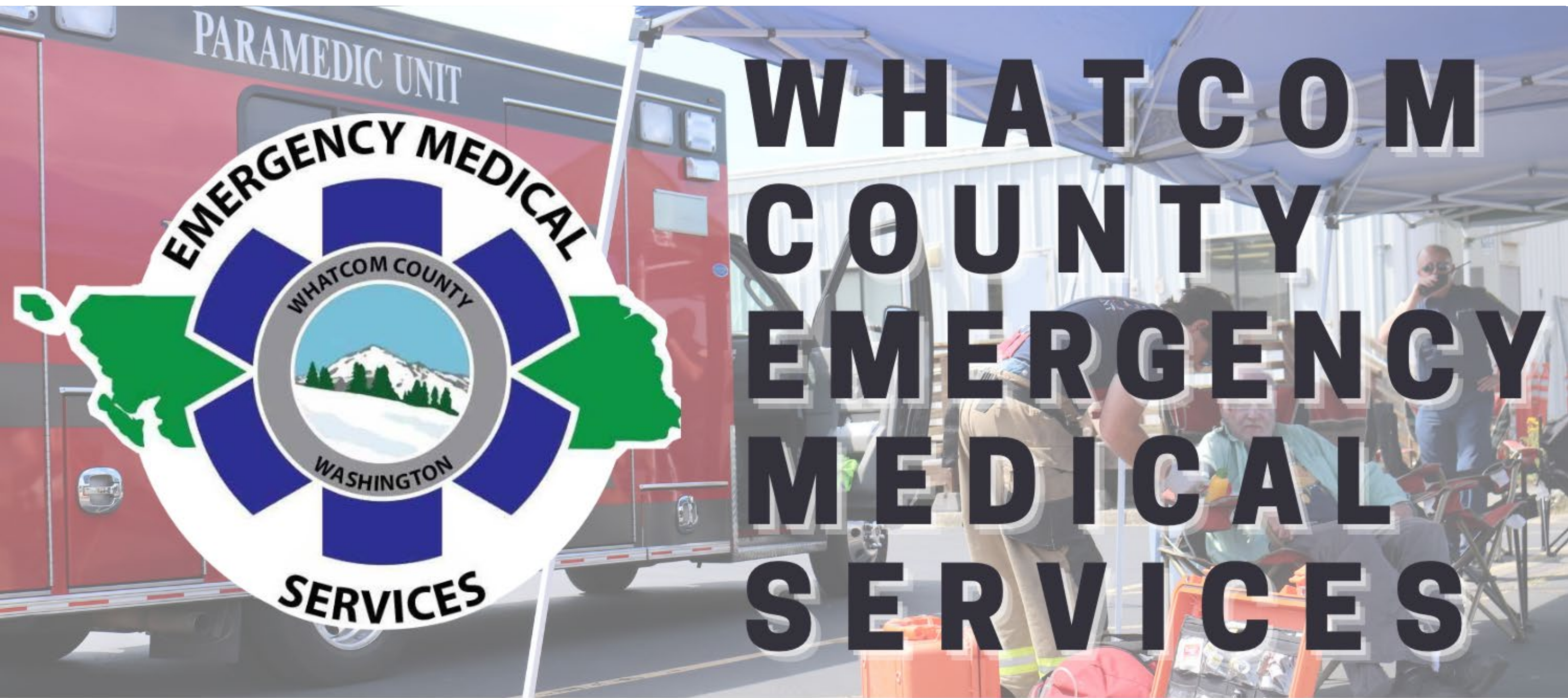

LEVY PLAN

2023-2028

"Working Together for the Future of EMS in Whatcom County"

Michael Hilley
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V-10/Final June 2022

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Executive Summary

This report provides a six-year strategic plan with recommendations for the continued support of Whatcom County's Emergency Medical Services (WCEMS) Advanced Life Support (ALS) system and to better support Basic Life Support (BLS) systems through the County-Wide EMS Levy. Funds from this levy are intended to support and where appropriate, expand Fire System Based Emergency Medicine to meet increasing and expanding community needs. Cost Allocation Models comparisons, an examination of Service Levels for both BLS and ALS response areas, an understanding of where System Efficiencies can be achieved, and projections of future systems enhancements were analyzed for the recommendations. Continuation of the EMS Levy is vital to supporting the EMS system at the current level of service. Efficiencies must be realized through integrated programs such as dispatch call diversion programs, Community Paramedic programs, alternative response programs, prevention programs, investments in technology, and other means to manage the long-term cost of the system. A successful EMS levy along with centralized oversight by the Emergency Oversite Board (EOB) guided by the leadership of the Technical Advisory Board (TAB) and Finance, with continued collaborations between the EMS agencies and communities are needed to sustain the system. Recognizing the need to improve diversity, equity, and inclusion in the staffing and services of the emergency medical system, this plan update acknowledges this topic. The strength of the levy fund has stabilized the EMS system and provided opportunities to respond to dramatic changes in the EMS environment. This plan is a guide for the next six years and is endorsed by the EMS Levy Plan Committee.

The EMS Levy Plan Committee Endorses:

- Placement of the levy on the ballot in the 2022 general election, pursuant to RCW 84.52.069
- A levy rate of 29.5 cents/$1,000 Assessed Valuation (AV)
- Maintaining EMS sales tax and transport fees
- Monitor and maintain Ground Emergency Medical Transportation (GEMT) funding
- Enhanced support of BLS
- Use $2.5 million per ALS Unit Cost to develop the levy rate
- Maintain reserves sufficient for one year’s operating expenses
- Implement programs that provide support and encourage efficiencies
- Fire-Based EMS for Whatcom County
- Diversity, Equity, and Inclusion efforts to increase diversity in EMS personnel

EMS Levy Plan Committee and Endorsements

EMS Levy Committee Confirmation

The Whatcom County Emergency Medical System Oversight Board (EOB) confirmed the EMS Levy Committee at the March 10, 2021 meeting.

Mission

To recommend a funding strategy and mechanism that will support and sustain a countywide EMS System.

Members and Endorsement of Recommendations

The Levy Planning Committee formally endorses the attached EMS funding strategy and mechanism to support and sustain a countywide EMS System.

"Working together for the future of EMS in Whatcom County."

ORGANIZATIONS REPRESENTED	APPOINTED MEMBERS
WHATCOM COUNTY	Mike Hilley
CITY OF BELLINGHAM	Brian Heinrich
WHATCOM COUNTY COUNCIL	Barry Buchanan
SMALL CITIES REPRESENTATIVE	Scott Korthuis
BELLINGHAM FIRE DEPARTMENT	Bill Hewett
WHATCOM COUNTY FIRE DISTRICT 7	Larry Hoffman
LYNDEN FIRE DEPARTMENT	Mark Billmire
WHATCOM COUNTY FIRE CHIEFS ASSOCIATION	Hank Maleng
WHATCOM COUNTY FIRE COMMISSIONERS	Rob Roy Graham
IAFF LOCAL 106 REPRESENTATIVE	Dan McDermott
WHATCOM 7 FIREFIGHTERS	Jeff Sluys
CITIZEN REPRESENTATIVE	Dick Williams
CITIZEN FINANCE REPRESENTATIVE	Dewey Desler
WC EMS/TRAUMA COUNCIL	Jerry DeBruin

Members of the EMS Levy Committee met monthly to research and deliberate on the best and most viable funding option to sustain our high-performance county-wide EMS System. The above-signed members endorse the recommendations and proposed levy rate included in this report.

EMS Levy Plan Committee Organization

The EMS Levy Committee divided their overall mission into four subcommittees and challenged each to research, study, analyze and produce recommendations specific to their assignment. The subcommittees were defined as:

1) EMS Administration
2) ALS/BLS
3) Finance
4) Communications

The team met regularly, gathered and researched data, and debated their findings. The results of those efforts are captured in this report. The Communications subcommittee is using the recommendations to inform and engage the public about their EMS System.

Levy Planning Partner Acknowledgments

Chief Duncan McLane
Mike Price
Patricia Dunn
Div. Chief Scott Ryckman
Asst. Chief David Pethick
Capt. Rob Stevenson
Div. Chief Ben Boyko
Chief Mel Blankers
Hunter Elliot
Jeremy Morton
Steven Cohen
Rosalee Cowan
Katie Poole
Dr. Marvin Wayne

Land Acknowledgement Statement

Whatcom County EMS acknowledges that the land known as "Whatcom County" that we operate on is the traditional and unceded territory of the Lummi, Nooksack, Samish, and Semiahmoo People who have cared for and tended this land since time immemorial. Truth and acknowledgment are critical to building mutual respect and connection across all barriers of heritage and difference. We begin this publication by acknowledging what has been buried by honoring the truth. We pay respect to their elders past and present. Please take a moment to consider the many legacies of violence, displacement, migration, and settlement that bring us together here in Whatcom County today.

Diversity Statement

Agencies and partners of the Whatcom County EMS system, in accordance with federal, state, and local law, provide equal opportunities for applicants and employees regardless of actual or perceived race, ethnicity, national origin, religion, sex, sexual orientation, gender identity or expression, age, disability, pregnancy, genetic information, veteran status, marital status, or any other protected class or status. WCEMS recognizes diversity and inclusion as ethical and imperative. WCEMS also recognizes promoting health equity as a priority. WCEMS values diversity in its leaders, EMS providers, and staff, which serve as a catalyst for a stronger workforce, improved decision-making, better patient outcomes, and a healthier community. An inclusive environment can enhance the quality of healthcare, improve community relations, and positively affect the health status of society. These priorities are reflected in WCEMS strategies, structure, and initiatives. The Whatcom County EMS system and its partner agencies support advancing efforts to increase diversity, equity, and inclusion in hiring practices to create a team of personnel that is reflective of the communities they serve and provides career opportunities for all those interested in a rewarding career in emergency medical services.

In order to achieve marked improvements in diversity, equity, and inclusion, the EMS Levy Committee identified the following recommendations:

- Track data, set targets, and regularly review progress towards targets
- Improve outreach and recruitment efforts
- Ensure standardized hiring practices
- Create a culture of inclusion in the workplace and in the training room
- Improve diversity on the EMS Levy Committee and establish a subcommittee on diversity, equity, and inclusion

More information and recommendations on these efforts is included on page 47 of this plan.

Whatcom County EMS History

1974 to 2004

Whatcom County Emergency Medical Services (WCEMS) was formed in 1974. Prior to 1974, private ambulance companies provided Basic Life Support (BLS) ambulance transport for most of Whatcom County. There was little to no coordination or "system" in place for providing countywide Emergency Medical Services (EMS). In 1974, the private ambulance company suddenly shut down their service to the County. With little warning or time to prepare, the Bellingham Fire Department stepped in, providing countywide emergency medical ambulance transports with firefighter/EMTs. Some of these firefighter/EMTs were then trained locally to become paramedics (the first class in 1974 performed their field internship in Seattle), forming the foundation of the current countywide Whatcom Medic One program.

Prior to 2004, the Medic One program provided virtually all emergency medical transports in Whatcom County whether they were the result of non-life-threatening circumstances, a BLS call, or potentially life-threatening circumstances requiring an ALS call.

Whatcom County Fire Districts and Departments locally fund and provide first responder emergency medical services, BLS, and transport services. These services operate in coordination with the Whatcom County ALS Program and together comprise WCEMS. The system faces growing demand and increasing costs. EMS stakeholders aim to continue to support the EMS Levy for the sustainability of a countywide EMS system.

2005

Whatcom County voters approve a 1/10th of one percent EMS sales tax. The sales tax increase was expected to sustain the system through 2011; however, due to a continuing deficit, agreements were made to delay the 5th Medic Unit implementation and to employ other cost-saving measures. Recognition of the deficit was extended to late 2016.

2011

The Medic One Planning Committee is formed

Members represented Whatcom County, City of Bellingham, and District representatives from all four county regions. The committee engaged stakeholders in planning future county EMS including service expansion.

2012-2013

Countywide EMS model adopted

Whatcom County and the City of Bellingham passed joint resolutions adopting the countywide EMS business model. Ordinance 2013-074 established the role and composition of both the EMS Oversight Board (EOB) and the Technical Advisory Board (TAB). The EOB was appointed to provide oversight, vision, and strategy for the EMS system. The TAB was appointed to advise and recommend improvements to the EOB regarding operational, education, and logistical components of ALS and BLS life support services. The WCEMS EOB was formed in 2014 to provide general business oversight to Whatcom County's EMS organization. Facing dwindling reserves (exhausted by 2017) and increasing costs, the board appointed an EMS Funding Committee to examine and recommend funding options and cost efficiencies.

2016

First EMS Levy

The EMS Funding Work Group presented a comprehensive set of recommendations to the EOB, including a levy. A 29.5-cent levy, replacing fire district and city funding, was narrowly approved by voters in the 2016 General Election.

2017-2022

Many of the 2016 EMS Funding Working Group Recommendations were adopted, including establishing an EMS Administrator position, enhanced data collection and software, dispatch efficiencies, equipment enhancements, and BLS support. A 5th Medic Unit will be implemented in 2022.

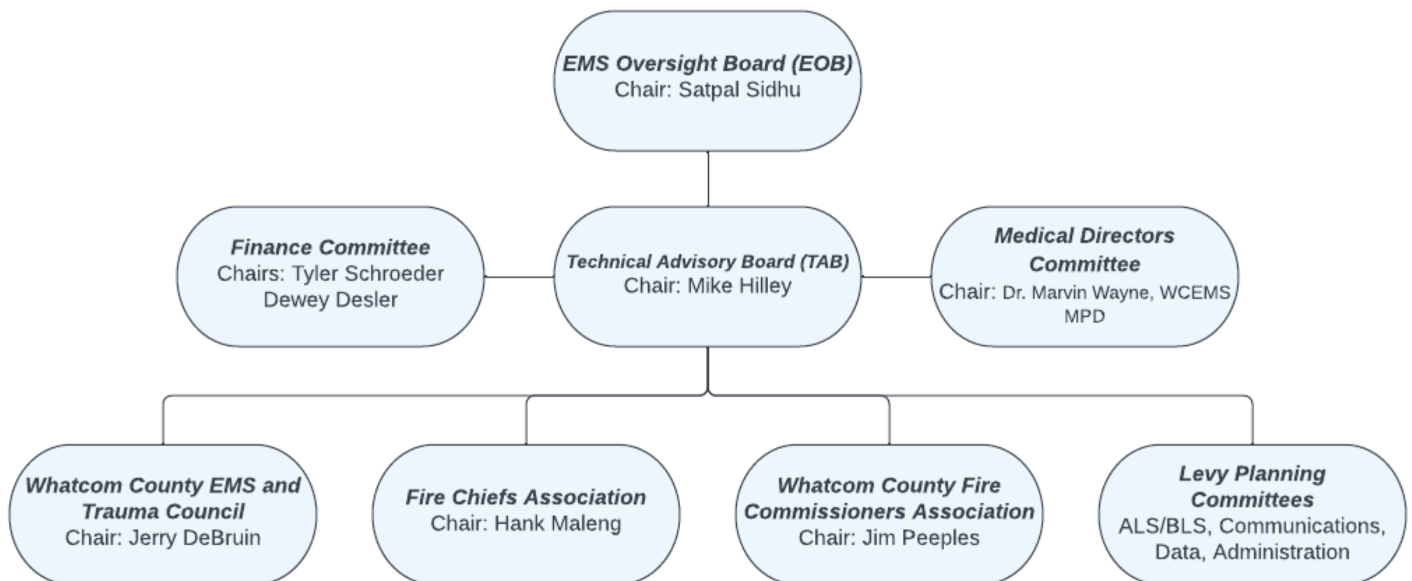
Mass Casualty Incident Drill, NWFR Station 12

WCEMS System Model

Regionally Operated Citizen Supported Model

The Whatcom EMS system has matured into a unified system responding to growth in the County over the last several years. In the fall of 2016, Whatcom County voters approved a county-wide levy that provides a sustained funding source for a regionalized EMS system in Whatcom County (2017 to 2022). Regional partnerships form committees and subcommittees that provide input and feedback to the EOB. These regional partnerships are coordinated through the EOB. These partnerships are coordinated through the EOB where the EOB seeks input from the TAB and Finance Committee along with representatives from labor organizations, local governments, training organizations, fire districts and fire commissioners, hospitals, county and city council representatives. The TAB sends technical and operational, recommendations to the EOB, while the Finance Committee provides budget analysis to the EOB. The EOB provides system oversight and governance. The successful passing of the county-wide levy was preceded by work from the “2016 EMS Funding Work Group.” This foundational work from 2016 provided a framework for a strategic plan by implementing recommendations that created a stable funding source allowing for the highest level of EMS service for Whatcom County citizens.

A motion was passed on May 25th, 2022 at the EOB final Levy Plan review meeting that on an annual basis, the EOB will meet to discuss the EMS Standard Cost Model, with adjusted projected interest income, to review financial projections until the end of the levy cycle. If financial changes need to happen, the TAB will provide recommendations for reductions in expenditures to retain a healthy ending fund balance of 70% of annual spending.



Additional partnerships include the North Region EMS and Trauma Council, the Whatcom County EMS and Trauma Council, St. Joseph Peace Health Hospital Trauma Service, Bellingham Technical College, Whatcom County Search and Rescue, Whatcom County Office of Emergency Management, Whatcom County Human Services Division, Whatcom County Response Systems Division, and the North Region Accountable Communities of Health.

Medically-Based Leadership Model

The region's medical partners provide oversight and research to the Whatcom EMS system. Dr. Marvin Wayne is Whatcom County's Medical Program Director. Dr. Wayne coordinates policies and procedures along with the Supervising Physicians for the two Advanced Life Support (Paramedics) programs as well as the Mt. Baker Ski area.

The local hospital system is integral to creating a patient care continuum that provides positive patient outcomes when working with the EMS System. The relationships with PeaceHealth St. Joseph Medical Center and the EMS community allows advanced therapies to begin in the field that can be supported by the hospital. Comprehensive Emergency Stroke Care, Post Cardiac Arrest Care, Acute Myocardial Infarction (AMI) Treatment, and Trauma Care are some of the integrated activities with the EMS System that decrease mortality and morbidity for the patients we serve.

The Whatcom County Trauma and EMS Council (WCTEMSC) serves the EMS community with Continuous Quality Improvement (CQI) Programs as well as training directed toward reducing the morbidity and mortality associated with trauma and acute illness. The Council provides educational outreach to providers and also connects residents with trauma prevention programs in the region. The WCTEMSC works closely with the North Region EMS and Trauma Care Council as part of a five-county consortium of EMS organizations.

The North Region EMS and Trauma Care Council is one of eight separate EMS and Trauma System Regions that are made up of local and regional councils. The regions are supported by grants from the state office and are charged with developing the regional trauma plan, regional patient care procedures, prevention, and public education programs to address regional injury problems and patterns. The North Region EMS and Trauma Care Council have representatives from EMS agencies in Whatcom, Island, San Juan, Skagit, and Snohomish Counties.

2017 – 2022 EMS Levy Plan Review

The 2016 Whatcom County EMS Funding Work Group made several recommendations regarding the EMS system. Following is a summary of those recommendations and their status:

The 2016 Funding Work Group Endorsements Summary

- The pursuit of an EMS levy pursuant to RCW 84.52.069
- A levy rate of 29.5 cents/$1,000 assessed Valuation (AV)
- Placement of the levy on the ballot in the 2016 general election
- Eliminate City and County General Fund contributions while maintaining sales tax and transport fees
- Use $1.8 Million per ALS Unit Cost to develop the levy rate
- EMS Levy includes reserve sufficient enough for implementation of a 5th unit
- Enhance system-wide data collection and implement programs that provide support and encourage efficiencies
- Pay for all EMS dispatch fees, including ALS and BLS
- Appointment of a full-time countywide EMS Administrator
- Exploration of an expansion of the Equipment Exchange program and providing BLS Training Programs
- Inclusion of providing common Electronic Patient Care Reporting (EPCR) software for all EMS agencies
- Maintenance of a responsible level of financial reserves for unanticipated costs
- Conservative financial policies and procedures that lend to financial stability

Detailed Status Report of 2016 Funding Work Group Recommendations for the 2017-2022 Levy Plan

Endorsed Recommendation	Status
Pursue a county-wide EMS Levy	Passed in 2016 and ongoing
Whatcom County EMS Levy continues to pay EMS Dispatch Fees for the Districts/Departments. (Bellingham, Whatcom County, and Lynden pay Fire Dispatch Fees from their General Funds)	Ongoing/Continuing
Explore expansion of the Equipment Exchange Program	Maintained and expanded the ALS 360 Program.
Explore providing BLS Training Programs	Training Officer hired and Ongoing Training and Evaluation Programs expanded.
Deployed Learning Management System (LMS) Rescue Hub	Implemented/ongoing
Explore an EPCR software platform for all EMS agencies.	ImageTrend EPCR implemented in 2018

ALS/BLS Recommendations

Endorsed Recommendation	Status
Utilize Signal Preemption (Opticom)	Agency Policy Decision (Complete)
Review strategic placement of Medic Units in the county	GIS Study completed July 2021
Explore increasing Medic Unit - Staffing to 3 personnel during peak hours	Not pursued
Define EMS 1 responsibilities for the ALS system	Maintained/continued development needed
Analyze need for an additional (5th) Medic Unit	Completed/additional unit to be implemented Fall 2022
Establish Data and Reporting Standards	Implemented with ongoing development. Created Operations Data Committee
Explore Shared Services (Rescue Hub (LMS) Equipment Exchange)	Limited development

Community Outreach Recommendations

Endorsed Recommendation	Status
Implement Community Paramedic Program	BFD/FD7 Community Paramedics
Consider Expanding the Community Paramedic Program	Expanded to 3 positions along with Case manager from Ground Response and Coordinated Engagement (GRACE) Program teamed with Community Paramedics
Review calls to medical facilities (Skilled Nurse Facilities)	Implemented Make the Right Call Program

Data Recommendations

Endorsed Recommendation	Status
Establish Key Performance Indicators to evaluate efficiency and effectiveness Washington EMS Information System, Cardiac Arrest Registry System, and Continuous Quality Improvement Reporting	Dashboards implemented/further ongoing development
Establish financial accounting standards for BFD and FD7	Monthly invoices and expenditures review implemented

Management and Administration Recommendations

Endorsed Recommendation	Status
Add a County EMS administrator	Implemented/Ongoing
Launch a financial and performance dashboard for stakeholders	Dashboard implemented
Explore shared services	Partially pursued
Develop a Reserve Policy and Build Reserves	Implemented Summer 2021
Implement Lean Management	Not pursued
Risk Management: Engage risk management stakeholders in change discussions. Risk management from risk pools or insurers may provide information and benchmarks not otherwise available	Further development needed
Develop the framework, standards, and terms for the next EMS provider contracts	In development and ongoing
Develop an EMS Dispatch Center Strategic Plan	In development for 2023

2023-2028 Recommendations

ALS/BLS Subcommittee Overview

WCEMS and EOB chartered the EMS Levy Planning Committee where the subcommittees were formed into the ALS/BLS Subcommittee. The Subcommittee broke into two groups: BLS/ALS Operations and the Education/Prevention/Community Outreach groups.

Mission

- Recommend system enhancements
- Explore and recommend cost efficiencies in the current system and new programs
- Project the number of ALS units needed over the life of the levy
- Recommend ALS Funding Formula
- Recommend BLS Allocation Distribution Formula

Deliverables

- ALS System enhancements and related costs
- ALS Unit Allocation Calculation
- Annual BLS funding and distribution formulas proposal (Funding Formula)
- Cost reduction and system efficiency recommendations

Tasks

- Determine BLS support needed by local fire agencies
    - Identify support needed, factors impacting needed support, and related costs
    - Create stable, reliable, equitable formula or funding
- Explore ALS cost reductions through efficiencies and programs
- Explore system enhancements, feasibility, and associated costs

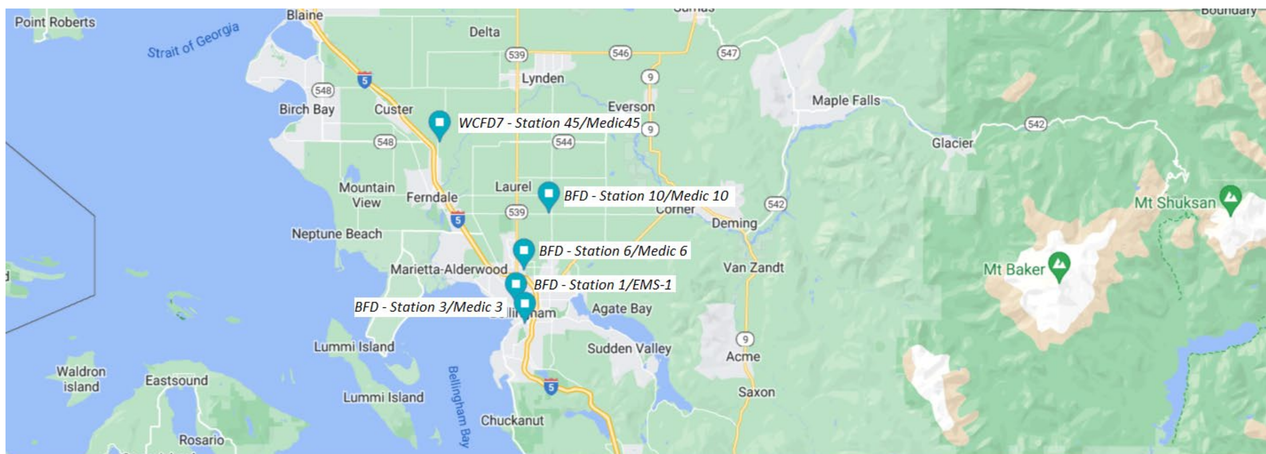
Members of the subcommittee were assigned areas to explore, research, analyze, and report back to the group for review and debate. All members were encouraged to thoroughly review processes, be creative, express their opinions, and present opposing points of view.

The subcommittee analyzed resources required to suitably develop and staff Whatcom County's Advanced Life Support (ALS) system. This considered the current level of service, future demands, and support for individual fire agencies' Basic Life Support (BLS) systems. Costs, funding options, services, and potential savings were analyzed to propose these recommendations.

ALS Recommendations

Levy Supported ALS Programs (2017 to 2022)
The county-wide levy supports four Advanced Life Support (ALS) Units through performance-based contracts with WCEMS at about $1.8 million per year per Medic Unit. Whatcom County Fire District 7 (Ferndale) staffs and operates one Medic Unit. The City of Bellingham Fire Department staffs and operates three Medic Units. In addition, BFD will staff and operate a new Medic Unit (Medic 75) to be implemented in late 2022 where the county-wide levy will support five Paramedic Units moving into the new levy period. The units are staffed 24 hours a day, 7 days a week, 365 days a year with two highly trained firefighter/Paramedics responding to critical care calls. Medic Units are strategically positioned to offer the best response to service demands in all areas of the county.

Current Medic Unit Locations

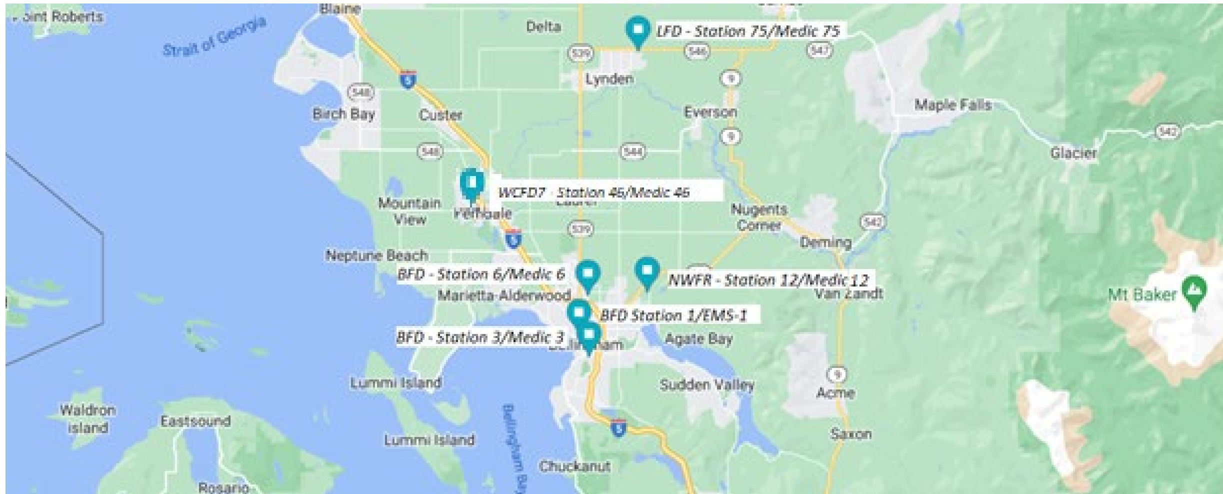


Adding a Paramedic Unit to maintain critical service levels and address service challenges is a complex undertaking. WCEMS initiated a project in September 2020 that was completed in July 2021 to determine if there was a need for an additional Paramedic Unit. The process looked at two questions which are:

1. Is there a need for an additional Medic Unit based on geography, increased call volume, and projected population growth in the county?
2. If there is a need, how should Medic Units be deployed to best serve citizens?

WCEMS received help from the GIS technical specialty company called Entrada/San Juan as well as data analysts from the Bellingham Fire Department and WCEMS to help make this assessment. The final recommendation was to deploy a new Paramedic Unit in Lynden as well as to reposition Medic 10 and Medic 45 to locations that provide equity in the call volume, reduce the stress on the downtown Bellingham units while providing higher reliability for the most rural parts of the county. The new unit is expected to be in service sometime in late 2022.

Future 2022/23 Medic Unit Locations

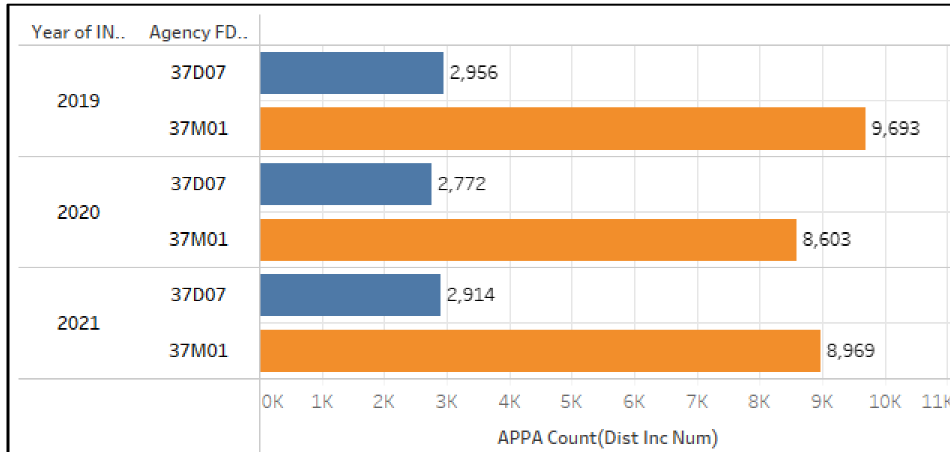


In 2021, Paramedics responded to more than 25,000 calls for emergency medical care throughout the region. The median response time for a Medic Unit within the city limits is 7.7 minutes and 90% of calls requiring a medic have a response under 14 minutes. Response is defined as the time from dispatch to arrival. Medic Units transported a combined total of 11,610 patients to the local hospital in 2021. Response times have remained stable; however, out-of-service times have increased with the occasional "no Medic Unit available" meaning the system has exceeded ALS capacity. With the addition of Medic 75 in Lynden in 2022, it is expected that the average system response time will decrease and the "no Medic Units available" status should rarely occur.

With the addition of Medic 75 in 2022, Medic Unit 10 will move to North Whatcom Fire and Rescue Station 12 and Medic 45 will move to FD7 Station 46 where the optimized travel times and call loads are more equally distributed among all the units.

The ALS/BLS Sub-Committees began meeting to look at current costs and to assess future service demands and needs. Committee members agreed that ALS remains the levy priority for funding the Paramedic Units. This committee examined the true costs associated with operating a Paramedic Unit with this data and future deployment in mind.

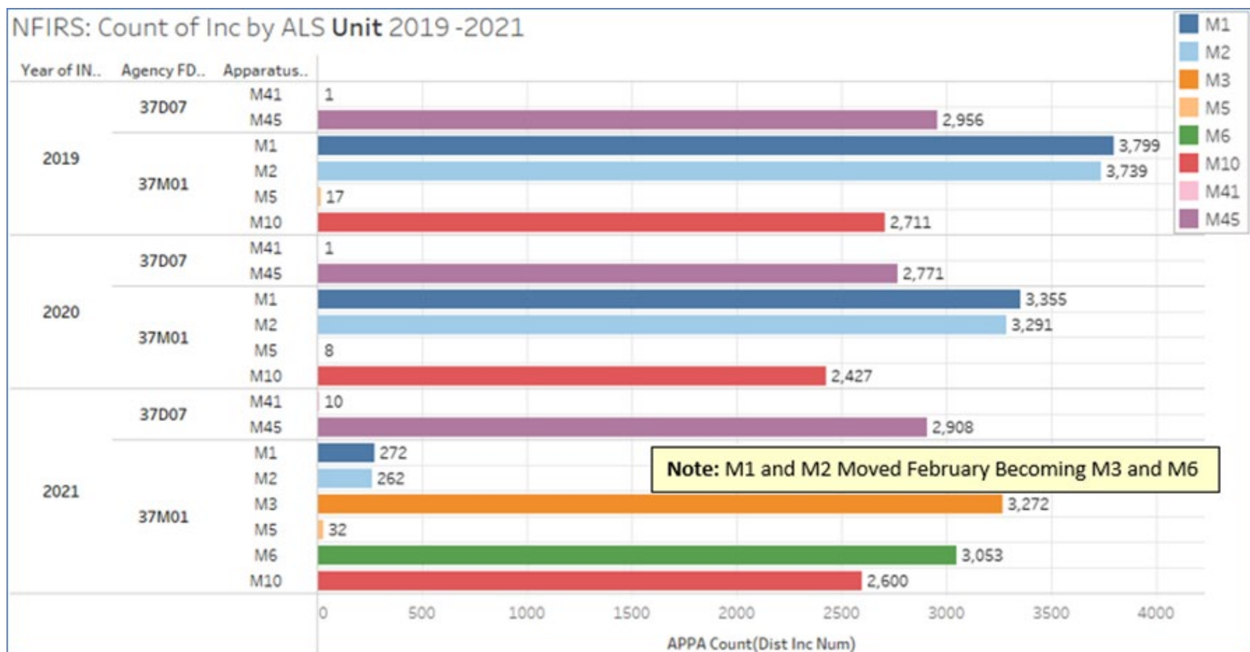
Total number of ALS calls by Agency Comparison 2019-2021



***Blue** – Whatcom County Fire District 7*

***Orange** – Bellingham Fire Department*

ALS Call Volume by Unit Comparison 2019-2021



The graphs above demonstrate a three-year snapshot of call volume growth from 2019 to 2021

ALS Recommendation 1

Continue using the Standard Unit Allocation model to determine annual costs with considerations for inflation and projected increases to help ensure sufficient funding.

The Standard Unit Allocation or "cost model" is the basis for funding each full-time 24-hour Paramedic Unit in the county. The yearly costs should include increases based on the current contract model, allowing for an automatic annual operation increase or CPI-W with a floor of 2.5% for Seattle-Tacoma-Bellevue. Projected per unit costs include vehicle replacement, salaries, wages, and daily operations of ALS ambulance services. (See Appendix; Exhibit 1)

ALS Recommendation 2

Continue to support the Medical Service Officer (MSO) positions at Whatcom Fire District 7 and Bellingham Fire Department.

MSOs for BFD and FD7 provide leadership and program management for the ALS System and contribute expertise to surrounding districts as requested. MSOs also provide additional Paramedic level supervision and emergency capacity when there are significant surges in 911 call volumes.
These positions are currently funded under the EMS Levy. (See Appendix; Exhibit 2)

ALS Recommendation 3

Continue to support the EMS 1 Field Supervisor Position for Bellingham. Consider monitoring the need for expansion of the EMS Supervisor Position during the Levy Period.

The current role of the EMS 1 Supervisor is to provide quality assurance to the Paramedic workgroup, monitor supplies and ordering, monitor performance, and provide field supervision. In addition, the EMS 1 captain provides overhead leadership to the BLS agencies for the Equipment Exchange Program, CQI feedback to county BLS crews on EMS performance, administrative duties supporting the BLS response systems as well as providing incident command support for multi-casualty responses, complicated motor vehicle accidents, hazmat responses, and other multi-unit responses in the county. EMS1 has currently exceeded the call volume that allows them to properly supervise employees and manage administrative duties and has, in essence, become a first-line response unit.
(See Appendix; Exhibit 3 and 4)

ALS Recommendation 4

Continue to support the ALS360 program through the Stryker Contract which includes the technology (LifePaks, LUCAS Mechanical CPR, LIFENET System) and patient movement system for the ALS agencies.

This recommendation is part of the Equipment Exchange Program (gurneys and load systems) where the technology and equipment are part of the "master contract" with Stryker. This is a 10-year lease with annualized payments of just over $523,000 per year for a total 10-year obligation of $5.4 million. It is anticipated in the year 2026 or 2027, this equipment will be upgraded to the newest technology and models as part of the ongoing contract with no price increases on the contract.

ALS Recommendation 5

Continue to support the Image Trend Electronic Patient Care Reports (EPCR) system for ALS which includes ongoing development of integrated technologies with the CAD systems, Julota, Life Net CPR Feedback systems, AED data downloads, and bi-directional information sharing technologies with the hospital.

Image Trend is supported by the Levy at about $180,000/year which includes records generated from the BLS system. Patient care records and charting is the primary function of the EPCR system; however, Image Trend increasingly is becoming more integrated with EMS CQI and information sharing systems. For ALS, the additional supported features are associated with continuous quality feedback programs that give providers insight into performance during certain procedures such as cardiac arrest (CPR Feedback) serial monitoring of cardiac rhythms, and highly accurate documentation of treatments and events during patient encounters. This technology is part of a larger and integrated system called LifeNet where these systems are connected and shared among multiple platforms including hospital information systems. Over the next six years, we know there will be significant integrations among these connected systems.

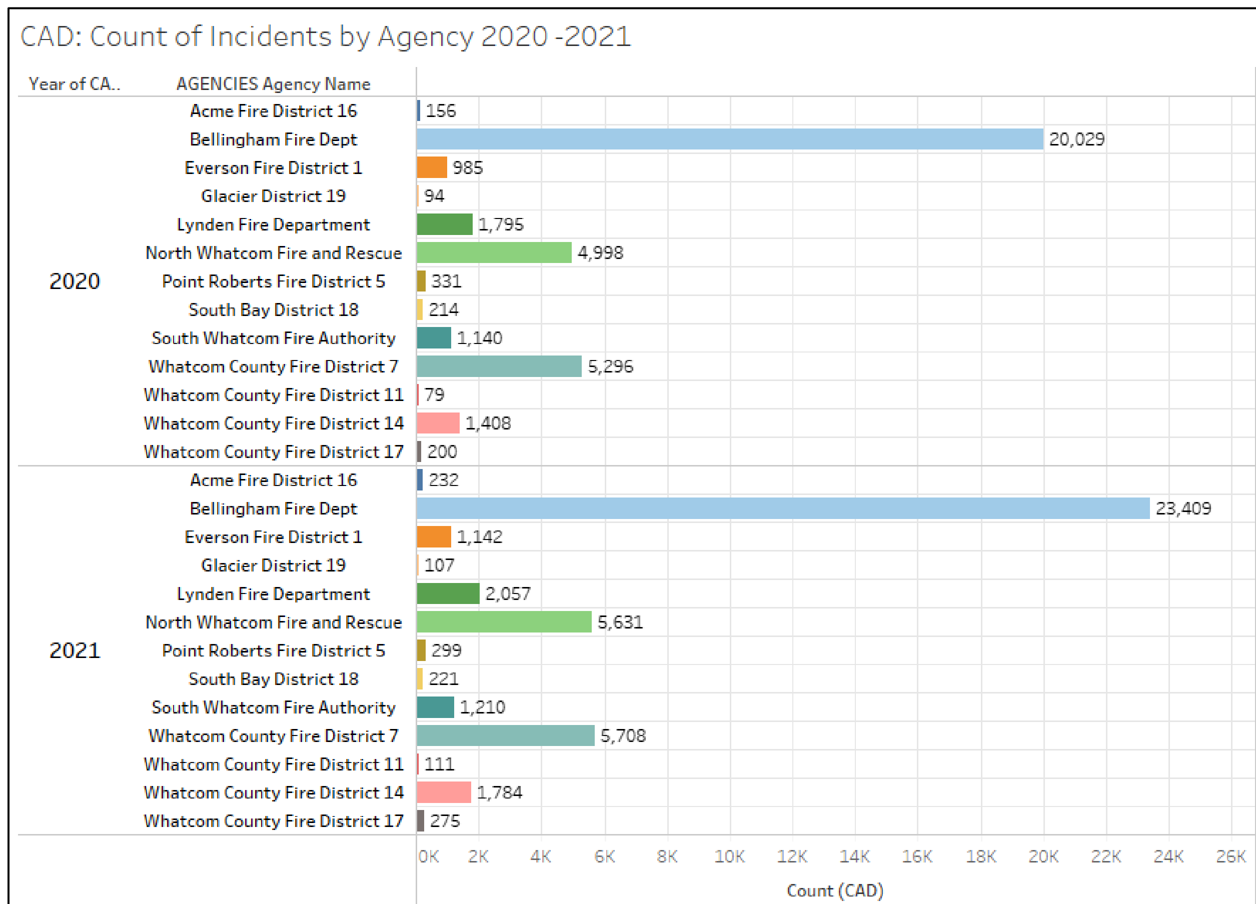
High-Performance CPR Training, Civic Field

BLS Recommendations

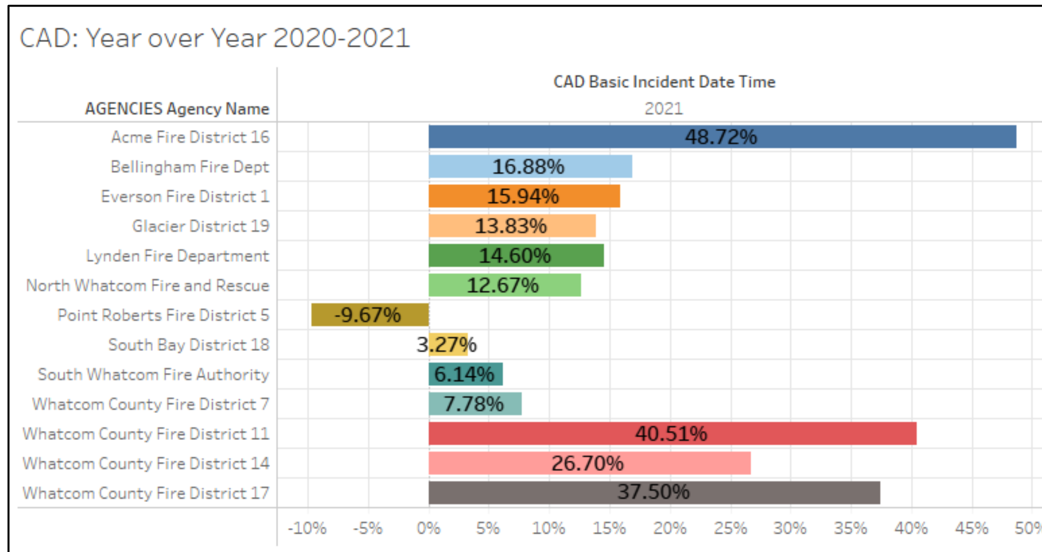
Basic Life Support (BLS) is the foundation of EMS services in Whatcom County. The BLS systems are integrated with the 14 local Fire Districts and Departments using Emergency Medical Technicians trained to provide lifesaving skills that stabilize critically sick patients before Paramedic Units arrive. The BLS agencies are striving to arrive at the scene within 6 to 10 minutes of the call being received at their station. There are 28 BLS units responding to about 25,000 calls per year and are the front lines of the EMS response. BLS services for the 14 agencies are funded through local property taxes, utility fees, and local fire district levies. Basic life support (BLS) includes emergency cardiopulmonary resuscitation; control of bleeding; treatment of shock, poisoning, anaphylaxis, Narcan administration, stabilization of injuries and wounds, and advanced first aid. Similar to the oversight provided to the Paramedic Program, the Whatcom County Medical Program Director also determines the scope of practice and educational requirements for over 625 EMTs in the system.

In the last three years, the BLS response system has become increasingly stressed in response to the ongoing COVID-19 Pandemic and multiple local and catastrophic flood emergencies that have resulted in a significantly increased call volume. In addition, the fire districts have seen decreased volunteerism in the recruiting of firefighter/EMTs and part-time personnel. It’s assumed these trends will continue and strategies must be developed to meet these increased demands for service.

Call Increases by Agency 2020-2021 Comparison



Percentages of Increased or Decreased Call Volume 2020-2021 Comparison



The ALS/BLS Sub-Committees met throughout this process to determine how best to support BLS agencies with the known increases in call volume and transports, a rapidly decreasing volunteer/part-time workforce, and increased costs related to staffing apparatus, supplies, training, durable medical equipment, recruitment along with other EMS related costs. (See Exhibit 8 2020/2021 Agency Transport Data & Increases)

BLS Recommendation 1

We recommend a BLS Cost Allocation providing a minimum of $1.5 million per year that offers equity in funding that further supports BLS operations, administration, and transportation to offset local jurisdictions' BLS costs. These funds can be increased later if the end fund balances continue to grow.

In the early 2000s, when Whatcom County implemented BLS transport, funding was not made available to offset the impacts on the agencies providing services in their response areas. All agencies have experienced significant financial impacts and call volume increases by providing these services to the community. Stipends for agencies would help offset the ongoing costs of EMS care and help alleviate partial financial burdens that were not addressed when BLS transport requirements were adopted. During work sessions in 2022, the BLS Sub-Committee created a formula that provides equity in funding for the BLS agencies. The formula considers Assessed Value rates for the jurisdictions, total call volume excluding ALS and Community Paramedic calls, and out of service times and weights them appropriately (See Appendix Exhibit 5).

This recommendation will provide an annualized reimbursement to the WCEMS Levy Fund using the approved BLS Allocation Model (Exhibit 5) for EMS-specific (per RCW 84.52.069) items including personnel, structures, equipment, and supplies for equitable distribution among the fire departments/districts in Whatcom County.

While it's recognized that BLS agencies face future challenges for funding operations, considerations for

future/annual allocations must be part of a long-term sustainability plan approved by the EOB for providing countywide BLS. The TAB shall provide the EOB with a long-term (six-year) sustainability plan for the BLS programs that includes considerations for regionalization and/or integration of BLS services across the county. This plan might include expansion of BLS services, collaborations between fire agencies, dedicated BLS units serving several districts, or consolidation of BLS services in some regions where shared services can be explored and/or where certain districts can transition to a full-time workforce. This plan will include anticipated annual costs that can be supported by the 2023 to 2028 Levy.

BLS Recommendation 2

Continue to support the Equipment Exchange Program that provides interoperability for both BLS and ALS for equipment that includes the ALS360 program as part of this shared equipment program. ($20,000 Equipment Exchange Program/year) ($523,000 ALS360 Program/year)

The Equipment Exchange Program provides a small offset of financial burdens to the departments/districts in Whatcom County. More importantly, it supports an efficiency program for patient movement interoperability. This program provides funds for a centralized equipment exchange for certain equipment that circulates through the system.

The Equipment Exchange Program allows equipment and consumables to move through the system when a patient is transferred between units. There are agreements with all EMS providers and the Emergency Department at St. Joseph Peace Health Hospital to centrally store this equipment. Program advantages include:

- The first response agency returns to service quicker
- Standardizes EMS equipment
- Enhances the care provided to the public
- Cost-effective and minimizes waste
- Allows gurney interoperability among units

In 2020, WCEMS recognized the current gurney (patient rolling bed system) had reached its end of life. After careful evaluation, WCEMS selected the Stryker Power Cot and Power Load system as the county-wide agreed patient transport system. Shared among the ALS and BLS units in the county, this modern gurney provides safer patient handling and lifting, a reduction in lifting injuries to EMS providers as well as continued interoperability among all county EMS units. Known as the ALS360 Program, WCEMS entered into a lease agreement that saves about $1.8 million over a 10-year period. In addition, this equipment will be upgraded to newer technology in about 5 years without additional annual costs over the 10-year timeframe. Each Stryker Gurney costs approximately $25,000 and each PowerLoad System costs approximately $25,000. The current contract includes maintenance and annual inspections for the contract period. There are 56 gurneys in the system shared among the agencies. Annualized payments over the 10-year period are about $523,000/year. Also included in the ALS360 program are the technology pieces for the Paramedic Units that include this equipment: Life Pak 15's monitor/defibrillators, stair chairs, and the LUCAS mechanical CPR devices further described in the ALS Recommendation section.

In 2022, WCEMS completed a two-year project with the ALS360 program where the remaining BLS units were equipped with the Stryker "PowerLoad" system at approximately $25,000 per unit. This $1.4 million project installed the PowerLoad system in 53 BLS units. This one-time purchase was intended to upgrade the patient movement system among the BLS agencies providing inter-operability between the BLS/ALS units, increased patient comfort, and safety, along with a predicted decrease in lifting-related injuries to EMS personnel.

BLS Recommendation 3

Continue to support the centralized Electronic Patient Care Records (EPCR) system Image Trend for all agencies. ($185,000/year)

Image Trend is funded through the levy at approximately $185,000 per year and was implemented in June of 2018. Image Trend provides a common data collection and analysis platform. Information provided from this system streamlines reporting for all agencies and provides the ability to analyze countywide system data and implement efficiencies.

All BLS and ALS agencies with the exception of FD5 Point Roberts use this EPCR system which provides not only an integrated records system but centralized and integrated data systems for a systems-level view. Each department/district maintains its local system while WCEMS provides data analysis and administration at the systems level. The robust analytic module provides detailed data in the areas of EMS response, provider treatment modalities, continuous quality improvement, unit utilization, and a wealth of other information related to observing EMS systems operations.

EMS System Data Overview

Specific and detailed EMS systems data was identified to be insufficient and lacking in quality and depth during the pre-2016 levy planning process. One of the greatest successes of the 2016 Levy was the agreed centralized Electronic Patient Care Records (EPCR) system called Image Trend which employs a powerful analytic module. This forward-thinking strategy has provided almost four years of EMS systems data that compares many data points when considering strategies for EMS system management and financing. Most of the data referenced comes from these systems.

- We know there may be additional factors unique to Whatcom County that would affect productivity measures. When additional data is available, a comprehensive analysis of ALS unit productivity, efficiencies, and opportunities can be performed
- Much of this learning was gained during the Fifth Medic Unit implementation study where current and robust data obtained from current GIS data had a great influence on community decision-making
- This work was the first opportunity to visually see specific data related to call volume and location, types of calls, and observing trends in call characteristics
- By the end of 2019 Image Trend was fully implemented in all but one agency in Whatcom County
- This system has allowed for the success of the 5th Medic Unit project, the successful roll-out of medications like Nitrous, and allowed for Whatcom County to work with community partners in coordinating care for patients that are seen by multiple agencies
- Image Trend has been greatly augmented by the introduction of the Community Health Information System (CHIS) Julota platform
- Whatcom County EMS can now track and coordinate care between the Jail, EMS, Community Paramedicine, Medical Diversion Program

Image Trend Example

Care Coordination Platforms connect EMS and Diversion Teams

The EMS administration supports systems-level administration and analysis of the EPCR system, Image Trend, which provides a centralized repository of EMS data. In addition, to support the Community Paramedics and GRACE programs, the data analyst has created partnerships between the hospital and crisis stabilization facility through the Community Health Information platform which supports a continuum of care for patient care data and information for those enrolled in those programs. Known as a Community Health Information Hub (CHIH), JULOTA makes these community connections from the EMS system with these assumptions:

- EMS has always been a portal for patients to enter services
- In the past there has not been the information infrastructure to support connecting patients with services that are beyond the scope of EMS intervention

Current Diversion Programs include

- Community Paramedicine (CPM)
- Ground-Level Response and Coordinated Engagement (GRACE)
- ImageTrend in combination with the CHIS and other platforms allows for front line workers to research the utilization of services across silos

Acting as the master patient Index for the county, teams can query

- Individual patients
- EMS contacts
- Jail Bookings
- Community Paramedicine/GRACE contacts

Image Trend EMS Report Example

EMS System Data Recommendations

Recommendations Systems Data 1

Support and expand the integration of systems like Image Trend and the JULOTA platform. Continue to develop integrated platforms that favor bi-directional community health information sharing.

The challenges that Whatcom County faces as a community have proven time and time again to be multifaceted and impact multiple organizations/systems.

- The Opioid crisis led to working closely with the Lummi Tribal clinic
- The COVID pandemic has shown the need to integrate EMS data with hospital outcomes
- County elected officials have called for the development of alternative forms of response and communications

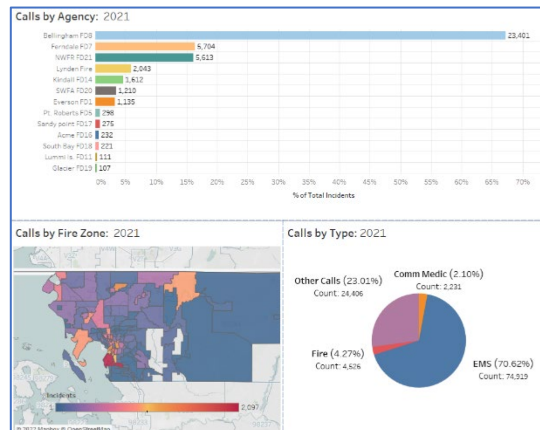
Centers for Medicaid (CMS) are launching comprehensive information-gathering programs relating to alternative destination reimbursement that requires integration with the Crisis Stabilization Center. Continued mandatory reporting to the National Emergency Medical Services Information System (NEMSIS).

Data Reporting Standards and Dashboards

The past 3 years of work included the development of Key Performance Indicators (KPIs) that provide an effective dashboard for management, employees, elected officials, and citizens. Whatcom County does not currently have the capacity for a HIPAA compliant server for the use of publishing dashboards. Currently, static dashboards are being published on the county website.

- The Tableau Server Project was designed in 2019 but disrupted by competing priorities/global pandemic

In conjunction with the JULOTA platform/vendor, the objective is to publish a series of public/private facing dashboards.



The graphic above is an example of taking CAD, Law Enforcement Data, and EMS reports and drawing creating a longitudinal view of the information.

Julota Integration Example

Incident Date and Time
12/04/2021 11:46 pm

Incident Type
EMS

Details

Agency
Bellingham Fire Dept

Incident Number

Chief Complaint
Breathing Problem

EMD Card Number
6D02

Run Number
N/A

Primary Impression
Syncope/ Near Syncope/ Collapse

EMS Response Number

Incident Zone Number
010001

Transported
St Joseph Hospital

Chief Narrative
M3 and A1 dispatched to report of DELTA abnormal breathing, 53YOM. SUBJECTIVE: PT C/C feeling weak and lightheaded. PT reports was in typical morning when he started to feel weak and lightheaded, and was concerned he would pass out, so PT laid down onto ground. PT denies chest discomfort or SOB during this event. PT denies LOC. PT denies similar previous events. PT further reports ABD pain ...

Notes
(Discussion)

Incident Date and Time
11/29/2021 03:42 am

Incident Type
Community Health

Details

Agency
Bellingham Fire Dept

Incident Number

Chief Complaint
Well Person Check

EMD Card Number
CP

Run Number
N/A

Primary Impression
N/A

EMS Response Number

Incident Zone Number
010001

Transported
Transported, Location Unknown

Criminal / Legal System Contacts

Type of Contact: Booking
Agency: N/A
Booking Date: 06/26/2021
Release Date: 07/01/2021
Felony or Misdemeanor? Felony Misdemeanor
Notes: (Notes)

Type of Contact: Booking
Agency: N/A
Booking Date: 05/20/2018
Release Date: 05/21/2018
Felony or Misdemeanor? Felony Misdemeanor
Notes: (Notes)

Recommendations Systems Data 2

Continue the development and deployment of secure dashboards for applicable community partners. Provide information sharing and increased continuous quality improvement data support to the various EMS sectors.

While the technology is a vital component of this work it is important to account for the administrative work of use agreements and relationship building that precedes publishing dashboards

Armed with Data-Driven decision-making, Whatcom County can start to create KPIs that go beyond state and federal standards to a proactive system that is seamless to patients while acting as a force multiplier across the continuum of Fire Based/EMS/Diversion services.

This recommendation echoes the 2016 Whatcom County EMS Strategic Plan: “The Whatcom County EMS strategic planning committee recommends collecting performance measure data and performing intra-county comparisons annually. The Bellingham Fire Department and departments throughout Whatcom County should collect performance measure data to gauge each fire department’s delivery component. This data should help in planning more efficiently and effectively for the future by flagging problem areas.”

After identifying relevant KPIs, ensure data is gathered, monitored, actionable, and available to all stakeholders. Track medical save rates and benchmark against other agencies and best practices. Utilize this knowledge to improve service. Use in communications and as an education tool with the public.

BLS Education and Training Overview

BLS Education and Training Overview
Whatcom County EMS agencies employ more than 625 Emergency Medical Technicians (EMTs). EMTs are the foundation of the EMS system providing immediate lifesaving skills until advanced help can arrive. Progression in an EMS career begins at the EMT level with approximately 140 hours of training including didactic and practical skill sessions. For those that progress to become a Paramedic, trainees participate in about 900 hours of physician-led didactic, practical testing, and field evaluations before taking the National Registry Examinations. Training takes about a year before becoming certified.

Once certified as an EMT or Paramedic, EMS providers must "re-certify" every three years. Washington Department of Health, (EMS Systems) allows two re-certification methods for EMS providers:
1) Continuing Medical Education or 2) Ongoing Training and Evaluation Program. Both methods must meet state-specified educational requirements. Whatcom County utilizes the Ongoing Training and Evaluation Program (OTEP) method. This requires evaluations of knowledge and skills for each topic throughout the certification cycle and must be conducted quarterly.

Initial and ongoing EMS training can be any one of the following:

- Emergency Medical Responder (EMR)
- Emergency Medical Technician (EMT)
- Advanced Emergency Medical Technician (AEMT)
- Paramedic

EMTs are required to document 30 hours per year of didactic and practical skills application and evaluation. Paramedics are required to document 50 hours of didactic education per year. They also receive annual evaluations of skills proficiency and specific training related to specialized skills.

In addition, EMTs and Paramedics must demonstrate competency through established training networks to the Whatcom County Medical Program Director (MPD). The MPD is the certifying officer for all Whatcom County EMS providers.

BLS Education and Training Recommendations

BLS Initial & Ongoing Education Recommendation 1:

Continue to fund and support the county-wide BLS training, tracking, and compliance software Rescue Hub for EMT initial and recertification compliance. Further develop BLS Training Programs throughout the county that enhance and improve the quality of training through the Education Committee and Training Officers.

Whatcom County has multiple fire departments ranging from volunteer, volunteer/career combination, and all career. A single standard OTEP method training program has been established for the county using EMS Connect, an online learning system that costs $25.00 per person per year for all individual agencies. Practical evaluations are performed in-house. Each department is responsible for training delivery as each has unique needs. Departments are encouraged to share training opportunities and allow other departments to participate.

The responder's primary agency pays EMS Connect and provides the skills evaluations through various methods. Training records tracking and compliance are supported by the EMS Levy for all agencies using the Rescue Hub online platform with a cost of approximately $3,000 per year for over 625 EMS professionals.

BLS Initial & Ongoing Education Recommendation 2

Develop and fund BLS/Emergency Services Evaluator workshops/conference that supports the EMS systems requirements for the certification process. (quarterly workshops/conference).

The ESEs are the MPDs teaching liaison for the EMS system. When new treatments, procedures, or policies are presented, the ESEs ensure that EMS providers are learning and practicing the State of Washington and the Whatcom County protocols and procedures. These protocols and procedures are an extension of the MPDs license and the ESEs ensure quality assurance and educational feedback as part of the continuing education programs. The goal is to fund four, 4-hour sessions a year with the ability to update as many as 20 ESEs per session. Senior EMT Instructors (SEIs) are required to teach this course.

BLS Initial & Ongoing Education Recommendation 3

There is an expressed need to build more capacity for EMT training with an emphasis on flexibility and availability. Monitor future capacity and cost as the levy budget develops in the next cycle.

This recommendation is to determine and develop additional opportunities for EMT classes as mentioned in Recommendation 2. These ideas come as future programs which can be utilized by individual agencies.

- Scholarships for underserved, rural agencies
- Potential grants for accelerated EMT programs
- Explore alternative training options considering cost and time

ALS Education and Training Overview

Whatcom County ALS agencies employ approximately 71 Paramedics when fully staffed. Initial education for a Paramedic is about a year process beginning with a 40-hour Anatomy and Physiology course as a prerequisite to the year of training. The Paramedic School curriculum is developed in collaboration with Bellingham Technical College (BTC) where BTC provides the Academic oversight and educational certifications through the Commission on Accreditation for Pre-Hospital Continuing Education (CAPCE) which maintains standards for the delivery of EMS.

This partnership between the Bellingham Fire Department, Fire District 7, Bellingham Technical College (BTC), and WCEMS has created a centralized Paramedic training program for the region that provides a rich educational experience for students.

Candidates for training can be from city and county fire departments where trainees are tested, evaluated, and competitively ranked for entry into the program. Once certified, ongoing training is conducted monthly by local physicians and EMS educators for a total of 50 hours per year. In addition, Paramedics must demonstrate skill proficiency through a variety of practical sessions as well as demonstrate a deep understanding of medical protocols and procedures.

Initial Paramedic class costs are approximately $1.0-1.5 million per year depending on class size. This includes supporting the Paramedic Course Instructor from the Whatcom County EMS system at about $190,000 per year and base school operating costs at about $350,000/year. Other costs include students' wages and benefits while they are in school.

The county Medical Program Director and the Supervising Physicians play a significant role in initial and ongoing education. The State of Washington DOH and CAPCE requires a board-certified physician to serve as course Medical Program Director that oversees curriculum, practical and skills labs, and testing. Further oversight is provided by the Paramedic Oversight Committee which monitors student progress, program success, and liaison with BTC for continued course accreditation.

The state-appointed County Medical Program Director approves all EMS courses and certifications locally before submitting them to the Department of Health EMS and Trauma systems, licensing section for State approval. The state-appointed county MPD maintains an ongoing contract with Whatcom County EMS while the Supervising Physicians are contracted locally for the Bellingham FD and Fire District 7 ALS programs.

ALS Education and Training Recommendations

ALS Initial and Ongoing Training Recommendation 1

Fully fund the current model of Paramedic Apprenticeship over the life of the Levy and continue to develop the admissions of outside agencies to offset costs to the Whatcom County EMS Levy as well as strengthen the program for the future. Include inflator numbers (3% for materials, (CPI-W), etc., 6% for labor cost increases) as part of the planning process. Future school planning should also include monies for training equipment and administrative support.

Whatcom County has trained our Paramedic responders since 1974. Our program focus is on the needs of our community and the unique challenges faced when providing service to a geographically diverse region. By training our people locally with physicians and providers who understand our system we create efficient training in a compressed time frame that produces high-quality, competent providers. We control the quality of our education and adapt quickly to changes in standard of care and practices that larger programs are unable to address. We have re-established our program after a decade-long hiatus; now this proven and successful apprenticeship program of training and education is a model for other systems across the country. (See Appendix, Exhibit 6)

ALS Ongoing Training Recommendation 2

Support existing Peer Support programs within the Fire Agencies for the mental health of emergency responders. Develop additional training for Community Paramedics, Paramedics, and EMTs in the areas of trauma-informed care, PEER support, mental health responses, health equities in EMS, Pandemic training, Mental First Aid for First Responders, and other specialized training for the changing Fire-Based EMS environment. (Open to all first responders) Build off current NWFR and BFD programs. Consider an "on-call" (Retainer/Referral) Psychologist/Counselor with specific competencies related to responders' Mental Health issues.

This recommendation acknowledges the psychological and physical stresses for those who respond to emergency calls during their careers. It is also understood that the overall physical and mental health is paramount to supporting the EMS workforce at its highest level. The goal of this recommendation is to provide resources for first responders that will support a long and healthy EMS career.

Diversion, Prevention, and Community Outreach Programs Overview

Diversion Programs (Community Paramedics)

The current diversion program grew out of the Bellingham Fire Department (BFD) with a goal of reducing the number of frequent users of the 911 system. BFD implemented the Community Paramedic program in 2014/15 with a single Community Paramedic, and then later added one licensed social worker that supports the Fire Department with case management aimed at navigating patients to the right care at the right time.

Currently, the program has grown to include three Community Paramedics who are teamed with a social worker/case manager where patients are enrolled in the Ground Response and Coordinated Engagement (GRACE) program based on referrals from EMS agencies and frequent 911 use. This program has had great success by diverting some of the most vulnerable populations to more appropriate medical care. This program is also developing fall prevention outreach for vulnerable communities.

Current Prevention and Community Outreach Program Support

Currently, there is limited support from the levy in the areas of Prevention and Community Outreach. However, there is a great desire to provide community prevention and outreach programs in the county. Community CPR and First Aid training, Stop the Bleed programs, Community Heart Screen Programs, fall prevention, and STROKE recognition are a few of the many programs that contribute to healthy communities.

These program desires exist within the relationships of Whatcom County Trauma and EMS Council, PeaceHealth Hospital, North Region EMS/Trauma Council, and local/state Injury and violence prevention programs. Opioid/OD prevention, gun safety, human trafficking, and vulnerable populations abuse are some of the state-level programs that can be emulated for local outreach.

Diversion, Prevention, and Community Outreach Recommendations

Diversion Recommendation 1

Fund an additional two Community Paramedic Units to serve the larger and growing county. Planning for all future units should include a Community Paramedic Unit paired with every ALS Ambulance. ($500,000/year)

This will provide the ability for individual agencies to appropriately address mental health, substance abuse, homelessness, and geriatric response issues that current EMS services are understaffed and not trained to manage. Consider expansion if data indicates cost savings through reduction in calls. Ask the TAB to examine the best utilization and form of the program throughout the county and recommend an appropriate level of service.

With the passage of House Bills 1182, 1054, 1310, 1267, 1089, 1223, 1088, and 1320 and Senate Bills 5051, 5066, 5476, 5055, and 5259 there will be an increase in the need for alternative response units to care for a diverse spectrum of medical call types. Community Medics in more rural parts of Whatcom County can reduce call volume on primary response units by managing high utilizers of the 911 system. These units respond with a Paramedic and mental health or other social services expert to manage unique call types that are not part of everyday EMS response. These units can also be used to provide hospital discharge follow-up for orthopedic injuries, falls, or post-operative care. Patients released with newly diagnosed congestive heart failure or chronic obstructive pulmonary disease also benefit from expedient follow-up post-discharge. These units can also be used to do fall assessments and act as surge capacity or crisis intervention units when not involved in other activities.

Prevention and Community Outreach Recommendation 1

Priority recommendation is to further the Community CPR/AED and First Aid programs with a goal of becoming a citizen CPR "Heart Safe" community defined by numbers of people trained in CPR that supports increased survival rates from Sudden Cardiac Arrest.

Program metrics provide target goals for increasing cardiac survival rates in the community. Funding for the program should include CPR/First Aid Instructor development and community engagement initiatives. Instructor development and community engagement initiatives can include:

- Public Service Announcements encouraging businesses to deploy AEDs on-site
- Targeting businesses with AEDs onsite
- Provide incentives for AED and CPR trainings
- Engage in prevention campaigns
- Encourage AED deployment on each floor of multi-story buildings
- Further expand AED equipment in public areas
- Consider a $5,000 yearly budget

Prevention and Community Outreach Recommendation 2

Create public awareness/prevention programs aimed at reducing morbidity and mortality related to sudden traumatic injuries as part of the County's trauma prevention outreach. Programs currently being promoted: infant car seat program, Stop the Bleed, bike helmets, window safety for multi-level homes/apartment buildings, and fall prevention programs.

Coordinate with the Whatcom County EMS and Trauma council along with the North Regional EMS and Trauma Council and other partnering safety and prevention programs to further develop and support these projects.

Medical Dispatch (Prospect) Program Overview

Current EMS Dispatch Support

The county-wide levy supports approximately 80% of the EMS dispatch fees ($2.1 million) while the City of Bellingham General Fund, Whatcom County General Fund, and the City of Lynden General Fund pay the remaining 20% of fire dispatch fees per the 2016 Interlocal Emergency Medical Services Agreement. Dispatch fees support personnel, equipment/technology facilities, and other aspects of the Prospect Dispatch Center at approximately ***$2.1 million with a projection of up to $2.3 million per year***. The Prospect Dispatch Center is managed and led by the Chief of the Bellingham Fire Department and is located at Fire Station 1. Day-to-day operations and leadership are provided by the Division Chief. The center employs 14 dispatchers, two shift supervisors, and one manager. Dispatchers are highly trained, hold EMT Medical Dispatcher certifications and deploy specialized skillsets for recognizing Sudden Cardiac arrest and providing dispatcher-assisted telephone CPR.

Since the 2016 Levy Workgroup Plan was endorsed, the EMS Levy has seen a significant increase in dispatch fees related to increased call volume, technology, and equipment upgrades as well as increased staffing (2 dispatchers). Dispatch fees are determined by the WHAT-COMM Administrative Board. through a committee process. Annual fees are based on budget projections (3-year average with inflators) by the Board where the EMS Levy and Cities/County are invoiced for those fees.

Prospect Medical Dispatch Recommendations

Prospect Medical Dispatch Recommendation 1

Continue to support the Fire Agencies Prospect Dispatch Center annual fees at approximately $2.1 million with a projection of up to $2.3 million per year that supports the day-to-day operations along with supporting technology upgrades necessary to continue to orient and adapt to a dynamic and evolving needs of the community.

The Prospect Dispatch Center needs to be supported by evolving technology and dispatching principles to accurately triage and dispatch correct and appropriate resources for calls for service. The evolution of EMS service needs to be supported by the evolution of EMS dispatching to accurately triage and dispatch correct and appropriate resources to calls for service. The landscape for EMS and by extension EMS dispatching is ever-changing. Opportunities exist to deploy more efficient uses of limited EMS resources by making use of technologies such as artificial intelligence, telemedicine, and nursing hotlines to name a few.

Prospect Medical Dispatch Recommendation 2

Continue to have the TAB integrate with the Fire Chiefs Operations Committee to make recommendations to the EOB regarding future recommendations regarding the Prospect Dispatch Center.

Changes in law enforcement responses for service will also change the landscape of dispatch and create more opportunities to create efficient use of available resources through the implementation of AI, telemedicine, and other advances in dispatch tools and techniques. Creating a budget to embrace new trends is necessary to enable our dispatch center to keep up with advances in emergency call processing. Have the TAB continue to work with Prospect to understand future needs and make recommendations to the EOB. Prospect Dispatch Innovation/Technology is estimated to be $100,000 over the six-year levy cycle.

Prospect Medical Dispatch Recommendation 3: ***Ask the EOB to investigate/determine an alternate method for invoicing/paying for dispatch fees to move the remaining portion of the Fire Fees (BFD, LFD, WC) from those general funds. In this scenario, all dispatch fees would be invoiced directly to the Fire Districts/Departments from What-Comm.***

This recommendation is oriented to Whatcom County, the City of Bellingham, and the City of Lynden where there is a desire to redirect fire dispatch fees away from these general funds. This initiative requires informing the WhatComm Board and other stakeholders to determine if there is a better method or funding source for these dispatch fees not supported by the County-Wide EMS Levy as related to RCW 84.52.069.

Communications Committee Overview

The Communications Committee was tasked to develop strategies that “tells the story” of the Whatcom County EMS system as well as provide directed communications to the citizens of Whatcom County in the areas of:

- Financial Transparency by demonstrating how EMS levy monies are used to provide a high level of lifesaving services in Whatcom County
- Demonstrate the efficiencies of a unified system supported by the regional partners
- Report the processes and decisions that direct the EMS Strategic/Funding Plan
- Direct communications within the limits for promoting the levy

Committee members from the City of Bellingham, Whatcom County, Fire Departments/Districts, and other public entities should agree to “joint messaging” for supporting the county-wide levy as well to provide strategic communications specific to the Levy Plan and Recommendations.

The Communications Committee will continue to provide overhead support and joint messaging strategies for stakeholders of the EMS system.

Administration Overview

Whatcom County EMS Administration
The WCEMS Administration supports the EMS system in the areas of strategic initiatives, contract administration and system performance, monitoring financial stability, supporting training and education systems, data development, and communications. WCEMS has created collaborative partnerships with the Whatcom County Departments as well as local health care organizations and coalitions, councils, and committees where many health care initiatives cross into the EMS sectors. These relationships and collaborations include:

- Whatcom County Fire Chiefs Association
- Whatcom County Commissioners Association
- Partner with the Accountable Communities of Health
- Opioid Task Force
- Incarceration Prevention and Reduction Task Force (Behavioral Health Sub-Committee)
- Winter Emergency Shelter Task Force
- Whatcom County Health Department
- Whatcom County Department of Emergency Management
- Multiple Pandemic Response committees
- Crisis Stabilization and Diversion Committees
- North Region EMS and Trauma Council
- Whatcom County EMS and Trauma Council
- State of Washington EMS and Trauma Steering Committee (co-chair IVP sub-committee)
- Local and Regional Trauma CQI Committees

In addition, the Whatcom County EMS Ordinance developed a relationship that supports the Whatcom County Medical Program Director in the areas of EMT and Paramedic certifications and licensure, operational and medical practices as well as developing treatments and future technologies for better patient outcomes. In essence, the EMS system is an extension of the Medical Program Director's practice and philosophy where these treatment and response modalities are developed and implemented as part of the system licensure.

EMS Manager
The EMS Manager reports to the Whatcom County Deputy Director of Administrative Services and the Whatcom County Executive who Chairs the EOB. Primary responsibilities include contract management and administration, and the development and implementation of strategic initiatives to provide greater efficiencies within the system as well as the development and management of performance-based contracts with transport providers. The EMS Manager works closely with the EOB and TAB to provide strategic input for future plans and requirements and to evaluate first response performance (ALS/BLS) based on contractual requirements.

The Administration office monitors system structures and provides representation to partner agencies such as What-Comm and Prospect that provides input including:

- Assist with high-quality dispatching
- Establish a process for monitoring the medical quality of dispatch
- Employing the Medical Program Director for Emergency Medical dispatch oversight

The EMS manager monitors and ensures training is provided for EMS personnel (i.e. Basic EMT training), for the community (CPR, AED, and First Aid Training), and post-service training identified through the quality assurance process. This person works with system and data analysis and monitors programs and efficiencies.

The EMS manager maintains the EMS system as an integrated regional network (county-wide) of BLS and ALS services provided by Whatcom County, local cities, and county fire districts. This person makes regional delivery and funding decisions cooperatively with the EOB and TAB to ensure ALS delivery from a system-wide perspective. Finally, this person assists with and provides recommendations to develop programs in response to healthcare reform changes ensuring:

- Ensure equipment is consistent with established protocols
- Seek cost savings through group purchasing
- Coordinate storage, maintenance, distribution, and associated contracts of system-wide equipment
- With guidance from MPD, establish ALS initial paramedic training and continuing education requirements
- Review and oversight of financial reports

Medical Program Director
The Whatcom County Medical Program Director (MPD) is an appointed position by the State of Washington where specific reporting and medical oversight of the system responsibilities are an obligation and requirement of the State appointment. MPD duties are required by statute RCW 18.71.212 and are described in WAC 246-976-920. These responsibilities at the County level include "on-line" and "off-line" medical control, developing writing protocols and directing patient care, and being a conduit of information from local EMS&TC systems to State staff for purposes of training, certification, audit, and discipline of EMS providers. The MPD can delegate certain duties to Supervising Physicians however certifications, disciplinary action, and patient care protocols are the responsibility of the MPD. WCEMS manages the contractual obligations of the MPD.

The job of the Training Specialist includes:

- Participates in the development, implementation, and monitoring of EMS education, training and quality assurance (QA), and quality improvement (QI) programs for Whatcom County EMS
- Plans, develops, creates, coordinates, and conducts EMS training curriculum and examinations based on quality improvement plans for BLS and ALS training systems
- Works collaboratively with Medical Program Director and other training providers to ensure training components of QA/ QI processes are met
- Provides training guidance and support for EMS evaluators and EMT instructors
- Identifies and monitors key performance indicators for understanding system performance such as resuscitation rates, response times, unit reliability, and system response capacities for use in training curriculum development

- Provides recommendations for system improvements and evaluation of new medical treatments, protocols, and specialized medical equipment through data-informed decision-making processes
- Ensures compliance with Department of Health certification and training requirements for BLS and ALS providers
- Participates on the Bellingham Technical College Paramedic Training Oversight Committee and other local, regional, and state EMS Stakeholder groups, as assigned
- Develops community outreach and education programs for CPR and AED and emergency medical situations
- Maintains EMS training equipment and inventory and online learning system

The Data Analyst and Systems Administrator job includes:

- Independently performs highly complex tasks related to managing the EMS data and information systems which includes security administration, applications administration, integration, design, development, implementation, problem-solving, user support, and analysis
- Serves as a technical lead, answering questions and providing technical assistance to other employees and EMS agency representatives
- Organizes, coordinates, and facilitates the efforts of diverse individuals, groups, and agencies.
- Analyzes new options, implement programs, and evaluates effectiveness
- Coordinates the collection, development, and analysis of data and other information
- Exercises independent judgment in analyzing problems, issues, and situations; develops and implements recommendations

The Office Coordinator is responsible for:

- Provides clerical support for Whatcom County's EMS system and management team including County staff, the TAB, and the EOB, maintaining confidentiality as directed
- Major support roles are contract and accounts payable management, along with invoice processing and reconciliation
- Serves as the initial point of contact for Whatcom County EMS; works under limited direction while demonstrating a high level of organizational skills

Administration Recommendations

Administration Recommendation 1

Continue support for the current configuration of the WCEMS Administrative office employing an EMS Manager, EMS Training Specialist, EMS Data Analyst, and the EMS Administrative Office Coordinator for the six-year levy period. In addition, this budget supports the Medical Program Director as a contracted position where the EMS office administratively supports the MPD.

The EMS administration office does not anticipate the need for additional staff; however, there may be opportunities with special projects to contract for specialized services.

Administration Recommendation 2

Continue to support the Whatcom County Medical Program Director's contract with a negotiated stipend for the six-year levy period. This agreed amount will include CPI-W inflators using the Seattle/King County CPI-W index in June of each year with a minimum of 3.0%. This would include a $5,000 training and continuing education budget.

Administration Recommendation 3

It is anticipated the EMS administrative office will need to relocate sometime in 2023. It is unknown what these costs will incur and where the offices may be located. This recommendation is to enter a placeholder for costs related to the office relocation in 2022. These costs should include upgrades to computer network systems supporting high-speed bi-directional informational exchange services, additional server capacity, and data storage capacity for ImageTrend and JULOTA.

Finance Overview

Background
The Finance Sub-Committee was formed in October 2019. This group began meeting in an effort to gain a common understanding of the county-wide levy as related to expenditures and to establish reserve account policies. The finance sub-committee tracks parallel to the TAB to support understanding of the financial/budget impacts as well as to advise on budget impacts for those initiatives.

The group met quarterly and during year 2020, the Finance sub-committee worked to provide a recommended framework for processing proposals for funding the various projects and programs through the county-wide EMS Levy. Much of this work was oriented toward developing a Charter Statement and Scope of Responsibilities for the sub-committee.

The original sub-committee expanded in February 2021 to support the Levy Renewal planning effort. The group now meets monthly and includes these members:

Member	**Organization**
Tyler Schroeder	Whatcom County Deputy Executive
Mike Hilley	Whatcom County EMS Manager
Marianne Caldwell	Whatcom County Finance
Forrest Longman	COB Finance
Chief Larry Hoffman	Fire District 7
Scott Korthuis	City of Lynden Mayor (Small City Rep.)
Dewey Desler	Citizen Finance Rep.
Rob Roy Graham	Whatcom County Fire Commissioners
Ben Boyko	Div. Chief Fire District 7
Scott Ryckman	Div. Chief BFD

Charter Statement Recognized by the EOB
This is a joint advisory Emergency Medical Service Finance Committee. Members shall consist of the EMS Manager and representatives from County and ALS provider agency administrations, finance personnel from County and ALS provider agencies, a BLS provider agency, a small cities mayor, and a citizen representative as appointed by the EOB.

The Finance Committee will assess the programmatic recommendations developed by other sub-committees and provide financial advice, viewing the proposals as a whole package, rather than independent program areas. In addition, the Committee will review economic forecasts, determine indices for inflating costs, and develop financial policies. Another role is to provide financial perspective to the TAB and EOB and to ensure the EMS system remains financially sound.

Scope of Responsibilities
The Finance Committee will provide recommendations and comments on the following financial matters to the TAB and EOB:

- EMS biennial budget and supplemental budget requests
- Long-term and short-term projections
- Financial impacts of proposed operational changes and capital projects
- Impacts of proposed EMS programs and asset acquisitions
- Proposed financial policies and reserve requirement
- EMS program contracts and interlocal agreements
- Strategic plan components

Mission
Develop a 6-year EMS financial plan, including economic forecasts, proposed expenditures and revenue, and service changes. Determine the EMS levy rate needed to support this EMS system.

In addition, to support the motion was passed on May 25th, 2022 at the EOB final Levy Plan review meeting; "**On *an annual basis, the EOB will meet to discuss the EMS Standard Cost Model, with adjusted projected interest income, to review financial projections until the end of the Levy cycle. If financial changes need to happen, the TAB will provide recommendations for reductions in expenditures to retain a healthy ending fund balance of 70% of annual spending."***
Tasks

- Examine system costs (both ALS and BLS)
- Create system financial model
- Project ALS unit cost (operating and capital)
- Project Countywide ALS cost (operating and capital)
- Identify possible efficiencies
- Develop projected levy rate/amount need to support EMS system

Overview of Whatcom County EMS Revenue
Pursuant to RCW 84.52.069(2), the Statute allows a property tax levy of up to 50 cents per $1,000 valuation. Washington State's average levy is 40 cents/$1,000 assessed valuation. There are 175 EMS Tax Levy Districts in Washington State.

Property Tax
The EMS Levy is collected through property taxes. Property taxes are one of three primary revenue sources for a municipal subdivision (the others are sales and utility taxes). Property taxes then fund Municipal Fire Departments or Districts through local fire levies. This is the most widespread revenue source for fire agencies and is limited to $1.50/$1,000 assessed value. EMS levies are limited to $0.50/$1,000 assessed value.

Sales Tax
Whatcom County has a 1/10th of one percent sales tax dedicated to public safety and the EMS program.

ALS and BLS Transport Fees 2016-2022

ALS Transport fees are usually paid by third-party insurance, Medicare, Medicaid, or other government programs. Whatcom County 2022 transport fees are projected to be $2.0 million per year.

	2016	2017	2018	2019	2020	2021	2022
ALS Base Rate	$ 750.00	$ 766.00	$ 789.00	$ 813.00	$ 831.00	$ 849.00	$ 904.00
ALS Non-Emergency	$ 750.00	$ 766.00	$ 789.00	$ 813.00	$ 831.00	$ 849.00	$ 904.00
ALS Mileage	$ 15.00	$ 15.00	$ 15.00	$ 15.00	$ 16.00	$ 16.00	$ 17.00
BLS Mileage	$ 15.00	$ 15.00	$ 15.00	$ 15.00	$ 16.00	$ 16.00	$ 17.00
ALS2 Base Rate	$ 950.00	$ 970.00	$ 999.00	$ 1,030.00	$ 1,053.00	$ 1,075.00	$ 1,145.00
BLS Base Rate	$ 602.00	$ 615.00	$ 633.00	$ 653.00	$ 667.00	$ 681.00	$ 725.00
BLS Non-Emergency	$ 550.00	$ 562.00	$ 578.00	$ 596.00	$ 609.00	$ 622.00	$ 662.00
Treat No Transport	$ 250.00	$ 255.00	$ 263.00	$ 271.00	$ 277.00	$ 283.00	$ 301.00

CPIs for Seattle/Bellevue and Tacoma 2016-2020

CPI Increase	%
08/2016 CPI	2.1
10/2017 CPI	3.0
10/2018 CPI	3.1
10/2019 CPI	2.2
10/2020 CPI	2.1
10/2021 CPI	6.5

GEMT Reimbursement

The Levy receives approximately $2.3mil per year with projections up to 3.9 mil per year from the Ground Emergency Medical Transport (GEMT) program as related to transport fees. The GEMT program is a result of House Bill 2007 and was passed during the 2015-16 legislative session. The GEMT program provides supplemental payments to publicly owned or operated qualified GEMT providers.
The supplemental payments cover the funding gap between a provider’s actual costs per GEMT transport and the allowable amount received from Washington Apple Health (Medicaid) and any other sources of reimbursement.

EMS Levy Finance Committee Analysis

The cost to staff and deploys an ALS Unit in Whatcom County is $2.5 million with inflation adjustments using the Seattle/Tacoma/Bellevue CPI-W inflation index with projection up to $3.2 million by 2028:

- This includes capital expenditures (rigs and equipment)
- The initial capital outlay for a vehicle, technology, equipment, and consumables is approximately $340,000
- Personnel costs account for approximately 90% of the operating budget at approximately $2.25 million per year, per medic unit

EMS Levy Rate Calculation

The levy rate formulation assumes

- No City or County General Fund contributions
- Current sales tax revenue is preserved
- Transport fee revenue is preserved
- ALS costs are fully funded, as noted in this report
- GEMT revenue continues through the levy plan life

Standard Costs Forecasts: Per Unit

Whatcom County: ALS Providers Costs									
Standard Cost Forecasts per Unit									
		2021	2022	2023	2024	2025	2026	2027	2028
EMS Operations:									
Paramedic Wages		1,146,591	1,218,711	1,307,555	1,366,003	1,418,457	1,470,089	1,521,689	1,577,231
Paramedic OT		100,000	106,290	114,039	119,136	123,711	128,214	132,714	137,558
Paramedic Benefits		302,082	321,083	344,489	359,888	373,708	387,311	400,905	415,538
Supplies (Drugs, disposables, etc)		102,313	108,748	116,676	121,891	126,572	131,179	135,783	140,739
Fuel		14,625	15,545	16,678	17,424	18,093	18,751	19,409	20,118
Uniforms		9,825	10,443	11,204	11,705	12,155	12,597	13,039	13,515
Physician/Medical Consulting		26,703	28,383	30,452	31,813	33,035	34,237	35,439	36,733
Training		30,000	31,887	34,212	35,741	37,113	38,464	39,814	41,268
Medical Exams		13,125	13,951	14,968	15,637	16,237	16,828	17,419	18,055
Total EMS Operations Expense		1,745,263	1,855,040	1,990,272	2,079,237	2,159,080	2,237,671	2,316,213	2,400,755
Administrative (Indirect) Expense									
Salaries & Wages		89,100	94,704	101,608	106,150	110,226	114,239	118,248	122,564
Benefits		30,411	32,324	34,680	36,231	37,622	38,991	40,360	41,833
Billing Services		33,500	35,607	38,203	39,911	41,443	42,952	44,459	46,082
Office Expense		8,200	8,716	9,351	9,769	10,144	10,514	10,883	11,280
Total Administrative Expense		**161,211**	**171,351**	**183,843**	**192,061**	**199,436**	**206,695**	**213,950**	**221,759**
Facilities, Tech Allowance & Vehicles		140,701	149,551	160,453	167,625	174,062	180,398	186,730	193,546
Total Fire Districts Standard Operating Costs		**2,047,175**	**2,175,942**	**2,334,568**	**2,438,923**	**2,532,578**	**2,624,764**	**2,716,893**	**2,816,060**
Add: Overhead Allowance		205,000	218,000	233,000	244,000	253,000	262,000	272,000	282,000
Total Unit ALS Reimbursement		**2,252,175**	**2,393,942**	**2,567,568**	**2,682,923**	**2,785,578**	**2,886,764**	**2,988,893**	**3,098,060**
Add for COB: EMS1 + CommPM + Para School									
Add for Ferndale: CommPM			**6.3% CPI-W**						
*actual/current projected at CPI-W + 1%**		**2,073,780**	**2,204,428**	**2,365,131**	**2,470,852**	**2,565,733**	**2,659,126**	**2,752,461**	**2,852,926**
Difference between current model and new model		**178,395**	**189,514**	**202,437**	**212,071**	**219,845**	**227,638**	**236,432**	**245,134**
Assumptions:									
King County+.01, per King County protocol			*6.29%*	*7.29%*	*4.47%*	*3.84%*	*3.64%*	*3.51%*	*3.65%*
Overhead %	***10%***								
Paramedics per unit	***9.20***								
MSO FTE per unit	***0.33***								
Admin FTE per unit	***0.33***								
CPI forecast King County									
These #'s flow to All Units tab									
2021 #s are from these tabs: 2021Bud2StdCost, StdWages									
***represents cost per unit if current pricing continued**									
This Tab is to determine Provider reimburseable cost									

Standard Costs Forecasts: All Units

Whatcom County								
ALS: Standard Costs Forecasts ALL UNITS								
	2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
# of units:	*4*	*4*	*5*	*5*	*5*	*5*	*5*	*5*
Beginning Fund Balance	**18,757,332**	**22,648,713**	**14,818,122**	**15,649,944**	**16,167,220**	**16,371,958**	**16,240,595**	**15,729,719**
REVENUES								
Sales Tax Revenue (increase at 4%)	3,587,439	3,692,262	3,839,952	3,993,551	4,153,293	4,319,424	4,492,201	4,671,889
GEMT	2,965,339	2,300,000	2,467,670	2,577,975	2,676,969	2,774,411	2,871,793	2,976,613
EMS Fees	1,931,657	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000
Interest Income/Misc/Delinquent Taxes	436,251	323,627	412,454	549,299	607,564	632,308	617,511	624,984
Non-Levy Revenues	**8,920,686**	**8,315,889**	**8,720,076**	**9,120,824**	**9,437,825**	**9,726,143**	**9,981,505**	**10,273,486**
EXPENDITURES								
EMS Operations:								
Paramedic Wages			6,537,775	6,830,014	7,092,287	7,350,446	7,608,446	7,886,155
Paramedic OT			570,193	595,680	618,554	641,070	663,571	687,792
Benefits			1,722,447	1,799,441	1,868,539	1,936,554	2,004,527	2,077,692
Supplies (Drugs, disposables, sm equip, etc)			583,378	609,455	632,859	655,895	678,916	703,697
Fuel			83,391	87,118	90,464	93,756	97,047	100,590
Uniforms			56,021	58,526	60,773	62,985	65,196	67,576
Physician/Medical Consulting			152,260	159,066	165,174	171,186	177,195	183,663
Training			171,058	178,704	185,566	192,321	199,071	206,338
Physicals			74,838	78,183	81,185	84,140	87,094	90,273
Total EMS Operations Expense	-	-	**9,951,361**	**10,396,187**	**10,795,401**	**11,188,353**	**11,581,065**	**12,003,774**
Administrative (Indirect) Expense								
Salaries & Wages			508,042	530,751	551,132	571,193	591,242	612,822
Benefits			173,402	181,153	188,110	194,957	201,800	209,165
Billing Services			191,015	199,553	207,216	214,758	222,296	230,410
Office Expense			46,756	48,846	50,721	52,568	54,413	56,399
Total Administrative Expense	-	-	**919,214**	**960,303**	**997,179**	**1,033,476**	**1,069,751**	**1,108,797**
Facilities & Tech Allowance			802,265	838,127	870,311	901,990	933,650	967,728
Total Fire Districts Standard Operating Cos	-	-	11,672,841	12,194,617	12,662,890	13,123,820	13,584,466	14,080,299
Add: Overhead Allowance			1,165,000	1,220,000	1,265,000	1,310,000	1,360,000	1,410,000
Total Unit ALS Reimbursement	8,310,120	8,834,212	12,837,841	13,414,617	13,927,890	14,433,820	14,944,466	15,490,299
*New Cost Model**	**9,008,699**	**9,575,768**						
Other Expenditures								
Dispatch	1,787,463	2,155,075	2,312,180	2,415,534	2,508,291	2,599,593	2,690,838	2,789,054
EMS Administration	328,914	406,452	436,081	455,574	473,068	490,288	507,497	526,021
Training Coordinator	109,656	178,723	191,752	200,323	208,016	215,587	223,155	231,300
Paramedic School & Lateral Training	704,427	2,185,420	1,160,308	1,212,174	1,258,721	1,304,539	1,350,328	1,399,615
MPD & Support	89,408	133,005	142,701	149,080	154,804	160,439	166,071	172,132
EMS 1	685,787	728,992	999,876	1,044,570	1,084,682	1,124,164	1,163,623	1,206,095
Pymnts to small fire districts	58,257	75,000	-	-	-	-	-	-
5th Unit Implementation	-	2,067,500	-	-	-	-	-	-
BLS Subsidy	-	5,000,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
Stryker Lifts & maintenance	-	1,400,000	14,075	14,704	15,268	15,824	16,380	16,977
Additional Items	-	-	-	-	-	-	-	-
Community Paramedic (3)	499,135	590,000	615,477	642,989	667,680	691,983	716,272	742,416
WC Overhead Allocation	116,998	119,338	128,038	133,761	138,897	143,953	149,006	154,445
Equipment Lease	509,060	523,636	523,636	523,636	523,636	523,636	523,636	523,636
Software Maintenance	183,083	243,000	260,715	272,369	282,828	293,123	303,411	314,486
Total ALS Expense	13,382,308	24,640,353	21,122,679	21,979,331	22,743,782	23,496,949	24,254,681	25,066,475
NET LOSS BEFORE LEVY	(4,461,622)	(16,324,464)	(12,402,603)	(12,858,507)	(13,305,956)	(13,770,806)	(14,273,177)	(14,792,989)
Levy	8,353,003	8,493,873	13,234,425	13,375,783	13,510,695	13,639,443	13,762,301	13,879,527
Net After Levy	3,891,381	(7,830,591)	831,822	517,276	204,738	(131,363)	(510,876)	(913,461)
Ending Fund Balance	22,648,713	14,818,122	15,649,944	16,167,220	16,371,958	16,240,595	15,729,719	14,816,258
New Levy Rate	0.295							
2017 Levy Rate	0.295							
Target Fund Balance -70% of annual operations	9,367,616	12,768,247	14,785,876	15,385,532	15,920,647	16,447,864	16,978,277	17,546,532
Available for Spending:			**864,068**	**781,688**	**451,311**	**(207,269)**	**(1,248,558)**	**(2,730,275)**
Does not include FD7 EMS1 Captain								
Does not include increase in Community Paramedic FTEs								
Does not include Station 12 renovations								
Does not include Public Safety Radio support								
Does not include dispatch fee anticipated increases								

*** New Cost Model - represents what the EMS Fund would be paying for units if new model was instituted in 2021 and 2022. Line 39 is what we are currently paying.**

EMS Reserve Policy

Approved by EOB September 9, 2021

Policy Overview	
Reserves are a proactive management tool to protect EMS's ability to provide emergency medical service when there are unexpected events or changes in revenue or expenditures. EMS reserves ensure the system can withstand revenue and economic disruptions, unanticipated expenditure demands including capital requirements, and meet other necessary non-recurring expenses. Reserves are a key factor in external agencies measurement of EMS's financial strength.	
Reserve Policy Principles	
Purpose	To ensure adequate resources for cash flow and mitigate short-term effects of unforeseen events. Reserve funds are necessary to enable the EMS system to deal with unforeseen emergencies, changes in economic conditions, or revenue loss.
Approval	The County Executive shall approve this policy and: • The creation or deletion of any reserve amounts • Changes in reserve amount funding formulas • Reserve balances, as part of the annual budget process • Reserve replenishment plans
Target Balance	The EMS fund balance should be approximately 70% of the current year's budgeted operating expenditures and shall be budgeted at no less than 50% of these expenditures. With other revenue sources, this would allow funding for one year if a levy fails to be renewed. The year needed to hold a new election for a levy would provide time to create a plan moving forward.
Reserve Minimum Target Balance	Should a reserve fall below its minimum target balance, The EMS Administrator, in consultation with the EMS Finance Advisory Committee shall create a plan to bring the Reserve to the balance described in this policy. The plan shall be approved by the TAB and EOB Committee before presenting to the County Executive and adopted for replenishing the reserve balance to the target.
Policy administered by the EMS Administrator	

Diversity, Equity, and Inclusion Overview

Agencies and partners of the Whatcom County EMS system, in accordance with federal, state, and local law, provide equal opportunities for applicants and employees regardless of actual or perceived race ethnicity, national origin, religion, sex, sexual orientation, gender identity or expression, age, disability, pregnancy, genetic information, veteran status, marital status, or any other protected class or status. The Whatcom County EMS system and its partner agencies support advancing efforts to increase diversity, equity, and inclusion in hiring practices to create a team of personnel that is reflective of the communities they serve and provides career opportunities for all those interested in a rewarding career in emergency medical services.

The following steps provide strategic opportunities to advance diversity in the EMS workforce:

1. **Data**
   - Track and analyze applicant and employee data
   - Set targets for diversity in staffing
   - Track progress toward goals on an annual basis
   - Develop strategies to target specific challenges
2. **Outreach and recruitment effort.**
   - Support, engage, and organize other agencies within the EMS system to collaborate on outreach and recruitment that promotes fairness and opportunity and helps achieve set diversity targets
   - Identify target communities and organizations for recruitment activities
   - Support longer term pipeline programs to advance more diversity in entry into EMS jobs and paramedic training
3. **Standardized hiring practices**
   - Work with private ambulance companies, fire departments, and other EMS agencies to ensure a standard hiring process. Review regularly for opportunities for improvement
   - identify barriers in hiring and strategies to address challenges
4. **Culture of Inclusion**
   - Create a workplace and a training program culture of inclusion
   - Ensure work environment and training program environment is a welcoming, supportive, and safe place for all
   - Continue education in the division to support diversity, equity, and inclusion
5. **EMS Levy Committee**
   - Improve diversity on the committee by including two positions on the committee under the category of Diversity, Equity, and Inclusion
   - Establish a Diversity, Equity, and Inclusion subcommittee of the EMS Levy Committee
   - It is recommended that the above listed items are addressed in EMS annual reports to track progress and celebrates successes

Definitions

ALS	Advanced Life Support[1]. Invasive emergency medical services requiring the advanced medical treatment skills of a paramedic. Typically, ALS includes invasive techniques such as IV therapy, intubation, and/or drug administration. Provides advanced life-saving service and equipment by paramedics with advanced training. This is also known as paramedic service or Medic service. There will be 5 ALS transport units by the end of 2022. Four are with Bellingham Fire District, located in Bellingham and east Whatcom County. One is with Ferndale Fire District 7, located in western Whatcom County.
BLS	Basic Life Support. Includes emergency cardiopulmonary resuscitation; control of bleeding; treatment of shock, acidosis, poisoning, stabilization of injuries and wounds, and basic first aid. Whatcom County BLS support is provided through local fire agencies with Emergency Medical Technicians.
BFD	Bellingham Fire Department, City of Bellingham.
CARES	Cardiac Arrest Registry to Enhance Survival. CARES is a simple but powerful database that allows cities to collect a small set of performance measures from 911, first responders, fire departments, and Emergency Medical Services, and link it with outcome data from hospitals. This data enables entities to perform internal benchmarking and improve their response to cardiac arrest by strengthening the chain of survival in their community.
Community Paramedic Program	A Community Paramedic connects high EMS system utilizers to appropriate services and provides on-site evaluation. The program is intended to: • Improve health and wellness outcomes for people in the community. • Reduce dependence on 911 resources by frequent callers. • Reduce health system expenditures. • Produce revenue for services delivered.

[1] WAC 246-976-010, (6)

Definitions, Continued

EMS	Emergency Medical Services. A network of services coordinated to provide aid and medical assistance from primary response to definitive care, involving personnel trained in the rescue, stabilization, transportation, and advanced treatment of traumatic or medical emergencies. Linked by a communication system that operates on both a local and a regional level, EMS is a tiered system of care, which is usually initiated by a call to 911. Subsequent stages include emergency medical dispatch, first medical responder, ambulance personnel, medium and heavy rescue equipment, and paramedic units, if necessary. In the hospital, service is provided by the emergency department.
EMS 1	BFD Supervisory unit staffed with one EMS Captain/paramedic, 24/7/365.
EMT	Emergency Medical Technician
EPCRS	Electronic Patient Care Reporting Software
FD7	Fire District 7, located in the Ferndale area with one ALS Unit
GEMT	Ground Emergency Medical Transportation. Agencies are reimbursed by (Medicare/Medicaid?) for certain transports.
MPD	Medical Program Director is responsible for both the supervision of training and medical control of EMS providers. WAC 246-976-920 outlines the qualifications and process for MPD Certification which begins with recommendation for certification by the local medical community and local emergency medical services and trauma care council with the Office of Community Health Systems, Department of Health affirming and certifying the candidate.
MSA	Medical System Administrator. Senior system administrator. MSOs may report directly or indirectly to the MSA. May also be referred to as the EMS Administrator.
MSO	Medical Services Officer. Physician who is the senior officer overseeing agency BLS and ALS system resources.
Percentage Threshold	Percentage of ALS units utilized on BLS calls. This includes dispatched and/or closed BLS incidents

Appendix/References

Exhibit 1. Paramedic Unit Costs

Per Unit Operating Costs	$2,151,493.00
Per Unit Admin Support Costs	254,477.00
Per Unit Reserve Ambulance Costs	62,065.00
Sub Total**	**$2,468,035.00**
Four (4) Units	**$9,872,140.00**
Five (5) Units	**$12,340,175.00**

Exhibit 2. Medical Services Office (MSO) (Division Chief) Position Costs

MSO Salary, Benefits, Vehicle, Fuel, etc.	$200,423.00
Total; Two (2) MSO Positions	***$400,846.00***

Exhibit 3. Recommended EMS 1 Dispatch Roles

Recommended EMS 1 Dispatch Roles

- Surge Medic Unit, No other Medic Units available
- Continues providing ALS response when no other Medic Units are available
- Any responses in the City of Bellingham involving County Medic Unit responses (M-10 or M-45)
- Assists in keeping County Medic Units in their response area
- Multiple Medic Unit Responses
- Assists in coordination of resources and/or patients
- Multiple "Red" Patient Responses
- Assists in coordination of resources and/or patients
- CPR calls that involve services other than EMS, such as Fire, Haz-Mat, or LE (MVA, Industrial Accident, Rescue, GSW, or Stabbing)
- Assists in coordination of resources

Exhibit 4. EMS 1 (Field Supervisor) Budget

4 EMS Shift Captains; salary, OT, benefits, vehicle, etc.	$800,745.00
8 EMS Shift Captains; Increase of four (4) positions	$1,601,490.00

Exhibit 5. Approved BLS Calculation Formula

This formula and report are generated inside the ImageTrend Analytic Module called the "Report Writer". Data is obtained through the Image Trend "data mart" and extracted to the report writer using these data filters and ratio assignments. Table B: 2022 valuation is part of the calculation for the 2023 BLS Allocation with those reimbursement amounts shown in Table D, Table C: 2021 Valuation is there for reference.

Table A: Budget

Item	Amount		Ratio (Assigned %
Assessed Value:	$	450,000.00	**30%**
BLS Response Load:	$	1,050,000.00	**70%**
Total:	**$**	**1,500,000.00**	100%

Table B: Valuation 2022

Agency Name	Valuation $		% of Tota
Acme Fire District 16	$	213,921,133.00	0.50%
Bellingham Fire Dept	$	16,724,290,897.00	39.26%
District 4	$	2,102,229,240.00	4.94%
District 8	$	996,990,423.00	2.34%
Everson Fire District 1	$	1,576,039,310.00	3.70%
Glacier District 19	$	301,723,773.00	0.71%
Lynden Fire Department	$	2,563,276,903.00	6.02%
North Whatcom Fire and Rescue	$	6,439,657,314.00	15.12%
Point Roberts Fire District 5	$	749,112,318.00	1.76%
South Bay District 18	$	470,021,924.00	1.10%
South Whatcom Fire Authority	$	2,896,133,451.00	6.80%
Whatcom County Fire District 11	$	379,155,301.00	0.89%
Whatcom County Fire District 14	$	782,568,596.00	1.84%
Whatcom County Fire District 17	$	422,244,501.00	0.99%
Whatcom County Fire District 7	$	5,978,101,735.00	14.03%
Total:	**$**	**42,595,466,819.00**	**100%**

Table C: Valuation 2021

Agency Name		Valuation $	% of Total
Acme Fire District 16	$	183,476,914.00	0.48%
Bellingham Fire Dept	$	14,910,058,837.00	39.41%
District 4	$	1,891,322,038.00	5.00%
District 8	$	886,321,328.00	2.34%
Everson Fire District 1	$	1,315,905,164.00	3.48%
Glacier District 19	$	236,762,636.00	0.63%
Lynden Fire Department	$	2,237,569,863.00	5.91%
North Whatcom Fire and Rescue	$	5,577,808,275.00	14.74%
Point Roberts Fire District 5	$	710,830,694.00	1.88%
South Bay District 18	$	370,002,097.00	0.98%
South Whatcom Fire Authority	$	2,588,950,426.00	6.84%
Whatcom County Fire District 11	$	316,506,141.00	0.84%
Whatcom County Fire District 14	$	655,750,593.00	1.73%
Whatcom County Fire District 17	$	348,662,740.00	0.92%
Whatcom County Fire District 7	$	5,603,495,549.00	14.81%
Total:	**$**	**37,833,423,295.00**	**100%**

Table D: Amount Received

Agency Name		Amount $
Acme Fire District 16	$	8,985.40
Bellingham Fire Dept	$	542,367.89
District 4	$	56,314.46
District 8	$	63,834.08
Everson Fire District 1	$	56,794.50
Glacier District 19	$	2,907.86
Lynden Fire Department	$	111,226.02
North Whatcom Fire and Rescue	$	209,387.68
Point Roberts Fire District 5	$	9,261.20
South Bay District 18	$	14,380.49
South Whatcom Fire Authority	$	87,980.94
Whatcom County Fire District 11	$	15,420.79
Whatcom County Fire District 14	$	96,308.80
Whatcom County Fire District 17	$	21,344.46
Whatcom County Fire District 7	$	203,485.44
Total:	$	1,500,000.00

Exhibit 6. Estimated Paramedic School Budget

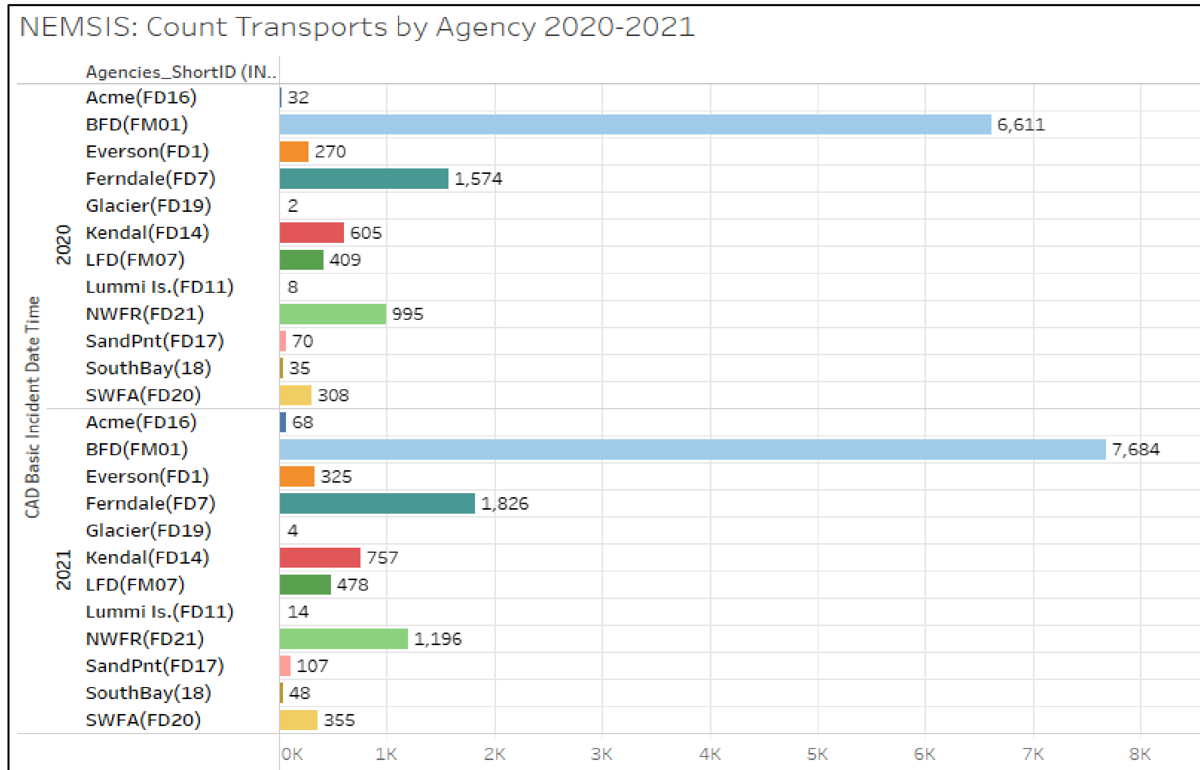
Preceptor Fees	$5,000.00
Evaluation Fees	$1,100.00
Student Equipment	$6,350.00
Candidate Wages	$113,500.00
Total Per Student	$125,950.00
Total, Full Class (10 Students)	**$1,259,500.00**
BFD Lead Instructor	$184,453.00
BFD Administrative Costs	$33,000.00
BTC Fees	$26,200.00
BTC Medical Program Director Fee	$16,000.00
Anatomy and Physiology Instructor	$6,040.00
Program Instructors	$56,000.00
Facilities	$15,000.00
Skills Lab	$35,000.00
Total	***$371,693.00***

Exhibit 7. Estimated Community Paramedic Budget

MIH Paramedic Salary/Benefits (One CPM)	$200,000.00
Fleet Costs	$5,000.00
Fuel	$10,000.00
Uniforms	$2,500.00
PPE	$7,500.00
Technology	$7,500.00
Misc. Costs	$5,000.00
Medical Supplies	$12,500.00
Per Team Total	***$250,000.00***
5 Teams	***$1,250,000.00***

Exhibit 8. Transports by Agency Showing Increased Call Volume:

Increase in call volumes from the National EMS Information System (NEMSIS) data



Increase in call volumes from the NEMSIS data Year over Year Percentage Between 2020 and 2021

NEMSIS: Transports by Agency Change 2020-2021

CAD Basic Incident Date Time: **2021**

Agencies_ShortID ..	NEMSIS (CountInc#)	NIMSIS Transport?(1=Yes 0=No)	% Difference in NIMSIS Transport?(1=Yes 0=No)
Acme(FD16)	143	68	112.50%
BFD(FM01)	17,130	7,684	16.23%
Everson(FD1)	762	325	20.37%
Ferndale(FD7)	4,646	1,826	16.01%
Glacier(FD19)	27	4	100.00%
Kendal(FD14)	1,107	757	25.12%
LFD(FM07)	1,527	478	16.87%
Lummi Is.(FD11)	78	14	75.00%
NWFR(FD21)	3,731	1,196	20.20%
SandPnt(FD17)	155	107	52.86%
SouthBay(18)	134	48	37.14%
SWFA(FD20)	822	355	15.26%