #10	AIDV.ES.00000575 (BLS)
Skagit County Fire District #11	AIDV.ES.00000576 (BLS)
Skagit County Fire District #12	AIDV.ES.00000577 (BLS)
Skagit County Fire District #13	AMBV.ES.60551218 (BLS)
Skagit County Fire District #14	AMBV.ES.60797919 (BLS)
Skagit County Fire District #15	AIDV.ES.00000580 (BLS)
Skagit County Fire District #16	AIDV.ES.00000581 (BLS)
Skagit County Fire District #17	AIDV.ES.00000582 (BLS)
Skagit County Fire District #19	AIDV.ES.00000567 (BLS)
Hamilton Fire Department	AIDV.ES.00000591 (BLS)
La Conner Fire Department	AIDV.ES.00000592 (BLS)
Concrete Fire Department	AID.ES.60470555 (BLS)
Skagit County Sheriff's Office Search & Rescue	AID.ES.00000600 (BLS)
Skagit County Sheriff's Office & Skagit County EMS	ESSO.ES.61051376

EMS System Call Volume



EMS Call Volume by Month and Year

MONTH	2019	2020	2021
JANUARY	1272	1390	1232
FEBRUARY	1322	1320	1170
MARCH	1402	1289	1298
APRIL	1250	1050	1350
MAY	1479	1215	1327
JUNE	1310	1381	1432
JULY	1212	1400	1484
AUGUST	1424	1401	1545
SEPTEMBER	1284	1273	1415
OCTOBER	1346	1226	1409
NOVEMBER	1271	1272	1411
DECEMBER	1205	1252	1453
TOTALS:	15,777	15,469	16,526



EMS Incident Heat Maps

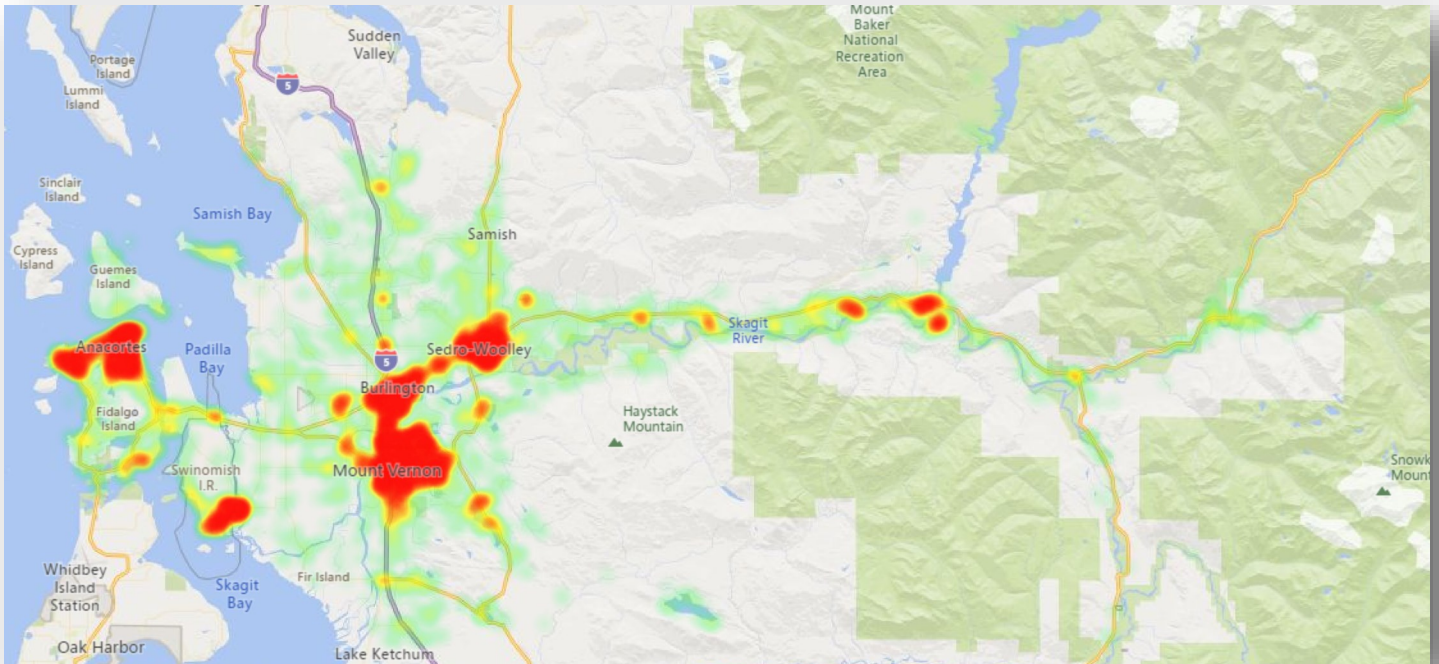


EMS Incidents by Day of Week and Time of Day

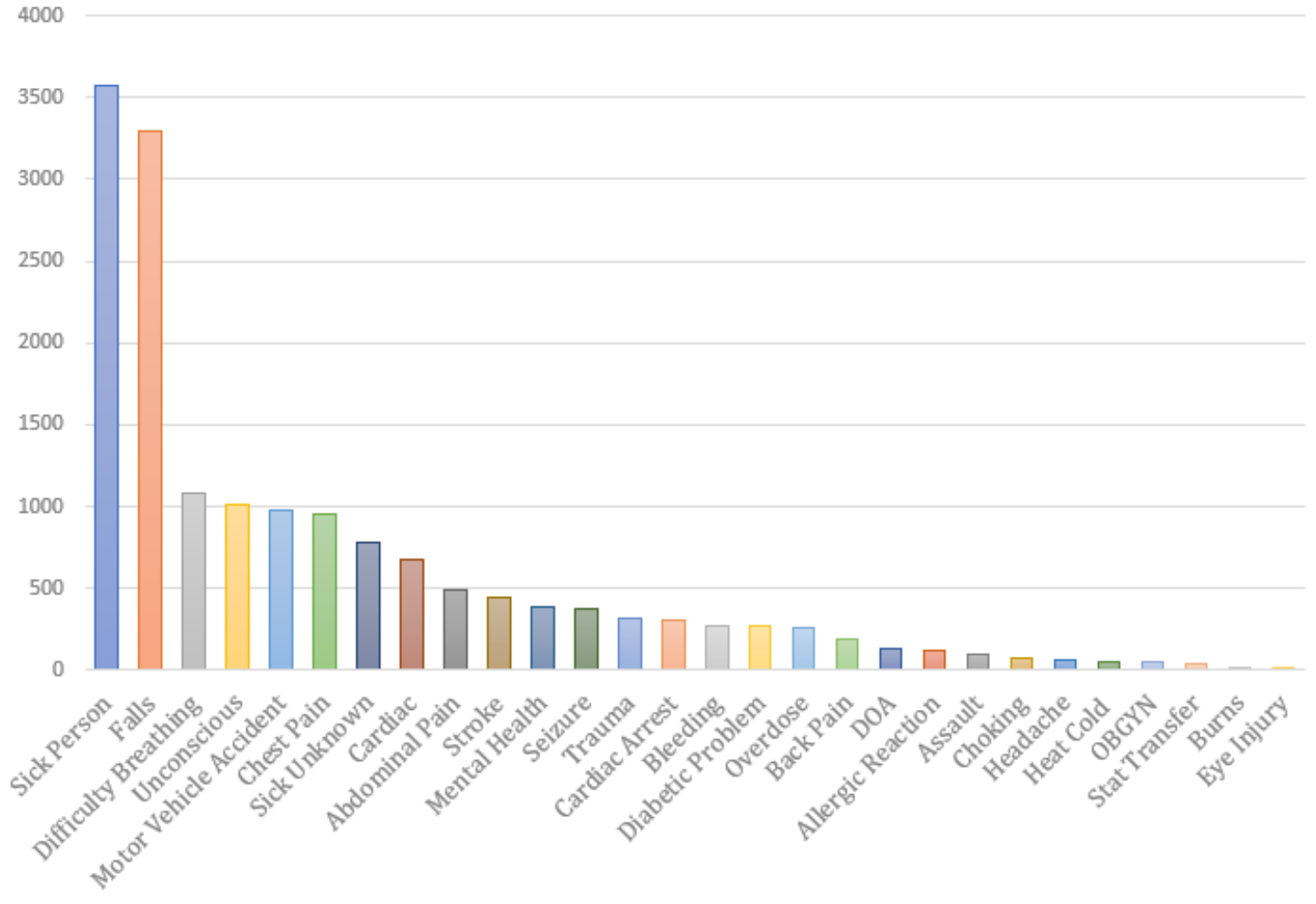
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Sunday	70	80	52	46	52	36	59	75	87	93	110	117	109	99	114	123	118	104	116	106	95	91	78	62
Monday	64	48	59	41	39	59	55	75	94	128	130	124	124	118	125	134	150	123	136	100	100	98	79	73
Tuesday	64	60	50	41	42	52	54	91	90	131	133	108	123	168	115	123	132	130	148	119	97	98	65	47
Wednesday	52	52	37	54	40	55	52	82	73	116	106	140	128	142	122	129	132	135	123	101	94	92	63	50
Thursday	39	53	42	41	49	54	57	72	110	124	149	125	125	140	128	126	131	113	106	116	88	76	88	62
Friday	68	55	50	44	42	53	75	77	96	97	132	133	120	114	152	151	146	138	136	112	132	110	84	68
Saturday	58	55	39	45	43	53	61	65	89	96	108	151	127	126	134	108	106	116	100	98	107	90	90	71

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EMS Incidents by Location



EMS Incidents by Dispatch Nature



EMS Quality Assurance & Improvement



Skagit County EMS in coordination with the EMS Medical Program Director is responsible for maintaining a quality assurance and quality improvement (QA/QI) process to monitor the performance and clinical care provided by EMS provider agencies in Skagit County. The EMS QA/QI process is linked to the EMS continuing education process and helps us to identify both system-wide training priorities and opportunities to improve policies, protocols, and standard operating guidelines to better meet performance expectations and support EMS providers.

Another important component of the EMS system and the QA/QI process is the Emergency Medical Dispatch (EMD) triage program at Skagit 911. Skagit County EMS works closely with Skagit 911 administration to review EMD protocols and specific incidents and implement changes when necessary through the Dispatch Steering Committee (DSC). The DSC is comprised of various EMS system stakeholders.



In addition, Skagit County EMS participates in a QA/QI committee at the regional level which includes EMS providers and hospitals within the North Region comprised of Snohomish, Skagit, Whatcom, Island, and San Juan Counties.

The Washington State Department of Health is currently in the process of revising the statewide EMS Key Performance Indicators (KPIs). This list of performance measures is intended to be a standard by which EMS systems can be compared based on specific clinical areas. The current clinical areas included in the Washington State KPIs are:

- ◆ Critical Trauma Patient Management
- ◆ Heart Failure Patient Management
- ◆ Asthma Patient Management
- ◆ Seizure Patient Management
- ◆ Acute Coronary Syndrome/Chest Pain Patient Management
- ◆ Stroke/Transient Ischemic Attack (TIA) Patient Management
- ◆ Cardiac Arrest Patient Management
- ◆ Advanced Airway Patient Management

We continue to work with our EMS system partner agencies and our electronic patient care reporting system vendor to optimize the collection and quality of EMS data so it can be used to track and trend by personnel, agency, and system and to ensure protocol compliance and clinical competency.

EMS Patient Transport



Skagit Valley Hospital

5,110 patients

Peace Health United General Hospital

1,999 patients

Island Hospital

1,840 patients

Peace Health St. Joseph Medical Center

18 patients

Providence/Harborview/Other

37 patients

9,004 total EMS patients transported



8,976 patients transported by ground ambulance



28 patients transported by air ambulance

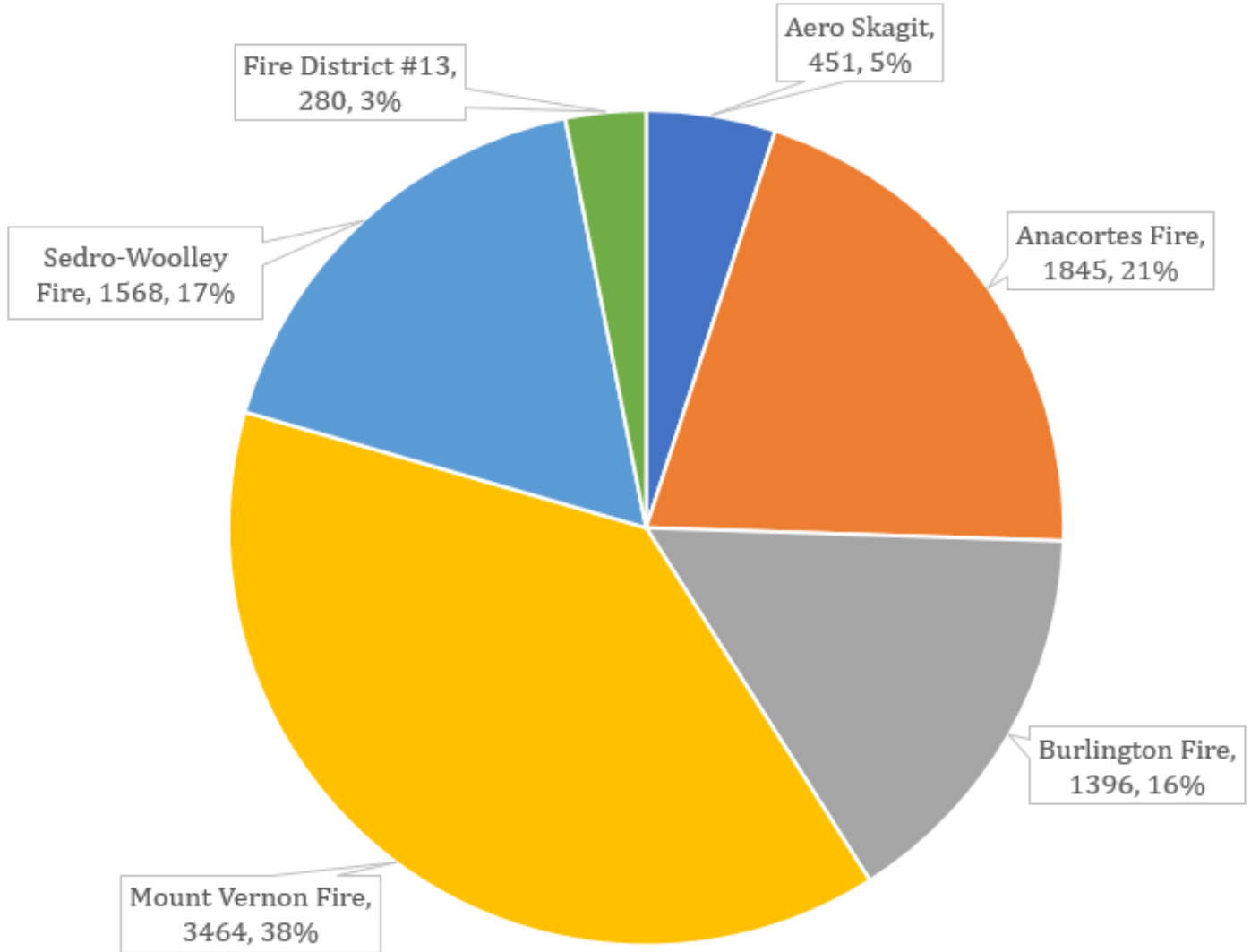
Hospital Emergency Departments in Skagit County Received 99% of transported EMS patients in 2021



Ground Ambulance Transport by Agency



EMS Transports by Agency



EMS Training & Education



Skagit County EMS is responsible for providing access for Skagit County agencies to an initial EMT training program through partnership with Skagit Valley College as well as providing a standardized county-wide Ongoing Training & Evaluation Program (OTEP) for EMS provider continuing education. We work collaboratively with regional EMS stakeholders and the EMS Medical Program Director to develop and support the curricula necessary to meet local, state, and national requirements as well as to meet industry best practice and emerging evolution in evidence-based medicine. In addition, Skagit County EMS serves as a liaison between Skagit County's 31 licensed EMS agencies and the Washington State Department of Health regarding initial certification, training program and course approval, recertification, and regulatory or policy updates that impact Emergency Medical Services agencies and personnel.

When COVID-19 presented challenges with in-person EMS training, we adapted to provide a mostly online didactic curriculum and virtual physician "run review" monthly presentations to ensure that integral training continued in a safe environment. Late in 2021 we were able to safely hold our first major in-person EMS training event with a "Difficult Airway" course for Advanced Life Support Providers. We look forward to starting back up more regular in-person EMS training as it becomes safe to do so.



EMS Certification & Recertification



The EMS Department is responsible for providing administrative assistance to the EMS Medical Program Director which includes processing EMS Training Course applications, initial EMS certification applications, and verifying compliance with continuing education requirements for EMS recertification applications.

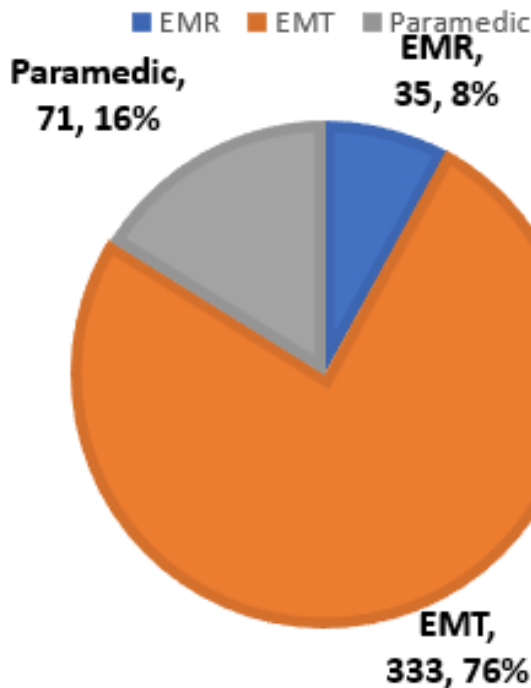
There are currently **2** Department of Health approved EMS Training Programs in Skagit County and there a total of **439 Credentialed EMS personnel** in Skagit County which includes: **35 Emergency Medical Responders, 333 Emergency Medical Technicians, and 71 Paramedics**. These personnel are affiliated with one or more of **31 licensed aid and ambulance agencies**.



In 2021, the Skagit County EMS Department processed the following:

- ◆ **15** EMS Training Course Applications (Includes initial EMR and EMT courses, EMS Evaluator initial and renewal, Supraglottic Airway, and IV Therapy)
- ◆ **48** Initial EMS Credential Applications (47 EMT and 1 Paramedic)
- ◆ **84** EMS Credential Recertification Applications (1 EMR, 64 EMT, 19 Paramedic)

**SKAGIT COUNTY EMS PERSONNEL
BY CERTIFICATION LEVEL**



EMS Naloxone Leave Behind Program



Skagit County EMS in partnership with Skagit County Public Health, the Washington State Department of Health and our EMS provider agencies launched an EMS Naloxone Leave Behind Program in 2021. The program is grant-funded through Department of Health and provides Naloxone at no cost to Skagit County.

Naloxone is a medication that can help save lives by reversing the effects of an opioid overdose. This program allows EMS personnel to provide Naloxone kits to at-risk individuals, an involved bystander, or the family or friends that are at-risk of witnessing an opioid related overdose.

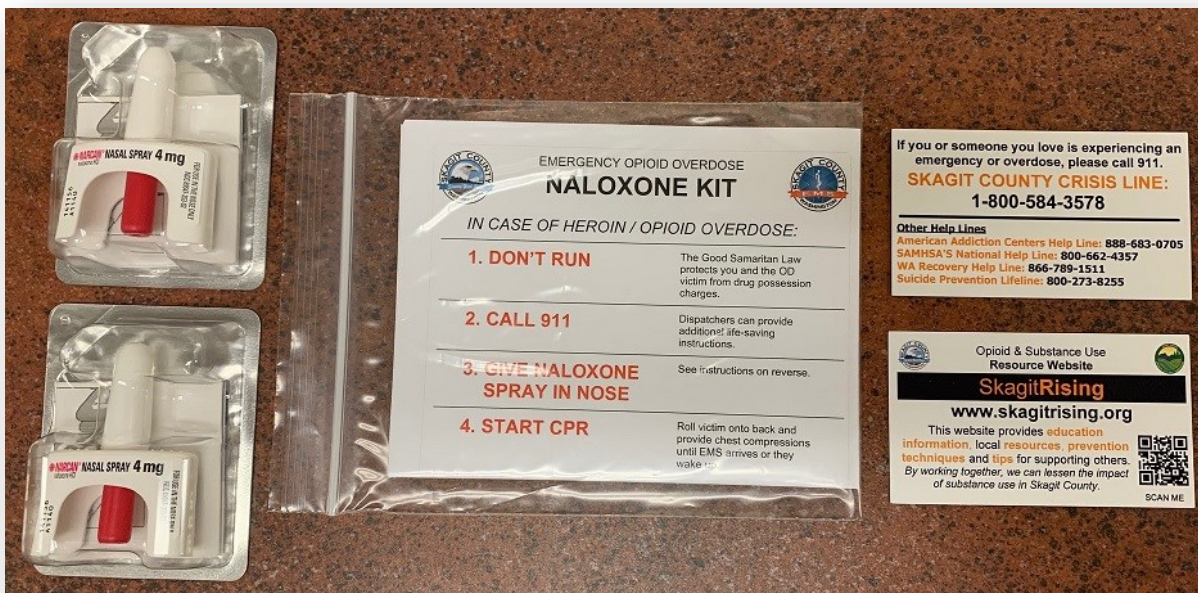
Each kit contains 2 doses of Naloxone nasal spray along with instructions for use and a resource card containing contact information for those wishing to pursue treatment for substance use disorder.

Skagit County EMS maintains a centralized reporting system to track the distribution of Naloxone Leave Behind kits as well as to notify Skagit County Public Health of any EMS contact with a known or suspected opioid overdose in accordance with Skagit County Ordinance [#020190001](#) requiring the reporting of health care incidents caused by an opioid overdose.



Washington State has several laws in place that protect those who intervene in an opioid overdose situation:

- [RCW 4.24.300](#) Immunity from liability for certain types of medical care (general public)
- [RCW 69.41.095](#) "Naloxone Law" – distribution, possession, and administration of naloxone among



Notable Events & Accomplishments



Development and Implementation of COVID-19 Vaccination Protocol for EMS

In early 2021, the Washington State Department of Health issued a policy allowing a temporary approval for credentialed EMS personnel to assist Public Health jurisdiction with COVID-19 vaccination. Vaccination administration is not normally within the scope of practice for EMS practitioners but the emergency declaration and temporary approval allowed us to provide specialized training and develop an MPD-approved protocol to support county-wide vaccination efforts.

Laerdal Sim Man High-Fidelity Mannequin Simulation Training

In April of 2021, 8 credentialed EMS evaluators attended a full day of simulation training on the Laerdal Sim Man ALS® purchased by Skagit County EMS through a previous North Region EMS and Trauma Care Council grant award from 2020. This simulation manikin allows EMS providers to participate in high-fidelity psychomotor training and perform low-frequency, high-risk interventions in a safe and controlled environment.

Ambulance Transport Rate Schedule Update (Resolution [R20220001](#))

After reviewing historical billing data for the past several years as well as comparable data from other public sector ambulance transport agencies in Washington State and surrounding states, the EMS Department in collaboration with the ambulance transport agencies presented a revised ambulance transport rate schedule to the Board of County Commissioners. The Board approved the revision in December 2021 and the new transport rates went into effect on January 1, 2022.

Hospital Data Exchange (HDE) Implementation with Skagit Regional Health

In May of 2021 we finalized the implementation of a Hospital Data Exchange (HDE) with Skagit Valley Hospital through our electronic patient care reporting system platform. This integration allows EMS providers and the EMS Medical Program Director to receive patient outcome information on patients who are transported including discharge diagnosis and other data elements that can be useful for training, quality assurance, and protocol development purposes.

North Region EMS & Trauma Care Council Grant Award

Skagit County EMS applied for and was awarded a grant in the amount of \$6,416.04 to fund the purchase and deployment of 6 Bleeding Control Kits. Each kit contains tourniquets, pressure bandages, chest seals, and other supplies for response to multiple patient traumatic incidents.

Video Laryngoscope Device Evaluation

Skagit County introduced video laryngoscopy as an advanced airway intervention for Paramedics around 2016. Recognizing that the original devices implemented in Skagit County were nearing the end of their useable life and that technological advancements have created additional options, in 2021 we conducted an evaluation with Paramedics from all of our advanced life support agencies to select a new device for use in Skagit County to be implemented in 2022.

2022 Strategic Objectives

TRAINING

- ◆ OneScope® Video Laryngoscope training and implementation
- ◆ Mass Casualty Incident (MCI) Plan updates and training
- ◆ Patient care reporting guidelines updates and training
- ◆ Develop and provide training on protocol / program for Rehab of Responders and Emergency Scenes

QUALITY

- ◆ Advanced airway procedure QA review following implementation of OneScope® Video Laryngoscope
- ◆ Protocol Update and Integration of Evidence-Based Practices
- ◆ Continued Standard Operating Guideline Development
- ◆ Patient care data quality optimization



COMMUNITY

- ◆ Patient Utilization Review & Partnerships
- ◆ Explore additional community risk reduction & engagement opportunities

PLANNING

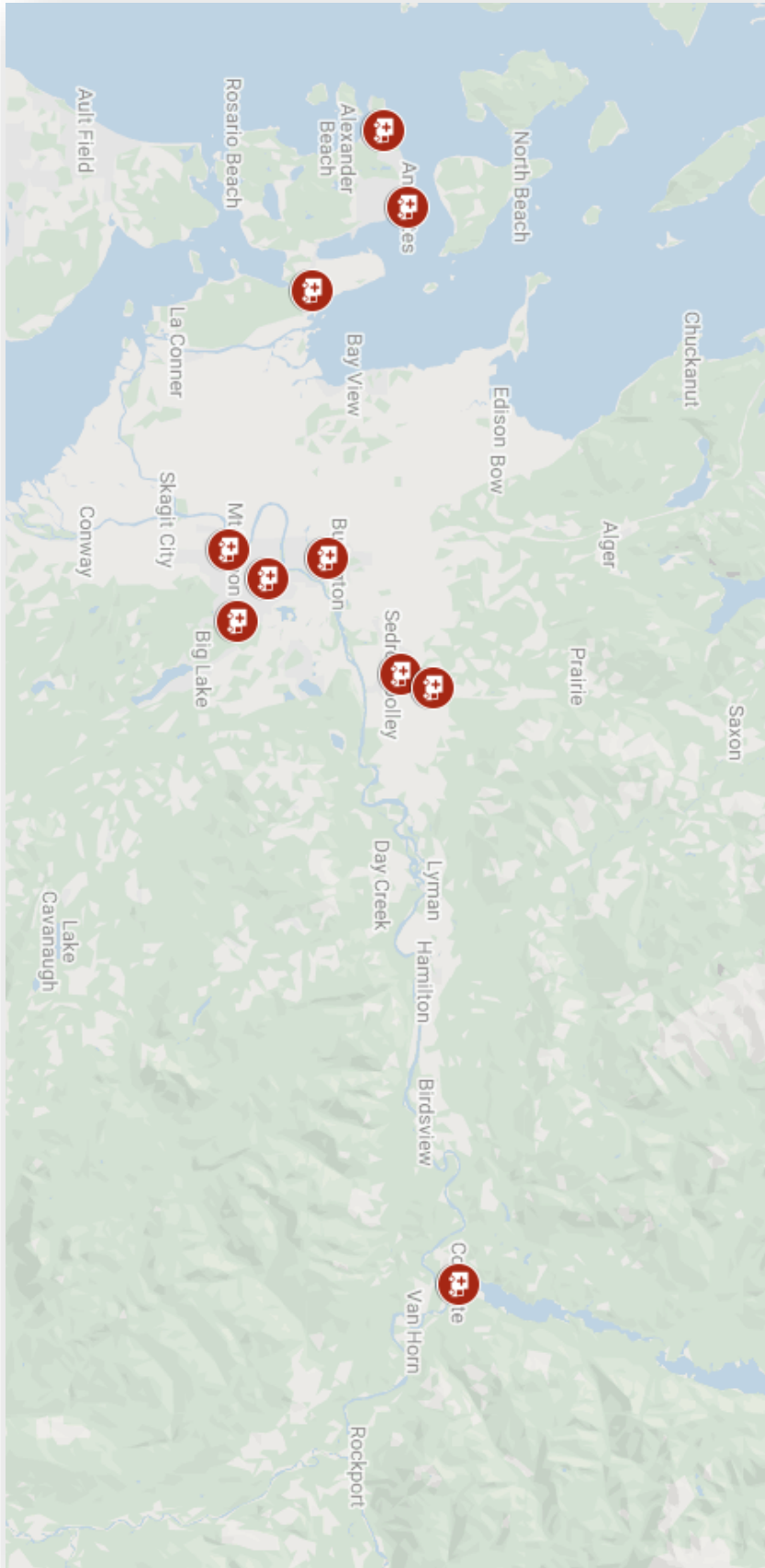
- ◆ EMS System / Levy cycle Strategic Planning and Stakeholder Collaboration
- ◆ CAAS Accreditation Preparation

Appendix X: EMS & Trauma Care Advisory Board Members

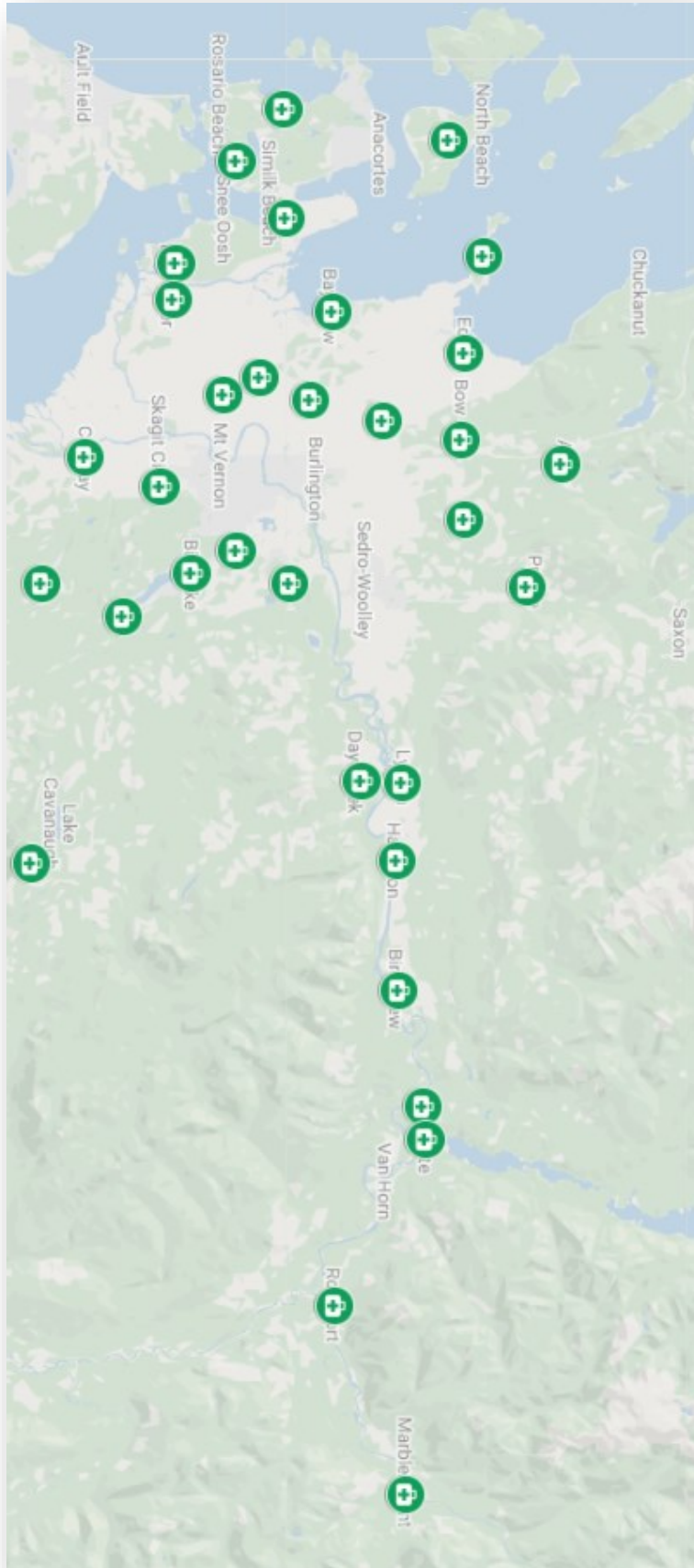


Name	Representation	Title/Organization
Lisa Edwards	Local Hospital	Island Hospital
Kandi Devenere	Local Hospital	Regional Director, Emergency Services,
Wood Weiss	BLS Transport Provider	Chief, Skagit County Fire District #13
Bryan Brice	ALS Transport Provider	Chief, Mount Vernon Fire Department
Dan Laine	ALS Transport Provider	EMS Div. Chief, Burlington Fire Department
Kenny Bergsma	Rural Fire Responder or Agency Designee	Commissioner, Skagit County Fire District #2
Matthew Russell, MD	EMS Medical Program Director	Medical Program Director, Skagit County EMS
Josh Pelonio	EMS Director	Director, Skagit County EMS
Sandra Jensen	Consumer	Administrator, Country Meadow Village
Steve Sexton	Elected Official—City Pop. >7,500	Mayor, City of Burlington
Eddie Hills	Elected Official—Town Pop. <7,500	Mayor, Town of Lyman
Peter Browning	Elected Official—County Commissioner	Commissioner, Skagit County District 2
Amie Tidrington	Prevention Specialist	Correctional Health Manager,
Lisa Janicki	Skagit 911 Board Chair	Commissioner, Skagit County District 3
Jared Couch	Law Enforcement	Chief, Upper Skagit Tribal Police

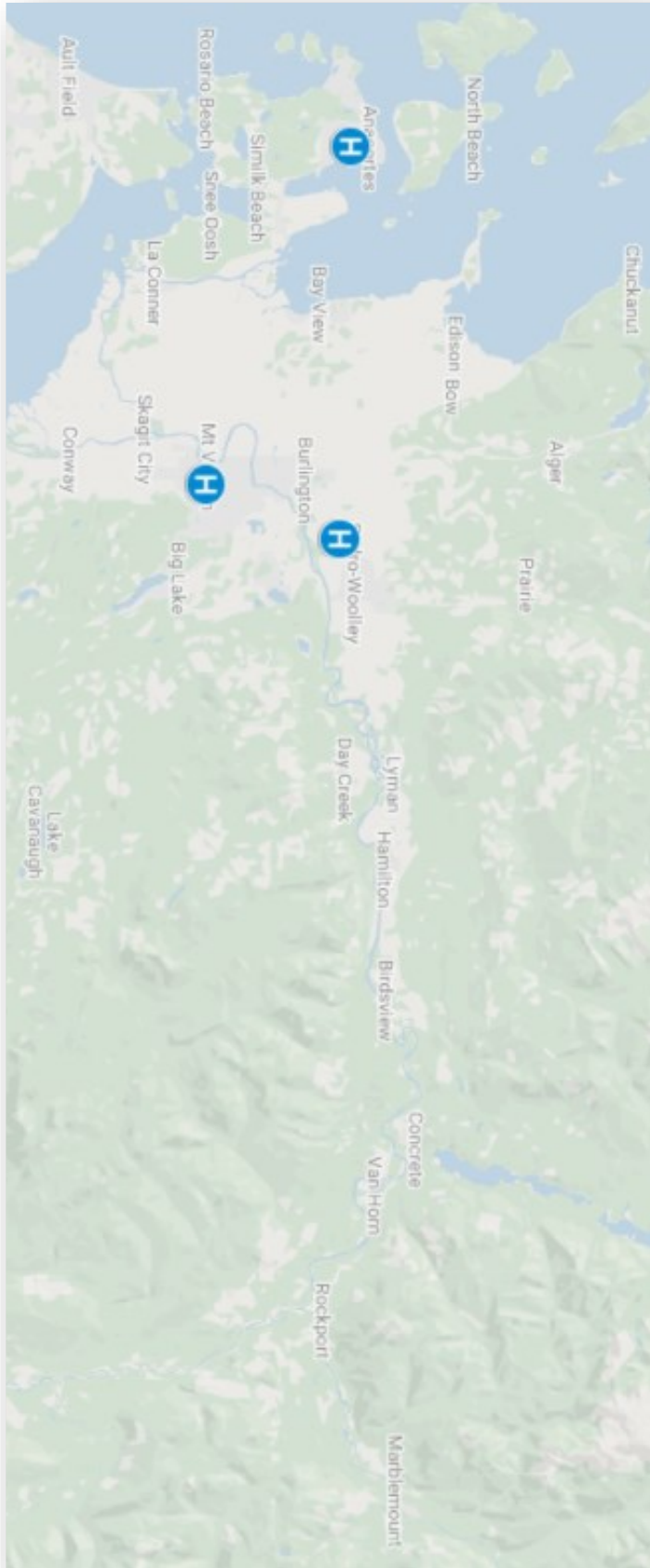
Appendix X: Advanced Life Support Provider Locations



Appendix X: Basic Life Support Provider Locations



Appendix X: Skagit County Hospitals





Skagit County Emergency Medical Services

2911 East College Way, Suite C

Mount Vernon, WA 98273

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