

# Whatcom County Emergency Medical Services

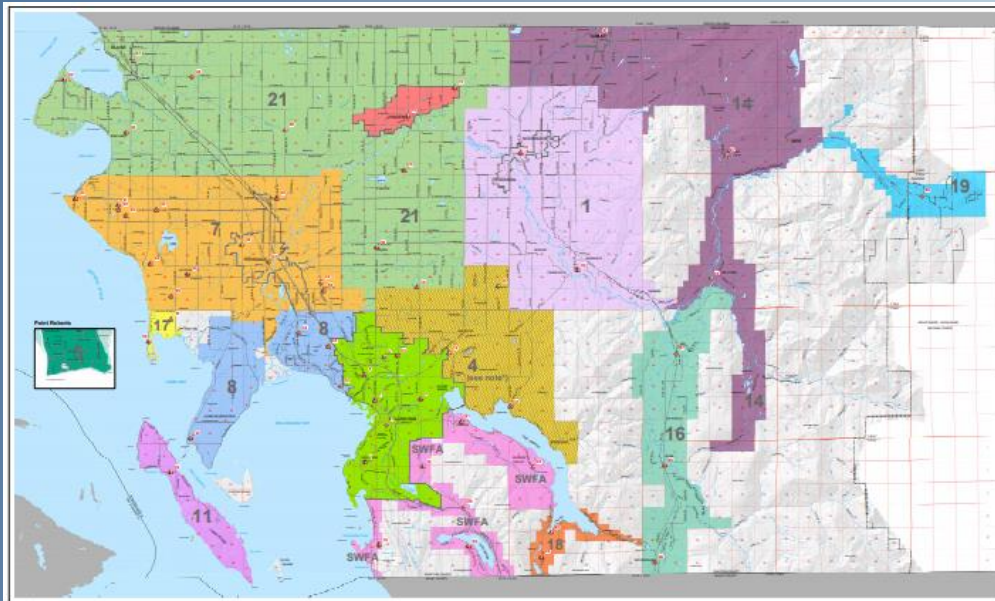


2019

2019 Annual report

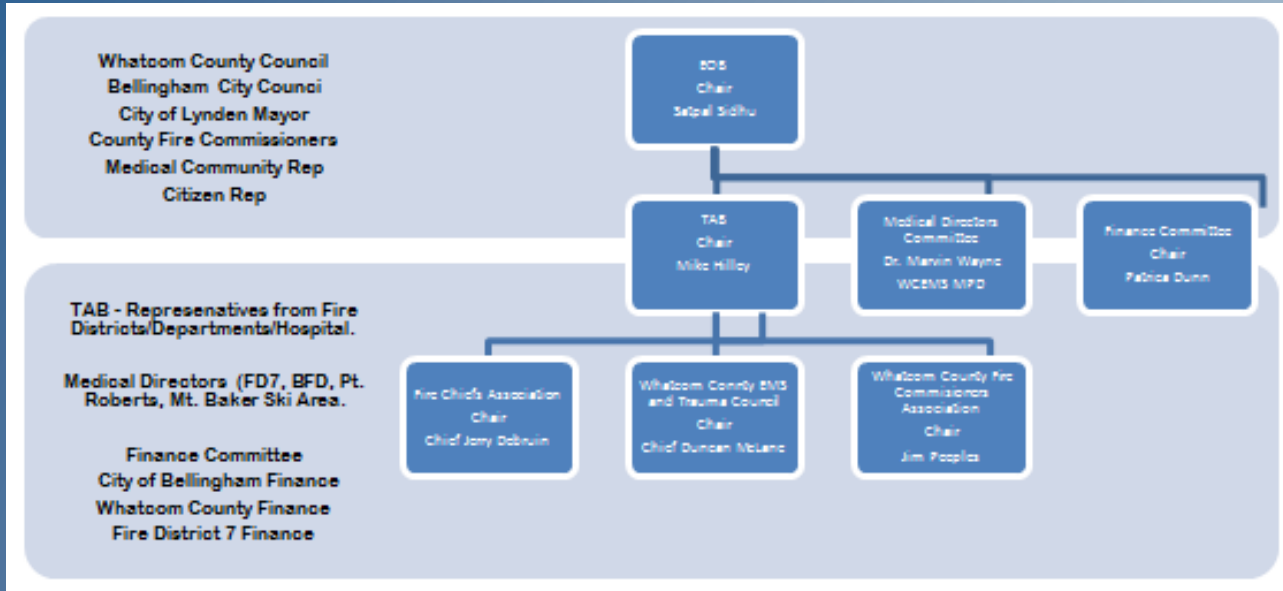
# SYSTEM OVERVIEW

- ▶ **Advanced Life Support (ALS)** Paramedic services are provided by the Bellingham Fire Department and Ferndale Fire District 7 serving Whatcom County.
- ▶ **Basic Life Support (BLS)** services are provided by the various fire districts through an integrated network of both paid and volunteer Emergency Medical Technicians (EMT's) or Firefighter/EMT's that serve those communities.
- ▶ **Private Ambulance Companies** provide additional capacity for the 911 system by handling non-emergent and routine inter-facility transports. Cascade Ambulance is the primary provider of private ambulance services serving Whatcom County.

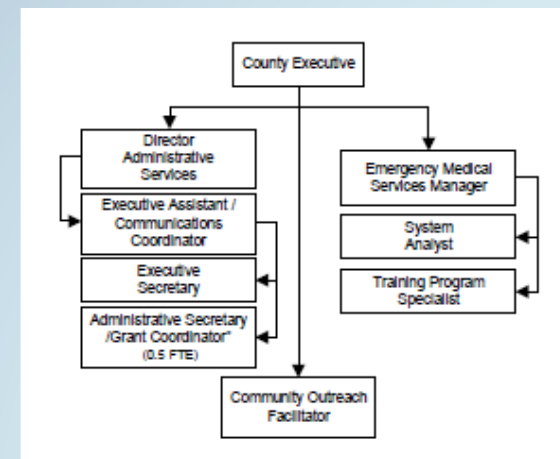


**4 Paramedic Units**  
**55 BLS Transport Units**  
**45 Paramedics**  
**670 EMT's**

# REGIONALLY OPERATED CITIZEN SUPPORTED MODEL



## Whatcom County Emergency Medical Systems (WCEMS)





# WCEMS 2019 Review of Programs

## Data and Records Management

- Image Trend and Julota

## Mobile Integrated Health

- Response to Homelessness
- Response to Opioid Epidemic
- Community Paramedics and Grace



- EMS Training and CQI Programs
- Community Outreach Programs
- Characteristics of Call Volume
- Budget Update
- 2020 21 Initiatives



# ELECTRONIC PATIENT CARE RECORDS SYSTEM (EPCR)

**IMAGETREND®**



Mobile Integrated Healthcare & Community Paramedicine



**Julota®**

## 2019 Hooley Awards Winners Announced at ImageTrend Connect

*“Whatcom County has made notifying local clinics about arriving overdose patients a priority. Using integrated solutions, they are able to alert a local clinic about ePCR involving overdoses. Within 1-2 hours of the clinic team receiving an alert from Image Trend Continuum, there is a face-to-face intervention with the patient where they look to refer or enroll that patient into the Community Paramedicine program. Whatcom County is making strides in using data and technology to benefit the community, patients and providers. Real-time alerts and critical timeliness of reaching patients is saving lives.”*



# MOBILE INTEGRATED HEALTH (MIH) AND COMMUNITY PARAMEDIC

## Total GRACE Population

January 2020 there are currently **95 Patients** listed as Active inside of Image Trend.

### Patient Mix:

Female = 49

Male = 42

Blank = 3

**95** Patients Seen By EMS More Than 16 Times

**101** Patients Seen By EMS More Than 5 and Less than 16

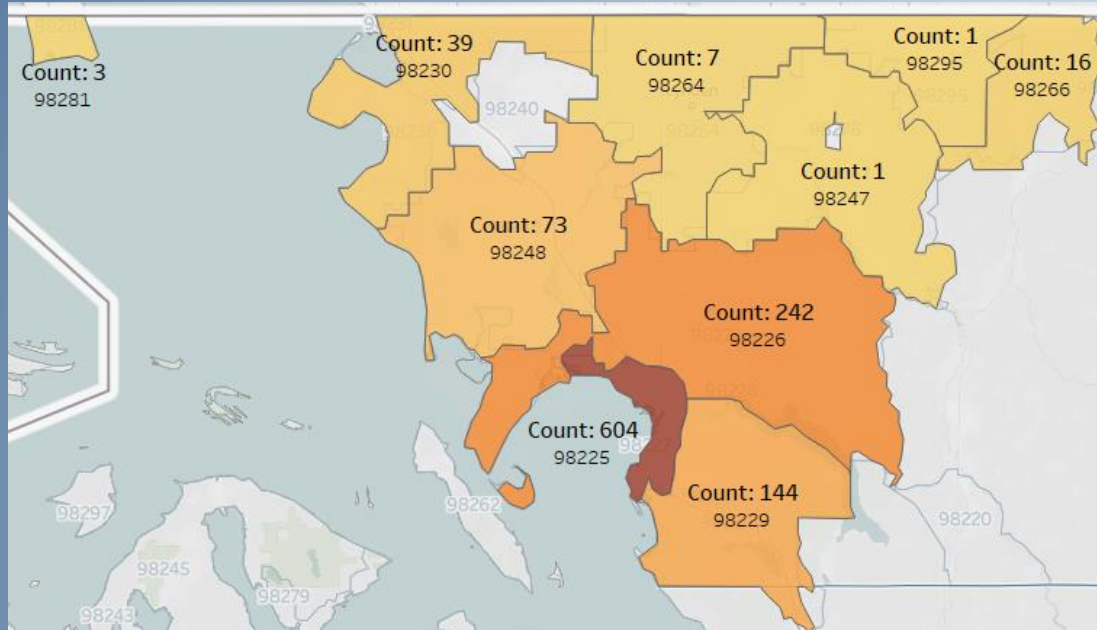
**207** Patients Seen By EMS More Than 4 and Less than 16

### Gender:

Youngest = 25 Years

Median Age = 56 Years

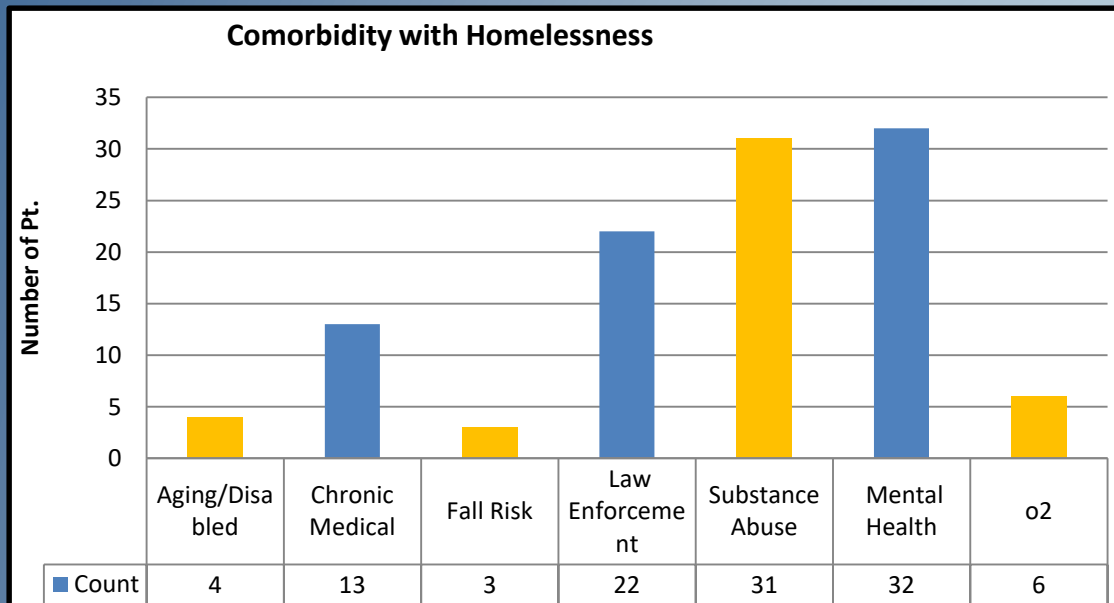
Oldest = 96



# EMS RESPONSE TO HOMELESSNESS

*First Responders frequently see patients who are homeless and have complicated medical problems. For the Community Paramedic and GRACE teams, this represents 41% of their enrolled patients.*

- Drop In Shelter Represents up to 5% of EMS Call volume.
- Almost 50% of the GRACE clients are homeless.



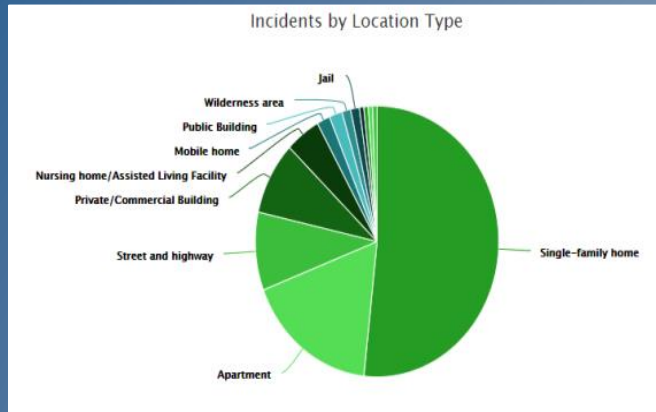
## **Opportunities Exist For Enhanced Services Through EMS.**

- **EMT on Staff at the Homeless Shelter.**
- **Employ Co-Responder Model For Crisis Diversion.**
- **Integrate HOT with Mobile Integrated Health (GRACE).**

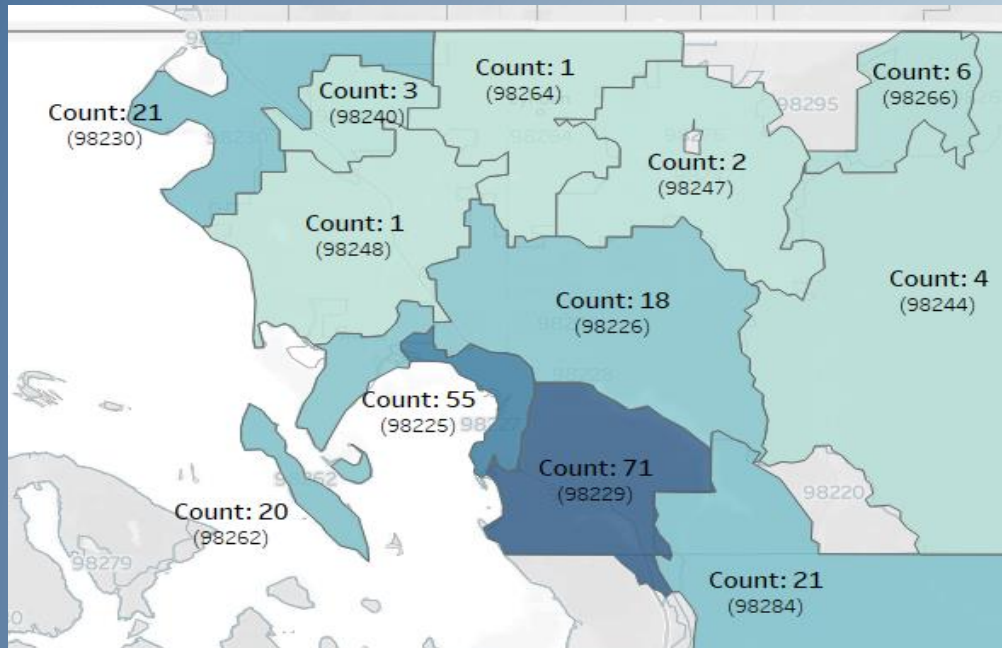


# WCEMS RESPONSE TO THE OPIOID EPIDEMIC

Whatcom Co. Fire Departments participate in the Narcan "Leave Behind" program.



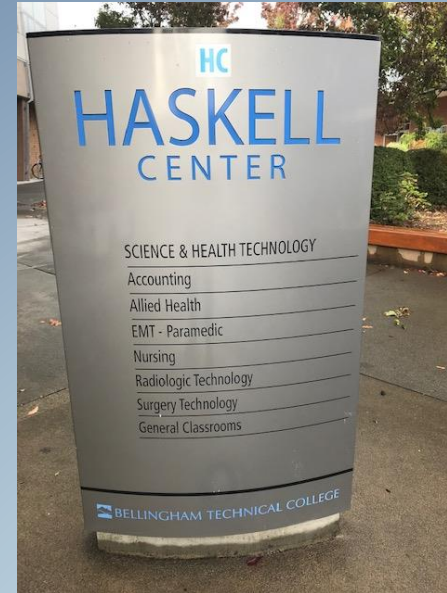
Approximately 40% of the patients revived with Narcan by responders will refuse transport against medical advice. First Responders offer to "Leave Behind" the kit along with education about the dangers of overdose and how to access services for treatment.





# WCEMS PARAMEDIC TRAINING PROGRAM

Paramedic education includes **656** classroom hours and an average of **1,315** clinical hours working with Paramedic preceptors, physicians and nurses at the hospital and at learning and simulation labs. Students provided care to more than **500** patients under the watchful eye of experienced Paramedics and Physicians where each student started an average of **150 IV's** and provided **22 intubations**.



Course Medical Program Director: Dr. Emily Junck  
Course Lead Instructor: Capt. Rob Stevenson

# BASIC LIFE SUPPORT TRAINING AND COORDINATION

## Whatcom County EMS & Trauma Care Council

The Whatcom County Emergency Medical Services and Trauma Care Council (WCEMSTCC) is a volunteer, non-profit organization incorporated October 16, 1972. The mission of the Whatcom County Emergency Medical Services and Trauma Care Council is to help reduce the morbidity and mortality associated with trauma and acute illness. The Education Committee directs training and quality improvement.

- Completed 2020 to 2023 BLS/ALS Training Plan.
- Deployed Learning Management Software. (Tracking and Compliance. Rescue Hub)
- Deployed EMS Connect as EMS Learning Content Provider.
- Recommends Hiring a Training Coordinator



Email: info@EMSCconnect.org 04/05/2018

**OTEP plan 2019-2021**  
Prepared by: Travis Deeks, MD, FACEP  
Curriculum Coordinator

**EMS Connect**  
Physician led EMS education

Monthly Recorded Sessions (3 hours of CME)  
60 min Topic 1 presentation  
60 min Topic 2 presentation  
60 min certification exam with review (BLS and ALS tested separately)

Total available credit hours per year = 36 hours

DATE	TOPIC	HOURS	PRESENTER
January, 2019	Topic 1: Cardiac Arrest	1.0	Lead / Guest
	Topic 2: Post-resuscitation Review current guidelines PE Crew Recommendations TESTING: Online exam with incorrect answer review	1.0	Lead / Guest
February	Topic 1: Sports Injuries	1.0	Lead / Guest
	Topic 2: Field Splinting Common sprains/fractures/dislocations Management of sports-related injuries TESTING: Online exam with incorrect answer review	1.0	Lead / Guest
March	Topic 1: Ambulance Safety	1.0	Lead / Guest
	Topic 2: Field Triage National regulations Crew safety Field differentials and decision making TESTING: Online exam with incorrect answer review	1.0	Lead / Guest
April	Topic 1: Pharmacology 101	1.0	Lead / Guest
	Topic 2: Street Drug Review Common EMS medication review Review of common and new age illicit drug use TESTING: Online exam with incorrect answer review	1.0	Lead / Guest
May	Topic 1: Trauma Triage	1.0	Lead / Guest
	Topic 2: Hemorrhage Control Assessment of the trauma patient Discuss hemorrhage management TESTING: Online exam with incorrect answer review	1.0	Lead / Guest
June	Topic 1: Seizures	1.0	Lead / Guest
	Topic 2: Seizure Management Review epileptic and non-epileptic seizure activity Status epilepticus definition and management	1.0	Lead / Guest

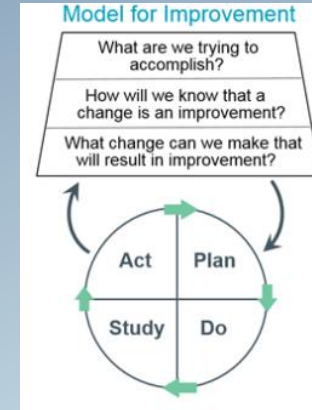
[www.EMSCconnect.org](http://www.EMSCconnect.org) © 2018 EMSconnect®

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# CONTINUOUS QUALITY IMPROVEMENT (CQI)

- ▶ *BLS CQI is conducted during monthly meetings evaluating significant calls that are flagged for review. Response times, provider treatment decisions and selected performance measures are part of the discussions. Opportunities for system improvement, identification of training opportunities for increased safety and skill enhancement are the outcome goals for the CQI process.*
- ▶ *ALS CQI is primarily discussed through processes built within the two ALS agencies. Chart Review and skills evaluations are conducted during closed sessions lead by the supervising physician of each organization. Particular attention is paid to Stroke, Cardiac Arrest, Trauma, ST Elevation MI's, Sepsis and Overdose responses.*
- ▶ *Dispatch CQI is provided by the Prospect Dispatch Center that evaluates dispatcher performance for not only the proper dispatching of resources but for the quick identification of certain immediate threats to life situations that includes Sudden Cardiac Arrest.*

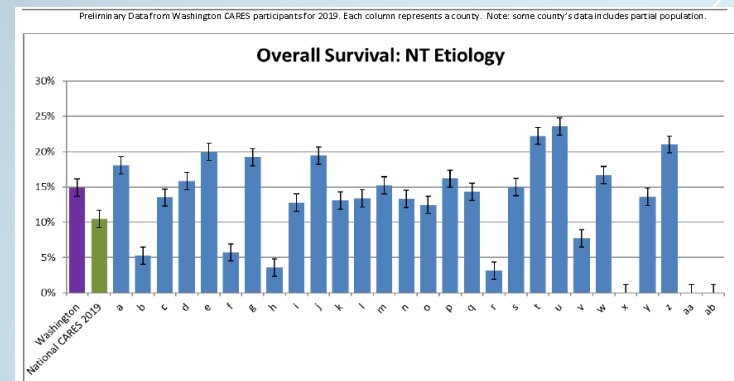


## CARES DATA

### Improvement Strategies For Increasing Resuscitation Rates

Non-Traumatic Etiology Survival Rates	
Overall:	15.0% (4210)
Bystander Wit'd:	21.3% (1710)
Unwitnessed:	5.3% (2005)
Utstein <sup>1</sup> :	42.5% (583)
Utstein Bystander <sup>2</sup> :	46.3% (436)

Bystander Intervention Rates <sup>3</sup>	
CPR:	57.3% (3281)
Public AED Use:	12.2% (584)



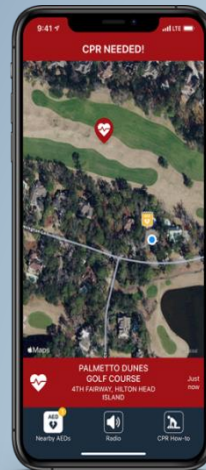


# COMMUNITY OUTREACH PROGRAMS (CPR/AED, PULSE POINT, STOP THE BLEED, TEEN HEART SCREEN)

**AED and CPR Programs** -The Fire Departments and Districts of Whatcom County generally provide CPR and AED training classes in their communities. WCEMS and the WCEMSTC are working to improve the numbers of people who are trained in CPR and how to use an AED.



**Pulse Point** - Efforts to expand the use of Pulse Point have shown positive results with the increase of subscribers from 3545 to 6715 from February 2019 when the awareness campaign began. This is just over a 50% increase of new subscribers over the last year.



The **Teen Heart Screening** program is now in its fifth year of providing heart screening for all teens in the region's high schools. In particular for student athletes, the heart screen looks for abnormalities that can be identified and corrected such as prolonged QT syndrome, arrhythmias or heart valve problems.

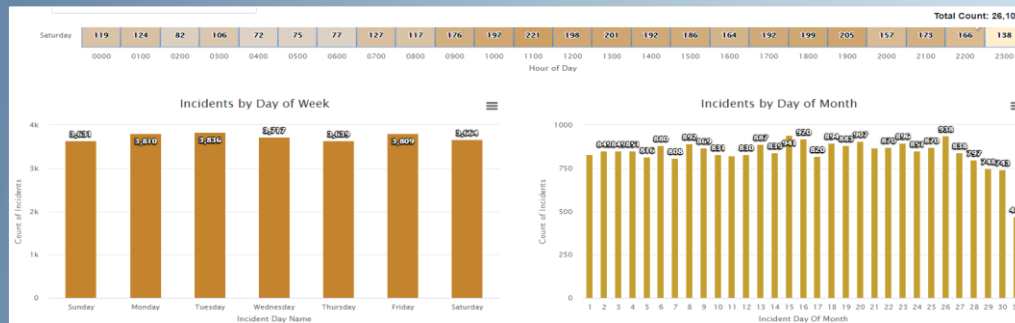
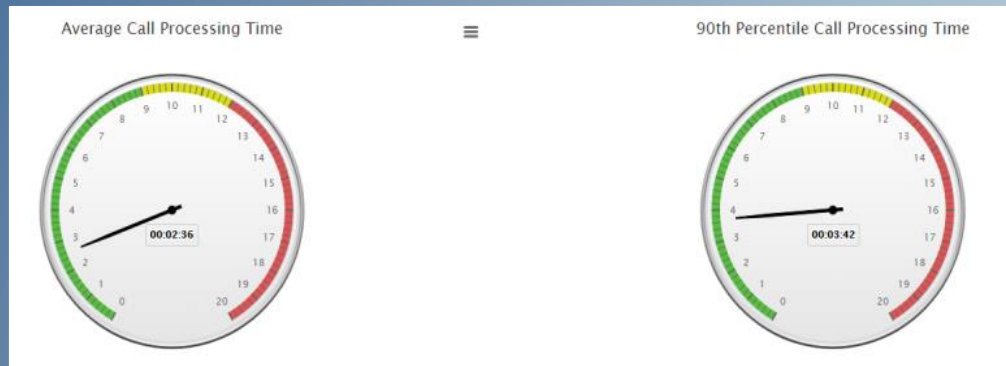
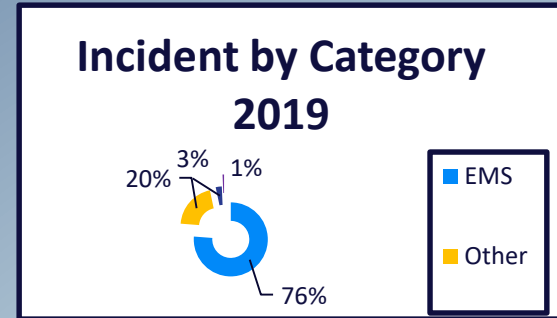


**Stop the Bleed Outreach**-Peace Health St. Joseph's Hospital has taken the lead in the region for the Stop the Bleed program. Trauma Nurse Coordinator Becky Stermer and Emergency Preparedness Manager Robert Taylor along with partners from the region have provided train the trainer classes (30 Instructors) so fire departments can deliver this training locally.

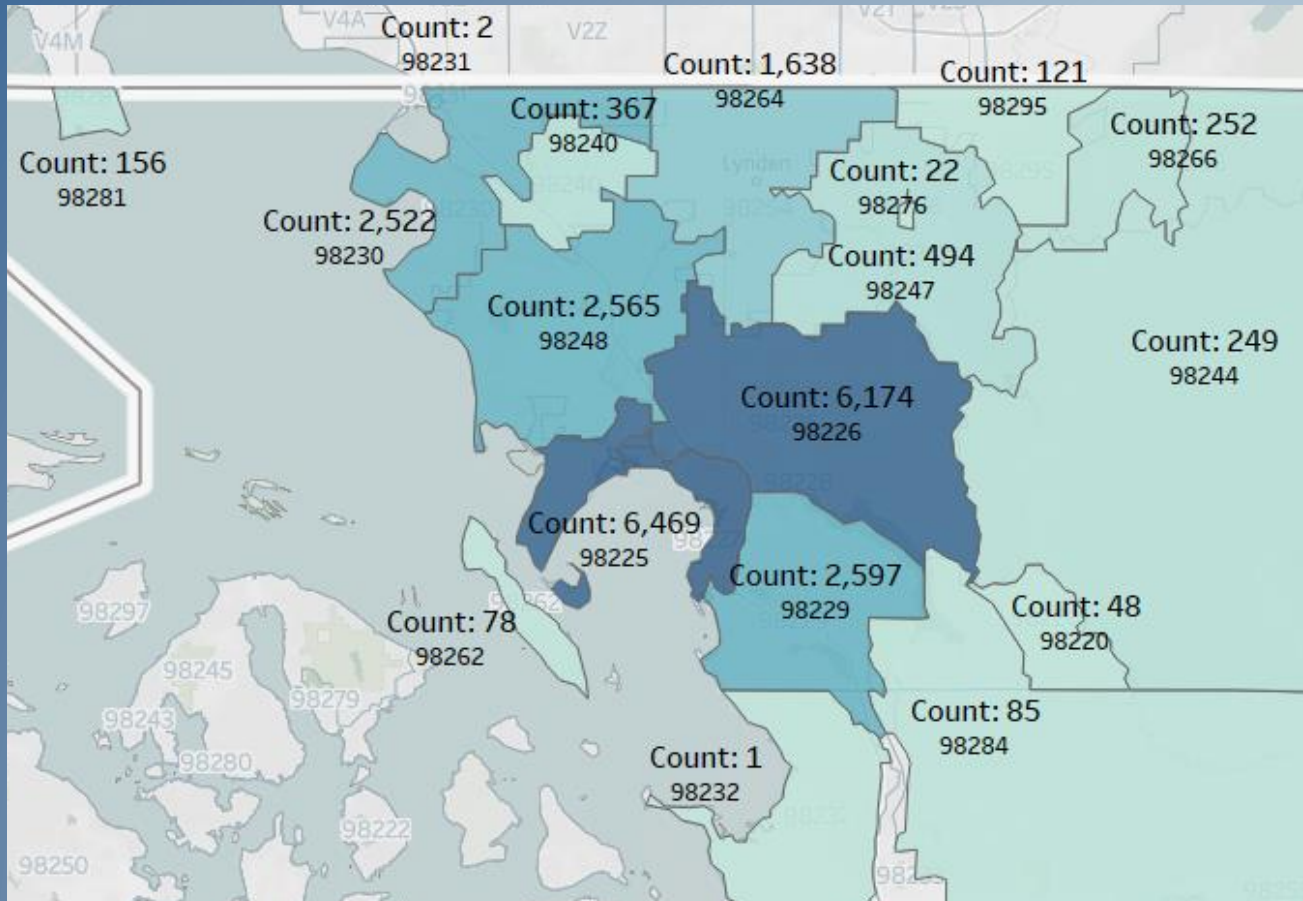


# Call Volume Characteristics

## General Dispatch Data

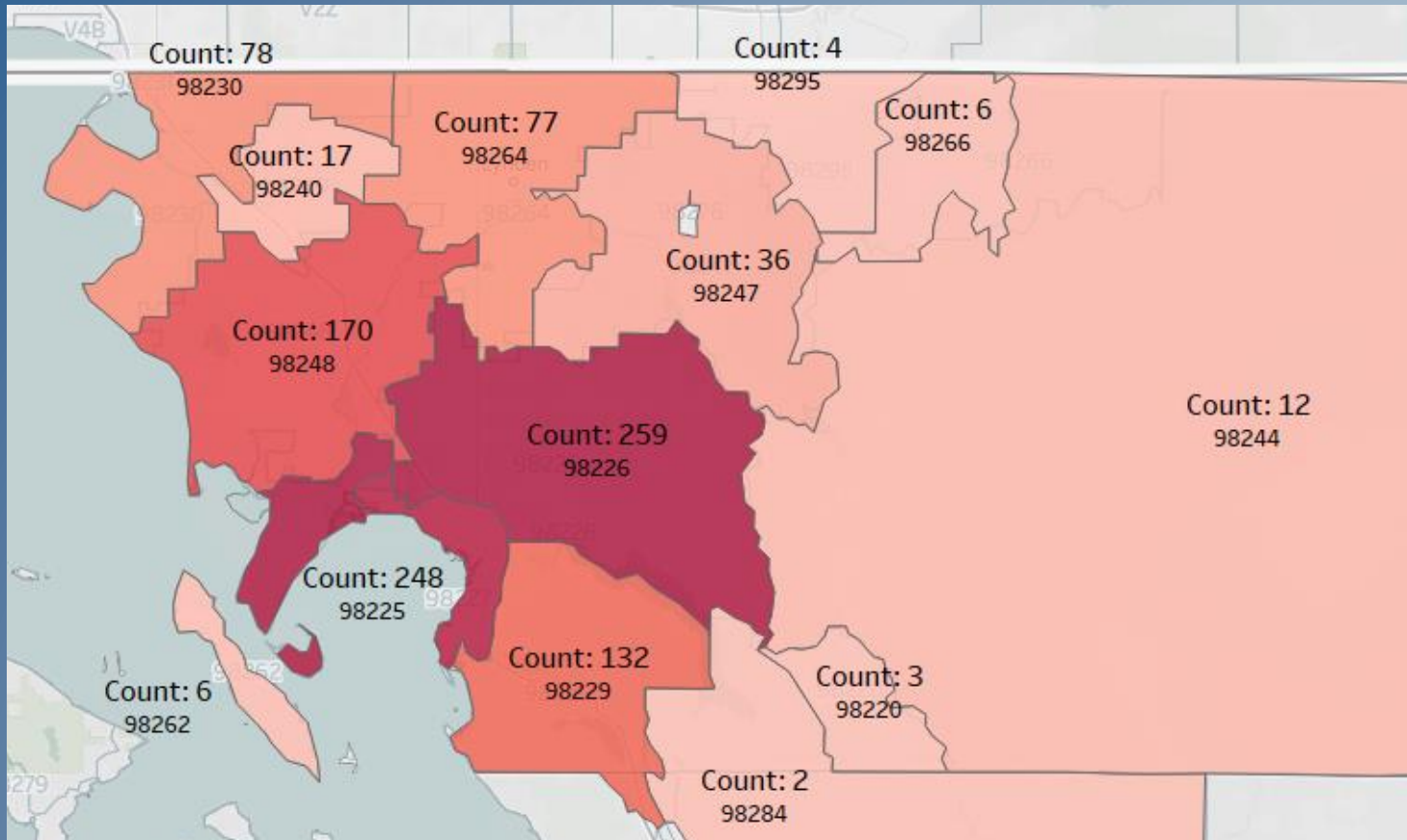


# Density of Calls (BLS & ALS) Whatcom County Jan 2019 to Jan 2020



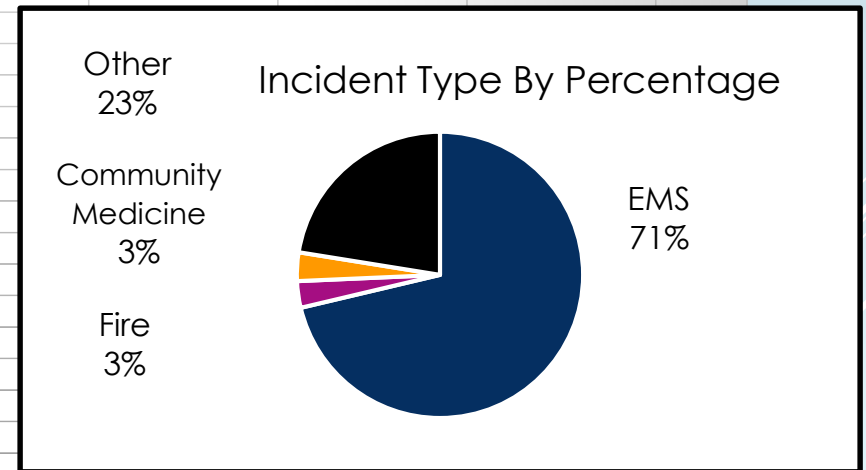
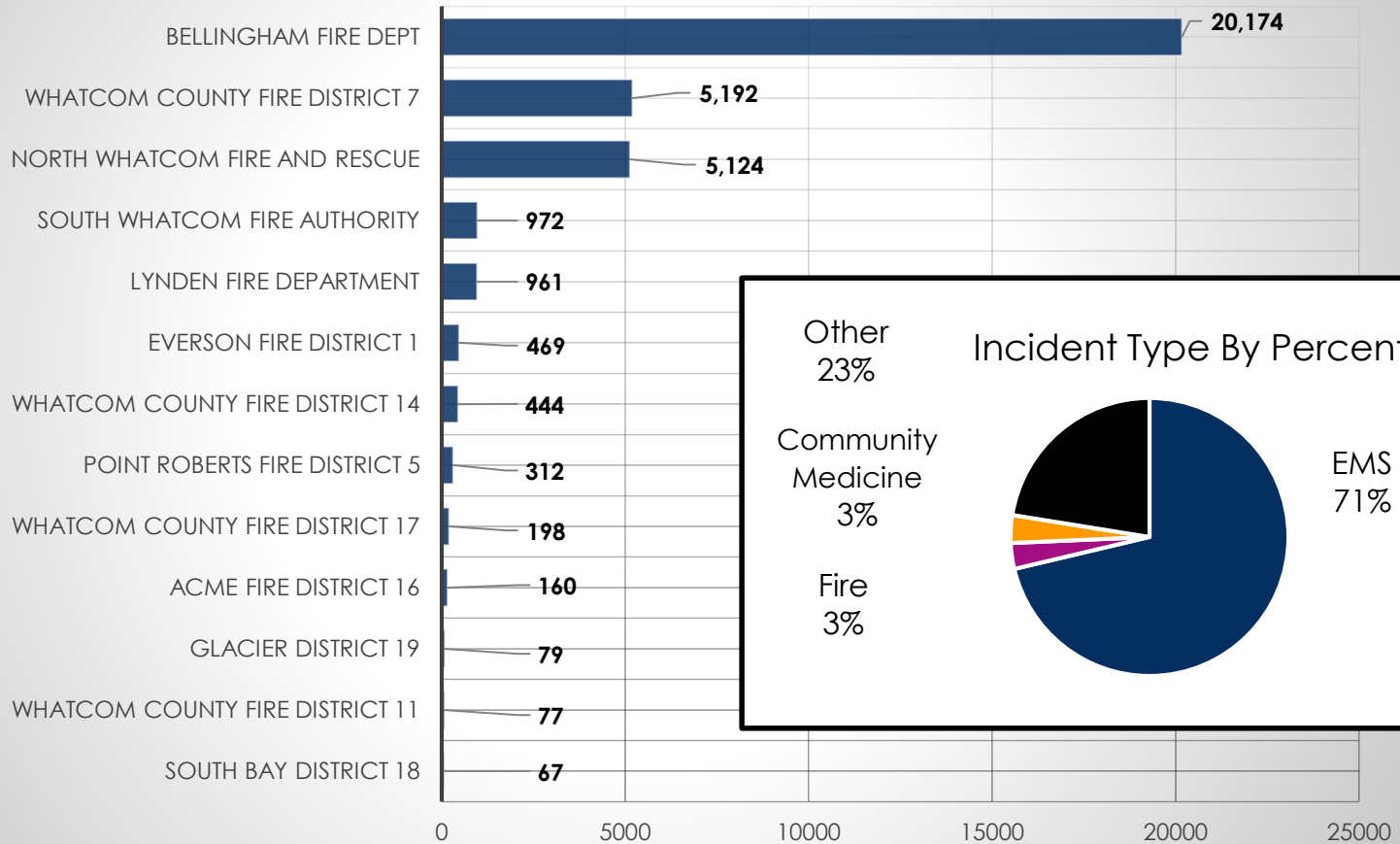


# Density of Fire Calls Jan 2019 to Jan 2020



# 2019 Numbers of Total Calls (Fire and EMS) Snapshot For All Whatcom County Fire Districts/Departments

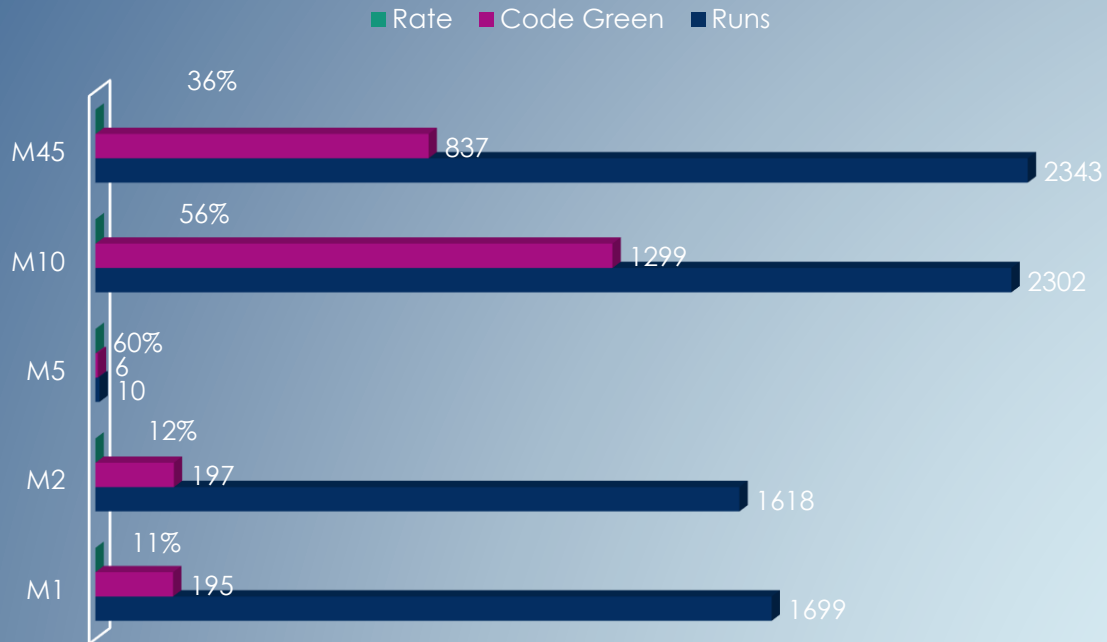
## Total Runs



# ALS Call Volume By Unit

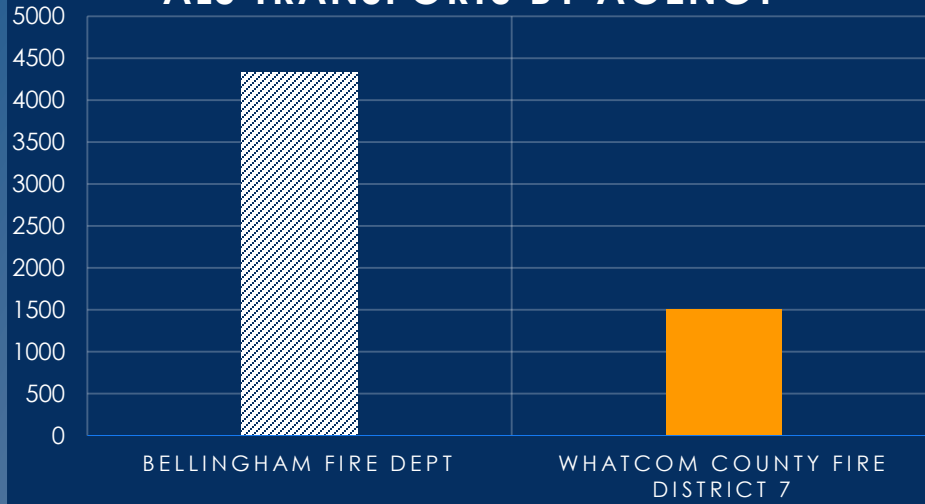
## M1, M2, M5, M10, M45

### Medic Run Volume and Code Green Percentage 2019 Totals



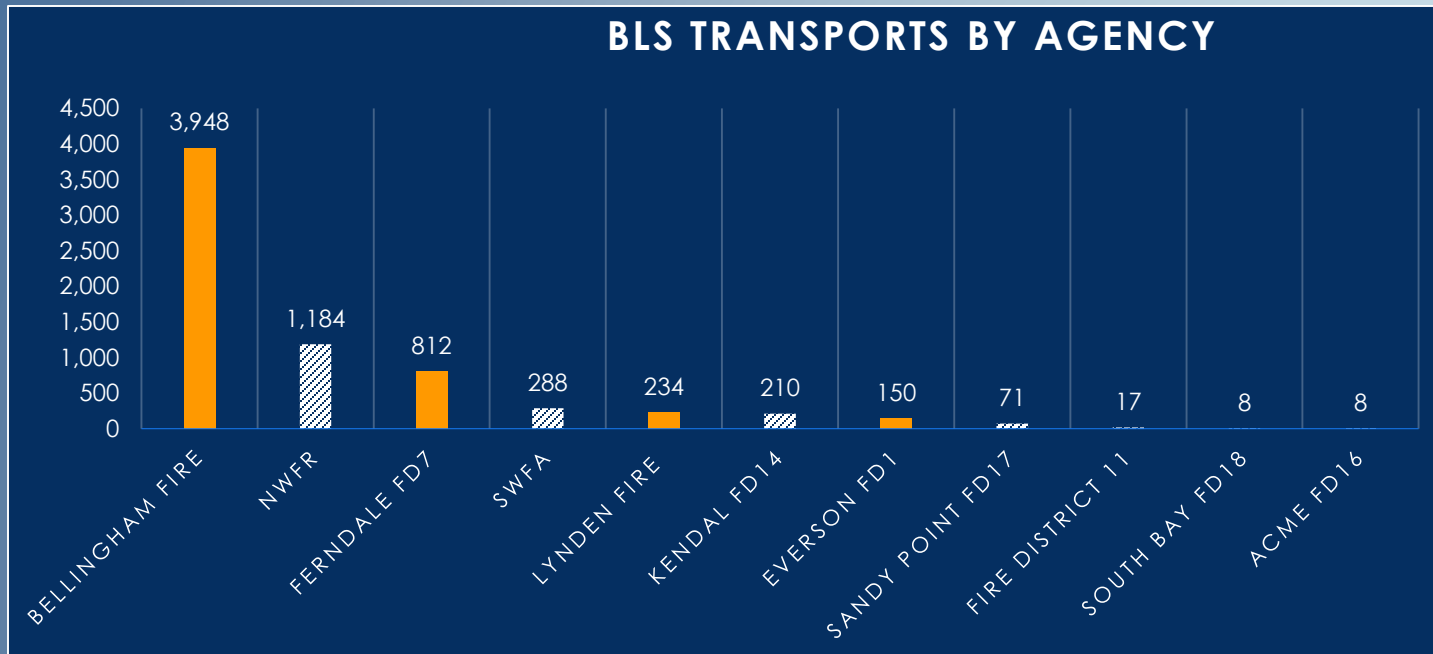


## ALS TRANSPORTS BY AGENCY



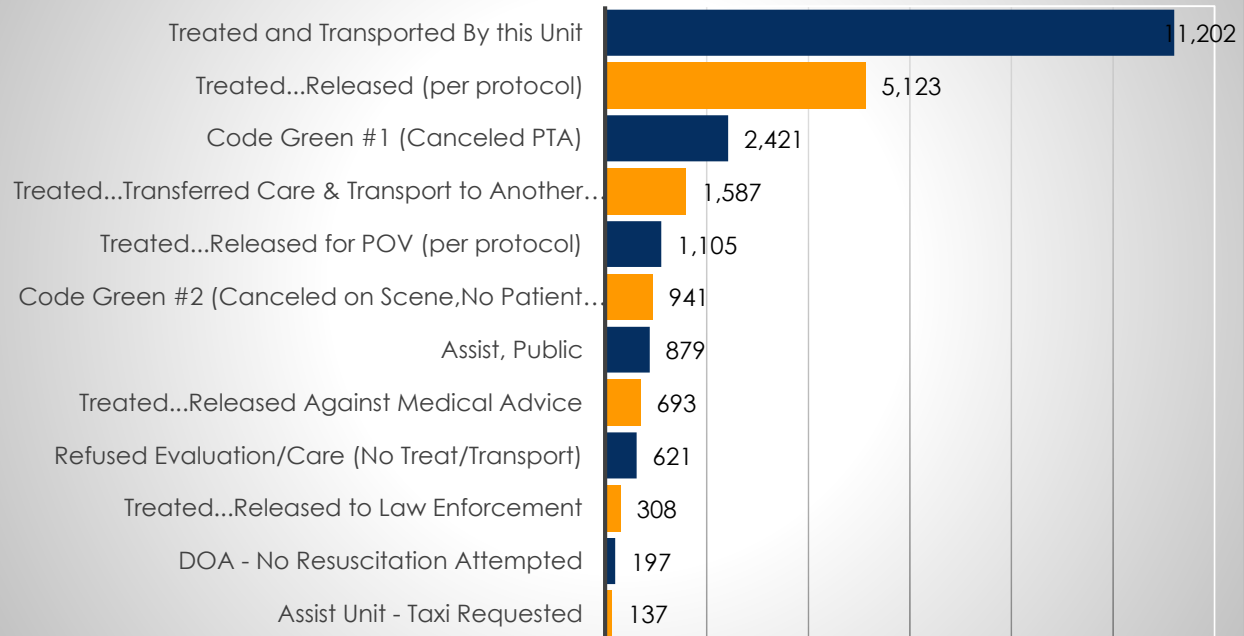
ALS and BLS Transports

## BLS TRANSPORTS BY AGENCY



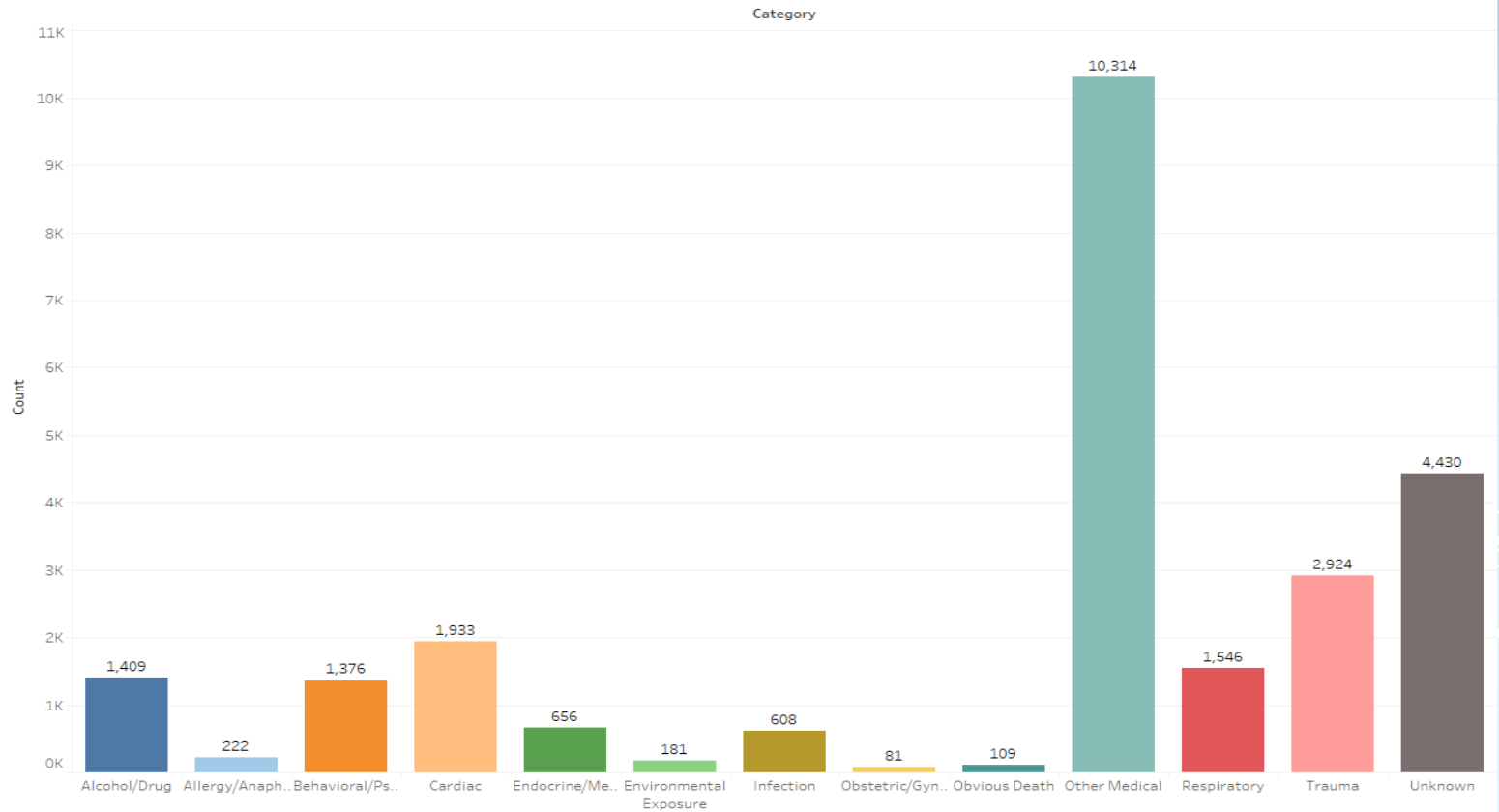
# Patient Dispositions

## Top EMS Dispositions



# Patient Condition Impressions by Provider

Provider Impression by Category 2019



# Finance and Levy Performance

## EMS Levy Fund Revenues 2019

# of units	4	4	4	4.5
	Actual	Actual	Budget	Plan
	2019	9/14/2020	2020	2020
Beginning Fund Balance	7,452,346		14,092,214	6,858,895
Property Tax	8,141,190	4,599,578	8,255,811	7,925,847
Sales Tax Revenue	3,116,847	1,813,732	3,156,405	2,698,556
Prior Period Adjustment-Sales Tax		-	-	-
AFG paramedic training reimb	57,427	-	-	-
Misc Income	495,630	103,684	166,750	5,000
Dispatch Reimbursement	-	-	-	-
Emergency Medical Service Fees	2,186,796	963,409	2,000,000	2,300,000
GEMT Payment	4,001,410	1,471,504	1,600,000	-
Medicaid Transformation Payments	100,000	-	-	-
Transfer In from GF	-	-	-	-
EMS Asset Distribution	-	-	-	-
<b>Total Revenues</b>	<b>18,099,300</b>	<b>8,951,907</b>	<b>15,178,966</b>	<b>12,929,403</b>

## Finance Sub-Committee

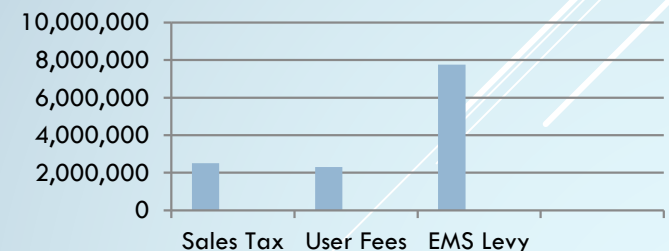
- Citizen Representative and Chairperson **Patricia Dunn**
- City of Bellingham **Forest Longman**
- Fire District 7 Fire Chief **Larry Hoffman**
- Whatcom Count Finance **Marianne Caldwell**
- Whatcom County **Tawni Helms**
- Whatcom County EMS **Mike Hilley**

## 2020 Fee Schedule

2020 Rates effective January 1, 2020 – based on Whatcom County Ordinance #2017-009.

	2016	2017	2018	2019	2020
ALS Base Rate	\$ 750	\$ 766	\$ 789	\$ 813	\$ 831
ALS Non-Emergency	\$ 750	\$ 766	\$ 789	\$ 813	\$ 831
ALS Mileage	\$ 15	\$ 15	\$ 15	\$ 15	\$ 16
ALS2 Base Rate	\$ 950	\$ 970	\$ 999	\$ 1,030	\$ 1,053
		8/2016 CPI 2.1	10/2017 CPI 3.0	10/2018 CPI 3.1	10/2019 CPI 2.2

## Primary Revenues (Sales Tax, User Fees, Levy)





# Expenditures Report

EMS Levy revenues support EMS activities related to direct service delivery or support programs: Personnel costs comprise about 80% of the Levy Budget. Medical equipment, consumables, administration, dispatch fees and training occupying about 15% of the expenditures while the remaining funds are oriented towards developing Reserves and Capital Allowance account.

## Reserve/ Capital expenditures Initiative

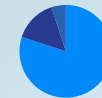
### 2020 Finance Sub-Committee tasks include:

Launch Financial Performance Reporting and Dashboards.  
Develop a reserve policy and build reserves. (GFOA Recommendations)

Identify Capital Expense items and build policy for accounts.

	Actual 2019	Actual 9/14/2020	Budget 2020	Plan 2020
Payments				
EMS Administration Services				
Vehicle for EMS Administration	(292,915)	(205,471)	(306,887)	(274,538)
EPCR acquisition & maintenance	-	-	-	-
MPD & Pymnts for Other Services	(184,787)	(116,948)	(150,000)	(94,253)
Payments to City	(94,217)	(65,529)	(142,200)	(54,908)
Payments to Other Districts	(6,640,099)	(4,492,440)	(6,773,308)	(6,568,672)
Payments to FD7	(213,316)	-	(220,000)	(227,301)
What-Comm Dispatch	(1,973,854)	(1,510,348)	(2,038,298)	(1,972,163)
<b>Estimated Other Costs:</b>	<b>(1,601,861)</b>	<b>(757,808)</b>	<b>(1,547,684)</b>	<b>(1,057,000)</b>
Strategic Plan				
Training Coordinator & Costs	-	-	-	-
Paramedic Training	-	(3,088)	(123,386)	-
Community Paramedic	(238,225)	(247,856)	(1,129,247)	-
Gurneys*	(172,143)	(181,802)	(359,850)	(174,694)
Office Remodel	-	-	(397,740)	-
Covid Expenses	(48,015)	-	-	-
5th Unit Training/Equipment	-	(2,849)	-	-
5th Unit Implementation	-	-	-	-
Total Expenditures	-	-	(212,866)	(986,081)
Net Revenues/(Expenditures)	11,459,432	(7,584,139)	(13,401,466)	(11,409,610)
	6,639,868	1,367,768	1,777,500	1,519,793
Ending Fund Balance (EMS)	14,092,214		15,869,714	8,378,688

## Levy Expenditures

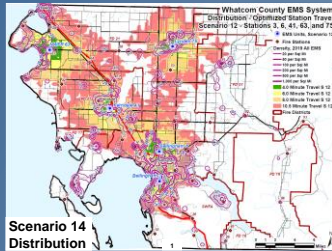


■ Personnel  
Costs

# EMS Administration 2020 Initiatives

## Capital Equipment (Technology) and Patient Movement (Gurney Replacement) Program

- Recommendation for a county-wide upgrade. (ALS/BLS)



## Fifth Medic Unit Analysis and Recommendation

- Recommendations for a Fifth Medic Unit deployment.

## Paramedic Training /Bellingham Technical College

- 2021 Paramedic School Funding Proposal.



## Strengthen Basic Life Support Training and Continuous Quality Improvement

- EMS Training Specialist Position (LMS and Compliance Tracking.)
- Recommendations for increased training budgets (BLS/ALS)
- Develop CQI Dashboards



# EMS Administration 2020 Initiatives

## Increased Capacity For Mobile Integrated Health Programs (GRACE,CP,CRT,Telehealth/Medline)

- COVID19 Required a quick pivot for the teams and exposed gaps in the system.
- Mental Health and SUD calls have increased. Vulnerable Populations increased.
- Recommendation for increased Mobile Integrated Health Programs.
- Moving forward Alternate Destination Program for Mental Health and SUD to CSC in 911 system.
- Recommendation for co-responder Crisis Response Teams including SUD. (Tribal Communities)
- Recommendations for Trauma Prevention Programs (Elderly Fall Prevention)



**“Working together for the future of EMS in Whatcom County”**

### EMS 2022 Levy Planning Process

- Planning underway with sub-committees.
- Recommendations will be presented in a Strategic Plan (2022 Ballot Measure)

### Whatcom County EMS Funding Work Group RECOMMENDATIONS

March, 2016  
Prepared and Submitted to:  
EMS Oversight Board





# Sudden Cardiac Arrest Survivors



Charles Hamlin (75)



Deanna Hutchings



Mathew Weeks



Kyle Harris



Rhett Bowlden

Dan Moore

