

**NORTH REGION  
EMERGENCY MEDICAL SERVICES  
& TRAUMA SYSTEM**

**S T R A T E G I C P L A N**

**July 1, 2009 - June 30, 2012**

Submitted by the North Region EMS and Trauma Care Council,  
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## EXECUTIVE SUMMARY

The **FY09-12 North Region Strategic Plan** guides the development and direction of the Region's EMS and Trauma System and directs **specific and necessary work** to be conducted by system stakeholders over the next three years.

**SYSTEM LEADERSHIP:** Active and involved membership is needed to govern the direction of planning for the North Region's EMSTCC system. The North Regional Council Board consists of an established membership structure that includes WAC membership requirements. Most EMS stakeholders are represented on the Regional Council; however, some stakeholders are absent from the planning process and the communication between Regional Council representatives and their affiliated agency administrators is sometimes lacking. Attendance awareness and the development of an effective and sustaining membership program (recruitment and retention) are needed. Continuity of clear and consistent communication linkages between the local, regional and state representatives continues to be a challenge. **Stakeholders need to be informed of issues and have the opportunity to actively participate in resolution of these issues, ensuring the success of the EMS and Trauma Care system planning.**

**SYSTEM DEVELOPMENT:** Because of a rapid population growth, as well as financial limitations, the region is finding that its response resources are being stretched farther than ever before. While the State's population growth is projected to grow by approximately 20 percent between 2005 and 2020, the population in the North Region is projected to grow by almost 31 percent for that same period. Given the North Region's substantial projected growth, the need has been identified to either increase our hospital capacity or increasingly rely upon hospital resources in other EMS and Trauma Regions. These hospital capacity issues have morphed into additional challenges for prehospital transport agencies being asked to take limited prehospital resources out of service for several hours at a time.

For improved system development, expanded working relationships need to be developed with the region's five (5) local county MPDs, as well as with representatives from each of the local county dispatch agencies. These agents play an integral and critical part in EMS and medical care system development on a daily basis. In essence, they work with multiple system agencies within their communities to a greater degree than most other stakeholder representatives.

The North Region Council is the lead facilitator for the Region 1 Healthcare Coalition, a network of healthcare organizations and providers that are committed to strengthening the healthcare system for emergencies. The purpose of the Coalition is to continue the development of a coordinated and effective medical and public health system response to all hazards through effective communications systems and protocols, strategic acquisition and management of resources and collaborative response planning. **Continuation of a collaborative planning process is needed to ensure that key stakeholders remain informed of system issues and have the opportunity to be involved in resolving both local and regional system issues.**

**SYSTEM PUBLIC INFORMATION AND EDUCATION:** Public information and education efforts in the region are conducted by individual hospital and prehospital agencies, therefore agency specific. Currently, there is no integrated EMS and Trauma Care System message.

Most of the public, policy makers and even stakeholders from different roles within the North Region system do not understand how the EMS and Trauma System functions, how it is funded or how to best use it. There is an overall lack of awareness for the costs associated with the continual "level of readiness" necessary to provide trauma care services for all injured patients.

Because funding is directly dependant upon the understanding that *the health of the EMS system affects the health of the population it serves*, it is important that a public education message be developed and implemented. In addition, data needs to be collected and documented regarding the cost effectiveness of establishing a healthy trauma system so that support advocacy for continued financial resources continues for both the state and its local communities. **North Region and EMS stakeholders need to work collaboratively with the State DOH to develop and implement an EMS and Trauma System educational publication campaign focused toward individuals and stakeholder groups.**

**SYSTEM FINANCE:** When considering adequacy of funding, it is important to consider the need for future capacity. The Trauma Care Fund revenue and appropriation have remained relatively static since 1997. In February 2007, the Washington State Department of Health engaged Navigant Consulting to conduct a comprehensive financial study of the State's Trauma System. Their findings included concerns focused on North Region's current population growth (one of the fastest growing populations in the state) and its current and future response capacity. Many of North Region's public prehospital not-for-profit agencies are adequately funded through a tax base (covers only basis expenses); however the tax base varies depending on location. As such, rural communities often have less available service. Further, private for-profit and not-for-profit prehospital agencies depend more on commercial insurers, such as Medicare and Medicaid, which do not provide sufficient revenue to cover related expenses.

While trauma reimbursement contribution margins for hospitals in North Region have been approximately four to five percent, achieving these margins may not be sufficient to maintain trauma capacity at the region's designated trauma hospitals when considering expected growth. Again, this kind of information needs to be made known to the public and policy makers because funding is directly dependant upon the understanding that *the health of the EMS system affects the health of the population it serves*. **System stakeholders need to remain involved and participate in Regional and State planning efforts to ensure stable funding. Sustainable funding has been and continues to be a need for all regional system providers across the continuum of patient care.**

**INJURY PREVENTION AND CONTROL:** When injury is prevented, the savings to the individual and the health care system within the region can be enormous. Therefore; preventable premature death and disability due to injury reduction through targeted injury prevention activities and programs is the focus of the North Region EMS & Trauma Care System. Top injury categories within the region are: falls, motor vehicle related injuries and deaths, poisonings, fire related injuries and death, and drowning. **Key stakeholders (including prehospital agencies and personnel) need to continue to develop and evaluate local prevention programs, as well as participate in the regional planning efforts to prevent death and disability caused by leading injury mechanisms.**

**PRE-HOSPITAL CARE:** The prehospital care system consists of dispatch centers, licensed and/or trauma verified prehospital EMS agencies, air medical service, and hospital receiving facilities. The operational coordination of these partners is the foundation of a successful system. North Region currently has ninety-four (94) trauma verified prehospital EMS agencies within the regional boundaries. There are also seven (7) dispatch agencies and ten (10) designated trauma services within these same boundaries. Five County Medical Program Directors provide medical control and direction to its 2,842 (as of January 2008) certified personnel.

Ongoing research and evaluation of prehospital performances and data are reviewed by each agency and by the County MPD. Essential planning pieces for the success of North Region's

prehospital agencies include prehospital training programs, prehospital protocols and guidelines, and need and distribution of prehospital services. **An enhanced system-wide review and data evaluation component needs to guide the development of prehospital training programs, prehospital protocols and guidelines and the need and distribution of prehospital services at the local and regional planning levels. Prehospital training and education needs continued funding support from the Regional Council.**

**ACUTE HOSPITAL CARE:** While North Region has worked directly with Harborview ED leadership over the past three years to review data on trauma patient transports and diversions within the region, and outside the region, the problem of bed capacity and specialty physician resources continues to be an issue. Currently, the North Region has ten designated trauma services within the regional boundaries, of which four are Level III, five are Level IV, and one is a Level V. Two of these designated facilities are classified critical access hospitals, with a limit of 25 beds. Bottom line, having sufficient capacity in the hospital setting (beds and personnel) is a huge issue in the region, and if not resolved, could potentially erode the high quality care currently offered.

The Navigant Cost Study stated that North Region appears to have a low hospital capacity relative to its current and projected populations. The North Region currently lacks a Level II trauma hospital and has the State's second highest ratio of population-to-total-beds and population-to-staffed emergency department beds, which translate into the second-lowest bed capacity per capita in the State. Given the North Region's substantial projected growth, it must either increase its hospital capacity or increasingly rely upon hospital resources in other EMS and Trauma Regions. **The North Region Council and its Committees need to continue to review and evaluate trauma transport and diversion data as well as support the development of higher level resources and increased capacity within the region.**

**PEDIATRIC CARE:** The North Region provides pediatric care through a region-wide EMS and Trauma Care System that integrates pediatric care into the system continuum. North Region has two (2) pediatric Level III designated hospital facilities within the regional boundaries, one located in the northern end of the Region – St. Joseph Hospital in Bellingham, and the other in the southern end of the Region, at Providence Regional Medical Center-Everett. **North Region hospital receiving facilities and EMS providers need appropriate equipment and training to care for pediatric patients. North Region stakeholder need to incorporate the State DOH Pediatric Guidelines into patient care protocols and procedures, as well as participate in state and regional planning activities regarding pediatric care.**

**TRAUMA REHABILITATION:** The North Region currently has two (2) hospital facilities with a Rehabilitation Level II trauma designation, one at Providence Regional Medical Center - Everett and the other at St. Joseph Hospital in Bellingham. Rehabilitation is the final step in patient care and consequently is at times a forgotten element of the continuum of patient care. **The Region's stakeholders need to determine if present rehabilitation resources are adequate as well as to participate in state and regional planning activities regarding rehabilitation care.**

**SYSTEM EVALUATION:** Prehospital EMS providers and the region's designated trauma facilities are active members of the North Region Quality Improvement (QI) Committee. Through that body, system efficiencies and issues are identified and action plans are recommended to trauma care providers. Prehospital data collection is essential for future grant funding opportunities, as well as collecting meaningful information on local, regional and statewide system performance. Washington State EMS Information System (WEMSIS), a web-based data reporting system has enabled many North Region agencies to securely collect, analyze and report EMS data. **North Region Council needs to support the WEMSIS program.**

## REGIONAL SYSTEM GOALS – OBJECTIVES – STRATEGIES JUNE 2009 – JULY 2012

### ADMINISTRATIVE COMPONENTS

#### SYSTEM LEADERSHIP

The North Region Council membership is derived from recommendations made by the local EMS councils below. These stakeholder representatives come from multidisciplinary public and private health care providers across the EMS and Trauma Care System and are governed by legislative authority in RCW 70.168.130 and WAC 246.976.960.

The North Region is comprised of the following five (5) counties and five (5) local EMS councils:

- Island County EMS Council
- San Juan County EMS Council
- Skagit County EMS Commission
- Snohomish County EMS Council
- Whatcom County EMS Council

The Council membership represents equal county membership representation in the following categories:

- Hospitals (5)
- Prehospital (5)
- At Large (5)
- Elected Officials (5)
- Consumer Representatives (5)

Other Regional Council membership includes the following categories that represent the entire region with their membership:

- Medical Program Director (1)
- Law Enforcement (1)
- Washington Ambulance Association (1)
- Washington State Nurses Association (1)

Local County Councils provide coordination at the county level. Local Councils are charged under RCW 70.168.120 to review and provide recommendations for the Region Council on the EMS and Trauma System Plan as well as communicate with the Region Council on emerging issues. Local Councils also make recommendations on minimum/maximum numbers of prehospital verified trauma services and Regional Council member appointments. **The relationship between the local and regional EMS council needs to be collaborative and cooperative.**

**Clear Value and Benefits Need to be Identified:** The North Region EMS & Trauma Care Council (NREMS/TCC) is a 501-3 (c) not for profit agency operating with a staff of three. Prospective members of non-profit organizations will ask, "Why should I become a member? What is in it for me? Is a membership a good value?" North Region EMS & Trauma Care Council is no exception. To do this, there must be a clear benefit and value to the representative considering membership. North Region stakeholders need to demonstrate that their participation

in planning is critical to keeping their profession healthy for the future. **A professional, active and involved membership is needed to govern the direction of planning for the region's EMS and Trauma Care system.**

There is clear value that networking opportunities with other professional colleagues from other counties and communities is a benefit. Sharing discussions on current issues also results in the sharing of best practices within their profession. Members actually have a say on how their regional EMS system will move forward toward the future when they participate in planning. Clear value for members needs to be considered when developing agendas for planning meetings. **The North Region Council need to highlight that there are benefits of membership by providing relevant information of the benefits of planning.**

**Development of Solid Membership Structure Needed:** The North Region EMS and Trauma Care Council consist of up to 29 volunteer members, recommended by Local EMS Councils. There is an expectation that these representatives will be involved with regional planning and to communicate the system issues and needs of their respective communities, as well as bring back to their local EMS councils reports on regional planning.

Memberships are reviewed at by the State DOH and officially appointed by the Secretary of DOH. Currently, there are some positions that have been left open for long periods of time. To ensure maximum representation from each of the five counties, the Regional Council has incorporated alternate positions for each membership category, which also need to be monitored and retained. The North Region EMS and Trauma Care Council needs to monitor and retain the established membership structure that includes the WAC requirements. WAC language identifies the membership structure required for both local and regional EMS councils. **This language needs to be reviewed locally and regionally for congruency and alignment of organizational structures and functions with WAC requirements.**

**Attendance Awareness and Monitoring:** One method to accomplish this has been by tracking attendance and developing an annual Attendance Summary Report of meeting attendance and providing this information to both regional and local council membership. This information is also currently tied to an annual Membership Participation Grant that the local EMS/TCC would benefit from each year.

**Membership Recruitment and Retention Planning Needed:** Most regional leaders are very busy people, and generally have multiple roles and tasks that they deal with each day. Most regional members that participate on a regular basis include prehospital and hospital representatives; however, there are times when even these representative categories have officially expired. Further, representative categories such as Consumer, Law Enforcement and even MPD representation are often unfilled. The Regional Council needs to work with the State DOH and other sources to develop an effective and sustaining membership program (recruitment and retention). **To maintain a core group an active and informed regional planners, a Regional Recruitment and Retention Plan is needed. Input provided by new members has also indicated a need for a membership orientation that includes a formal training of new members.**

**Effective Information Sharing:** Within the EMS and Trauma System there are multiple stakeholder groups such as; the Governor's Steering Committee and the various specialty Technical Advisory Committees (TAC), Regional Advisory TAC, Pediatric TAC, Data TAC, Cardiac and Stroke TAC and others. These and other bodies work to consistently improve the system as a whole. In the process of doing so important emerging issues arise. North Region membership representatives need to be informed of both state and regional activities in order to

be effective with their roles as planners. **System stakeholders need an effective, consistent and reliable mechanism of information sharing regarding emerging issues.**

Each year, the Regional Council receives a performance contract from the State DOH that includes activities that affect both regional and local planning. The North Region Council Administrator needs to inform the local EMS councils of the activities that would need regional and local collaboration. The Regional Council Administrator will provide an annual orientation to local and regional council membership of the Region's contract deliverables for that each fiscal year, highlighting activities that will impact their planning. Other information materials such as the Regional Calendar and Regional Annual Report will be made available. **System stakeholders need an effective, consistent and reliable mechanism of information sharing regarding emerging issues.**

**Regional Networking and Collaborative Planning Needed:** To improve and build the local and regional relationships, the North Region Council facilitates an Annual Regional Council Retreat that focuses on the state and the region's system planning needs, as well as recognizing outstanding volunteer participation and contributions from members and agency stakeholders. A key component to the North Region Plan's success is the collaboration and the team building (networking) work that regional stakeholders achieve during this annual planning workshop.

## SYSTEM LEADERSHIP

### GOAL #1

There are viable, active local and regional EMS and trauma care councils comprised of multi-disciplinary, EMS and trauma system representation.

<p><b>Objective 1:</b> By <u>August 2010</u>, the Regional Council will align their organizational structure and function with WAC requirements.</p>	<p><b>Strategy 1:</b> By <u>August 2009</u>, the Regional Council staff will provide copies of current WAC (WAC 246-976-960) to the Regional Council members for their review.</p>
	<p><b>Strategy 2:</b> By <u>December 2009</u>, the Regional Council will discuss and review membership currently in place and facilitate a gap analysis to identify positions that may need to be added to meet the WAC requirements, as well as identify other necessary representation needed for regional system planning.</p>
	<p><b>Strategy 3:</b> By <u>May 2010</u>, Regional Council will incorporate the WAC membership requirements into planning, as well as make recommendations for additional representation needed for system planning.</p>
	<p><b>Strategy 4:</b> By <u>August 2010</u>, Regional staff will update as needed the Council Bylaws with any new recommendations made by the Regional Council.</p>
<p><b>Objective 2:</b> By <u>December 2011</u>, with technical assistance provided as needed by the Regional Council, the Local Council will align their organizational structure and function with WAC requirements.</p>	<p><b>Strategy 1:</b> By <u>October 2010</u>, the Regional Council Chair and Administrator will send a letter and support documentation (WAC 246-976-970) to each Local Council Chair and County MPD, requesting time on the local agenda to discuss the requirement of Local EMS Council membership alignment with WAC 246-976-970.</p>
	<p><b>Strategy 2:</b> By <u>October 2011</u>, the Council Administrator will facilitate discussion at each local EMS council regarding WAC 246-976-970 requirements regarding Local Council membership structure and function.</p>
	<p><b>Strategy 3:</b> By <u>December 2011</u>, the Regional Council Administrator will provide a summary report of Local EMS Council alignment and implementation of membership with WAC requirements to the Regional Council.</p>
	<p><b>Strategy 4:</b> By <u>December 2011</u>, the Local Councils will complete alignment of their organizational structure and function with WAC 246-976-970.</p>
<p><b>Objective 3:</b> By <u>February 2012</u>, the Regional Council will develop an effective Regional Membership Recruitment and Retention Program (to include a Membership Orientation).</p>	<p><b>Strategy 1:</b> By <u>August 2010</u>, the Regional Council and Council staff will collect material provided by the State DOH, as well as research other relevant resources applicable to non-profit membership.</p>

	<b>Strategy 2:</b> By <u>October 2010</u> , the Regional Council will appoint an ad hoc committee to assist with the development of a Regional Membership Recruitment and Retention Program.
	<b>Strategy 3:</b> By <u>February 2011</u> , the Membership Recruitment and Retention Ad Hoc Committee and Regional Council Administrator will provide a draft work plan to the Regional Council for their review and input.
	<b>Strategy 4:</b> By <u>April 2011</u> , the Membership Recruitment and Retention Ad Hoc Committee and Regional Council Administrator will provide progress report to the Regional Council.
	<b>Strategy 5:</b> By <u>August 2011</u> , the Membership Recruitment and Retention Ad Hoc Committee and Regional Council Administrator will provide a draft plan of the Regional Membership Recruitment and Retention Program to the Regional Council for their review and input.
	<b>Strategy 6:</b> By <u>December 2011</u> , the Membership Recruitment and Retention Ad Hoc Committee will propose to Regional Council the adoption and implementation of the North Region Membership Recruitment and Retention Program.

<b>GOAL #2</b>	
Multi-disciplinary coalitions of private/public health care providers are fully engaged in regional and local EMS and trauma systems.	
<b>Objective 1:</b> By <u>May 2012</u> , the Regional Council will roll out the North Region Membership Recruitment and Retention Program (Membership Orientation) tool to local and regional stakeholder groups to increase participation in the EMS and trauma care system planning.	<b>Strategy 1:</b> By <u>February 2012</u> , the Regional Council and Administrator will identify a process and schedule for the North Region Membership Recruitment and Retention Program (Membership Orientation) roll-out.
	<b>Strategy 2:</b> By <u>May 2012</u> , the Regional Council and Administrator will implement the identified process and schedule to engage stakeholders in local and regional planning.

<b>GOAL #3</b>	
Each of the services under the EMS and Trauma System has active, well trained and supported leadership.	
<b>Objective 1:</b> By <u>October 2009, 2010 and 2011</u> , the Regional Council Executive Board and Administrator will identify, develop and provide a summary of DOH contract work to be completed by the Region for the current fiscal year that will affect the leadership of both local and regional EMS councils.	<b>Strategy 1:</b> <u>August annually</u> , the Regional Council Administrator will review State DOH contract deliverables and identify specific work that requires the participation and support of local and regional EMS councils.
	<b>Strategy 2:</b> <u>September annually</u> , the Regional Council Administrator will develop a North Region Update packet (specific work for the fiscal year) to be presented and/or disseminated to the local and regional EMS councils.
	<b>Strategy 3:</b> By <u>October annually</u> , the Regional Council Administrator will provide the North Region Update packet information to local and regional EMS councils.

## SYSTEM DEVELOPMENT

North Region consists of five counties, Island, San Juan, Skagit, Snohomish and Whatcom. Each county is challenged with specific geographic planning considerations.

The northern boundary of Whatcom County touches British Columbia, Canada where cross-border planning for the 2010 Olympics is currently underway. The southern boundary of Snohomish County is contiguous with the densely populated King County and often consists of planning efforts that include the tri-county communities of Snohomish, King and Pierce counties. Skagit County is centrally located in the region and is the geographic gateway to both Island County and San Juan County where both counties consist of 100% island properties. All along the west side of the region is the Pacific Ocean, scattered north and south with a variety of large to small island communities which jurisdictionally belong to one of the five counties in the region. Because of geographically challenged communities in Island County and San Juan County, North Region is the highest user of trauma verified air transport in the state.

EMS delivery in the North Region is diverse, with a variety of system configurations, funding, staffing, geography and mode of delivery (e.g., volunteer, municipal, private, etc.). There are also some inequities in distribution of EMS resources. Rural areas farthest from a hospital have the greatest need for EMS yet have the most trouble maintaining those services. In urban areas, there has been an increasing problem of hospital overcrowding and ambulance diversion. Most hospitals have developed diversion policies in an attempt to deal with the challenges, however, the challenges have continued.

While the State's population growth is projected to grow by approximately 20 percent between 2005 and 2020, the population in the North Region is projected to grow by almost 31 percent for that same period. Given the North Region's substantial projected growth, the need has been identified to either increase our hospital capacity or increasingly rely upon hospital resources in other EMS and Trauma Regions. These hospital capacity issues have morphed into additional challenges for prehospital transport agencies being asked to take limited prehospital resources out of service for several hours at a time.

**Interfacility Transport Planning:** Over the past couple of years, discussions have evolved with North Region system planners regarding the need to have planning tools that consider the identification of interfacility transport needs and gaps, in order to appropriately plan for needed resources. Currently, there is no EMS & Trauma System statute or law governing this category of resource planning. When planning interfacility transports, it is important to consider the various service categories:

<b><i>Scheduled Transports</i></b>	Generally a BLS service level is all that is needed to provide clinic to hospital transports, hospital to rehabilitation transports and hospital to long term care facility transports.
<b><i>Emergent Transports</i></b>	Generally an ALS or Critical Care services level is needed to provide patient transfer to a higher level of care or to a facility that provides specialty care.
<b><i>Critical Care Transports</i></b>	Provided by both <u>ground</u> and <u>air</u> ; however "Air Critical Care" has oversight and guidance, but the "Ground Critical Care" or <u>nurse cars</u> currently have vague or non-existent oversight and state guidance.

Regional Council membership has identified a need to better define issues affecting Interfacility Transport services and planning. The Regional Council also would like to obtain improved

planning processes and planning guidelines and to consider that ultimately State RCW and WAC may need to be opened and updated.

Because of a rapid population growth, as well as financial limitations, the region is finding that its response resources are being stretched farther than ever before. It is more important than ever to continue evaluating EMS and trauma system trends and to find solutions to issues through the collaborative efforts of the local and regional planning processes. This system needs to provide timely and appropriate delivery of optimal emergency medical treatment for people with acute illness and traumatic injury, and to recognize the changing methods and environments for providing optimal emergency care. **Continuation of a collaborative planning process is needed to ensure that relevant and key stakeholders remain informed of system issues and continue to be involved in solving these issues.**

**Information Sharing:** Within the EMS and Trauma System there are multiple stakeholder groups such as; the Governor's Steering Committee and various specialty Technical Advisory Committees (TAC), Regional Advisory TAC, Pediatric TAC, Data TAC, Cardiac and Stroke TAC and others. These and other bodies work to consistently improve the system as a whole. In the process of doing so important emerging issues arise. These issues need to be quickly passed on to both local and regional stakeholders.

Each year, the Regional Council receives a contract form the State DOH that includes performance activities that affect both regional and local planning. The North Region Council and staff need to better inform the local EMS councils of the activities that would need regional and local collaboration. **System stakeholders need an effective, consistent and reliable mechanism of information sharing regarding emerging issues.**

**Local County Medical Program Directors (MPD):** The primary role of the medical director is to ensure quality patient care. Responsibilities include involvement with the ongoing design, operation, evaluation and revision of the EMS system from initial patient access to definitive patient care. This puts them in the lead position for the design, reviews and updates of prehospital training programs, prehospital protocols and guidelines and need and distribution of prehospital services. The local county MPD is a significant designer of the local county EMS system. As such, the development of an ongoing collaborative and cooperative working relationship with all of the each of the local county MPDs in the region needs to be improved.

MPDs have the ability to authorize specific and/or specialized training requirements of its certified personnel. Their individual role within each of the five counties in North Region is paramount. They are the key contacts to develop training programs or educational platforms deemed important to state and regional planning efforts. **Potential MPD contributions and expertise have not been efficiently utilized for regional planning in North Region and this needs to be improved.**

**Emergency Medical Dispatch:** Emergency Medical Dispatch (EMD) program is an integral and critical component of the medical care EMS system. The emergency medical dispatcher (EMD) is the principle link between the public caller requesting emergency medical assistance and the emergency medical service (EMS) resource delivery system. As such, the EMD plays a fundamental role in the ability of the EMS system to respond to a perceived medical emergency. Pre-arrival instructions are a mandatory function of each EMD in a medical dispatch center. Training as EMDs is required for all dispatchers functioning in medical dispatch agencies and requires unprecedented cooperation between diverse disciplines.

Patient enters the system the second the phone rings in dispatch when symptom onset to definitive care is activated. Integration of the entire system improves patient outcomes. Dispatch

is an important component of patient care. **Regional collaboration and planning need to continue with dispatch agencies.**

**EMERGENCY PREPAREDNESS PLANNING:** Emergency medical services and disaster medical services share the goal of optimal acute health care; however, in achieving that goal, the two systems use different approaches. Emergency medical services routinely direct maximal resources to a small number of individuals, while disaster medical services are designed to direct limited resources to the greatest number of individuals. Disasters involving the intentional or accidental release of biological, chemical, radiological, or nuclear agents present a difficult community planning and response challenge, often producing a far greater number of secondary casualties and deaths than conventional disasters. Because the medical control of emergency medical services is within the domain of emergency medicine, it remains the responsibility of emergency physicians to provide both direct patient care and medical control of out-of-hospital emergency medical services during disasters.

**Interoperable Communications:** Interoperable communications is identified as a critical element of both emergency medical services and disaster medical services. The ability of hospitals, prehospital EMS agencies, and public service access points (PSAP) dispatch centers to communicate in a variety of ways is vital. The upcoming 2010 Olympics will be hosted in Canada (Vancouver and Whistler) and there will be 17 days of Olympic Games events (February 12<sup>th</sup> – 28<sup>th</sup>) and 10 days of Paralympic Games (March 12<sup>th</sup> -21<sup>st</sup> 2010). North Region expects to be greatly impacted by responder service needs affecting communication linkages within the North Region. Many of these responder agencies have been involved with recent evaluations of interoperable communication needs because of recent federal funding opportunities made available to the North Region. **North Region communication stakeholders need to continue the implementation of interoperable communication plans funded by recent federal grants made available to the region, in preparation of the 2010 Olympics.**

**Regional Bed Control & Regional MCI Planning:** Providence Regional Medical Center Everett (PRMCE) assumes the role of Regional Bed Control when requested by the facility in closest proximity to a given event. PRMCE would be responsible for responding to any need to distribute patients from the incident scene to the appropriate facility by establishing a direct, uninterrupted communication link with the scene if possible. Other hospitals will be expected to report bed availability to PRMCE as requested. In the event that Providence is overwhelmed and cannot assume the role of Regional Bed Control, PRMCE will request that St. Joseph Hospital perform the functions of Regional Bed Control.

There has been much discussion in the Region 1 Hospital Emergency Preparedness Planning Committee regarding the kind of specialized equipment, training and defined practices that would need to be in place to effectively achieve proficiency with this charge. One of the gaps identified during scheduled exercises in the region that prehospital dispatching of prehospital response units for a regional disaster has not been adequately considered. **All county MCI plans and County Emergency Management Plans (CEMP) will need to include such response issues as regional bed control, regional dispatch and deployment from the disaster scene, as well as many other regional planning issues including cross-border planning**

## SYSTEM DEVELOPMENT

### - Goal #4 -

There is strong, efficient, well-coordinated region-wide EMS and Trauma System to reduce the incidence of inappropriate and inadequate trauma care and emergency medical services and to minimize the human suffering and costs associated with preventable mortality and morbidity.

**Objective 1:** Throughout the Plan Cycle (July 2009 to June 2012) the Regional Council will monitor and implement the objectives and strategies within the FY09-12 North Region EMS and Trauma System Strategic Plan, by completing work within timelines.

**Strategy 1:** By August annually the Regional Council Administrator will provide copies of the North Region EMS and Trauma System Plan for FY09-12 and Gantt Chart Tool to identify work to be done by the Regional Council for the fiscal year

**Strategy 2:** Bimonthly, throughout the Plan Cycle (July 2009 to June 2012), the Regional Council and Council Administrator will monitor and provide a plan implementation progress report through State reporting.

**Strategy 3:** By August Annually, the Regional Council will develop and implement formal processes to complete Regional Plan objective and strategy timelines within the current fiscal year.

### - Goal #5 -

The Regional Plan is congruent with the statewide strategic plan and utilizes standardized methods for identifying resource needs.

**Objective 1:** By May 2011, the Regional Council will facilitate the North Region Council Retreat including a focus on EMS system planning and regional plan updates including updates to remain consistent with the state plan.

**Strategy 1:** By February 2011, the Regional Council and Council staff will set a date and confirm retreat location, as well as create a “Save This Date” flyer and distribute to regional membership stakeholders.

**Strategy 2:** By March 2011, the Regional Council Staff will develop a retreat registration form and will email to regional membership stakeholders.

**Strategy 3:** By March 2011, the Regional Council Administrator will work with the region’s Executive Board to identify retreat speakers; the Council Administrator will send out formal speaker requests to identified individuals.

**Strategy 4:** By April 2011, the Regional Council Administrator will develop a draft agenda to be presented to the region’s Executive Board for approval.

**Strategy 5:** By May 2011, the Regional Council will facilitate a North Region Council Retreat to include a focus on EMS system planning and regional plan updates.

**Objective 2:** By September 2011, Regional Council will complete a comprehensive data based North Region EMS & Trauma System Strategic Plan for 2012 – 2017 by following a work plan developed

**Strategy 1:** By August 2010, the Regional Council Administrator will obtain new directives, tools and formatting guidance for the development of the 2012-2017 North Region EMS& Trauma System Strategic Plan.

**Strategy 2:** By October 2010, the Regional Council and Administrator will collaboratively establish a work plan

collaboratively by the region and state.	process for the 2012 – 2017 North Region EMS & Trauma System Strategic Plan and identify data needed for plan development.
	<b>Strategy 3:</b> By <u>April 2011</u> , the Regional Council and other stakeholder committees within the region will identify the needs in the region and develop objectives and strategies for Regional Council review.
	<b>Strategy 4:</b> By <u>May 2011</u> , the Regional Council and Administrator will provide DRAFT plan developed by regional stakeholders to be reviewed and further developed by the attendees at the Regional Council Retreat.
	<b>Strategy 5:</b> By <u>July 2011</u> , the Regional Council Administrator will provide updated DRAFT Plan to Regional Council membership and stakeholders for their review and input.
	<b>Strategy 6:</b> By <u>August 2011</u> , the Regional Council Executive Board and Administrator will provide updated DRAFT Plan to Regional Council for review and approval of plan.
	<b>Strategy 7:</b> By <u>September 2011</u> , the Regional Council and Administrator will submit completed Plan to the State DOH.

<b>- Goal #6 -</b>	
The Regional EMS and trauma care system has multiple distribution channels (methods, routes etc.) for timely dissemination of information on emerging issues that have been identified by the Steering Committee.	
<b>Objective 1.</b> By <u>April 2010</u> , Region and Local Councils will identify existing distribution channels for use in timely distribution of Steering Committee and TAC information to regional stakeholders on emerging issues and will develop and implement an information distribution process.	<b>Strategy 1.</b> By <u>December 2009</u> Region and Local Council representatives will identify <i>or</i> form a group representing all counties within the region to determine existing information distribution channels
	<b>Strategy 2.</b> By <u>November 2009</u> the identified group will develop a process for timely distribution of information on emerging issues.
	<b>Strategy 3.</b> By <u>December 2009</u> the emerging issues information dissemination process will be implemented within the regional system.

<b>- Goal #7 -</b>	
The Regional EMS and Trauma System interfaces with state, regional and local agencies for all hazards planning.	
<b>Objective 1:</b> By <u>January, 2010, 2011 and 2012</u> , the North Regional EMS Council, the Region 1 Healthcare Coalition and Region 1 Hospital Emergency Preparedness (EP) Committee will develop and implement a process to collaboratively	<b>Strategy 1:</b> By <u>December 2009, 2010, 2011</u> , the committee chairs of the Region 1 Healthcare Coalition, Region 1 Hospital EP Committee and the North Region EMS Council will identify where planning work intersects and identify collaborative work for the next contract year.

identify contractual work that intersects.	<b>Strategy 2:</b> By <u>January 2010, 2011 and 2012</u> , the collaborating parties will begin implementation of the process to be used in completing contractual work that intersects.
<b>Objective 2:</b> By <u>June annually</u> , the North Region EMS Council, the Region 1 Healthcare Coalition and the Region 1 Hospital Emergency Preparedness Committee will participate in regional disaster exercises and collaboratively develop a Regional After Action Report (AAR).	<b>Strategy 1:</b> By <u>June annually</u> , the Region 1 Healthcare Coalition (includes regional EMS prehospital and hospital and other emergency response agencies) will conduct and participate in a minimum of one disaster planning drill or exercise. <b>Strategy 2:</b> By <u>June annually</u> , the North Region Council, the Region 1 Healthcare Coalition, the Region 1 Hospital Emergency Preparedness Committee and North Region Council staff will work with the various regional and local stakeholder groups, to collaboratively develop a Regional After Action Report (AAR).

<b>- Goal #8 -</b>	
Region-wide interoperable communications are in place for emergency responders and hospitals.	
<b>Objective 1:</b> <u>Bimonthly in 2009 and 2010</u> , the North Region Council will participate in regional communication planning meetings related to the 2010 Olympics and will provide bimonthly updates to regional stakeholder groups.	<b>Strategy 1:</b> By <u>September 2009</u> , the Regional Council will identify who will represent the Regional Council at NWRIC (Northwest Regional Interoperable Communication) planning meetings. <b>Strategy 2:</b> <u>Bi-Monthly during 2009 and 2010</u> , the Regional Council representative will attend NWRIC planning meetings and provide email updates on activities to regional membership and stakeholders.

## SYSTEM PUBLIC INFORMATION & EDUCATION

Despite the advances in basic science, technology, and trauma system organization, there are problems facing trauma care delivery in the United States and in the North Region communities. A root cause of these problems is the lack of recognition of the importance of trauma on the part of the population as a whole, and the funding priorities of the local government jurisdictions. Many North Region citizens view basic health care as an unalienable right. Many of them continue to view injuries as "accidents." There is an overwhelming lack of local public and legislative awareness about the scope of the injury problem and sources of payment.

There is limited understanding of the operational components of a trauma system. Many North Region citizens believe that a trauma center actually represents the entire trauma system. There is also a significant gap between what our public expects related to local trauma care and the services that may actually exist within our communities.

The North Region citizens are not the only public category that is not well informed about injury prevention and the trauma care system. Aside from emergency and trauma care professionals, most health care providers still do not have a clear understanding of how injury management relates to their individual practice, how trauma care systems operate or the costs associated with creating and maintaining these systems.

Most of the public, policy makers and even relevant stakeholders from different roles within our system do not understand how the EMS and Trauma System functions, how it is funded or how to best use it. There is an overall lack of awareness for the costs associated with the continual "level of readiness" necessary to provide trauma care services for all injured patients.

Because funding is directly dependant upon the understanding that *the health of the EMS system affects the health of the population it serves*, it is important that a public education message be developed and implemented. In addition, data needs to be collected and clearly documented regarding the cost effectiveness of establishing a healthy trauma system so that support advocacy for continued financial resources continues for both the state and our local communities in the region.

Beyond basic system education, there are many other issues that our stakeholders need to be kept informed of – things like the cost effectiveness of injury prevention, the national shortages of nurses and specialty physicians, as well as the impending aging population and the potential significant impact that will have on all system agencies.

Currently in North Region, public information and education efforts in the region are conducted by individual hospital and prehospital agencies, therefore agency specific. **There is great need to have an integrated EMS and Trauma Care System message that would be focused toward the general public, policy makers and relevant stakeholders.**

Therefore, this regional plan includes educating and informing individuals and groups about the EMS and Trauma Care System.

**North Region and EMS stakeholders need to work collaboratively with the State DOH to develop and implement an EMS and Trauma System educational publication campaign focused toward individuals and stakeholder groups.**

## SYSTEM PUBLIC INFORMATION & EDUCATION

### - Goal #9 -

There is a regional public information plan consistent with the state public information plan to educate the public about the EMS and Trauma Care System. The purpose of this plan is to inform the general public, decision-makers and the health care community about the role and impact of the Regional EMS and Trauma Care System.

<p><b>Objective 1:</b> By <u>January 2012</u> the Region Council will develop and implement a North Region Public Information and Education Tool.</p>	<p><b>Strategy 1:</b> By <u>September 2011</u>, the Region Council will receive the State Public Information tool.</p>
	<p><b>Strategy 2:</b> By <u>November 2011</u>, the Region Council will evaluate how the State Public Information Plan can be adapted for regional system information and education uses.</p>
	<p><b>Strategy 3:</b> By <u>December 2011</u> the Region Council and staff will write a work plan outlining how the Public Information Plan will be implemented in the North Region.</p>
	<p><b>Strategy 4:</b> By <u>January 2012</u> the Region Council and staff will incorporate applicable components of the State Public Information tool and other available Public Information and Education products as the Regional Public Information and Education Plan and implement it.</p>
<p><b>Objective 2:</b> By <u>May 2012</u> EMS and Trauma Care System Stakeholder groups in the region will have access to the North Region EMS and Trauma Care System Public Information Tools to provide information and education about the Regional EMS and Trauma Care System.</p>	<p><b>Strategy 1:</b> By <u>March 2012</u> the Region Council and staff will provide the Regional Public Information and Education Tool to Local Councils and key stakeholders.</p>
	<p><b>Strategy 2:</b> By <u>April 2012</u> the Region Council and staff will implement the use of the Regional Public Information and Education tool throughout the Region.</p>
	<p><b>Strategy 3:</b> By <u>May 2012</u>, stakeholder groups will have available for them the use of the tool.</p>

## SYSTEM FINANCE

Perhaps the biggest challenge for trauma care in the North Region is to ensure stability in funding both for individual patient care and for trauma system development. As uninsured patients are likely to continue to be a sizable proportion of the trauma patient population, measures to increase and ensure access to medical care for our local communities remain a fundamental component of efforts to improve trauma care.

The Trauma Care Fund revenue and appropriation that affect North Region hospitals have remained relatively static since 1997. In February 2007, the Department of Health engaged Navigant Consulting, Inc. to conduct a comprehensive financial study of the State's Trauma System.

North Region hospitals and prehospital trauma services are reasonably funded; however with one of the fastest growing populations in the State and an overall strained economy, more is expected with less. When considering adequacy of funding, it is important to consider the need for future capacity. On a day-to-day basis, North Region hospitals regularly report the clear need for enhanced hospital capacity, many reporting a daily census in the 90 - 100 percentile, with an additional category of need for disaster surge capacity.

While reimbursement contributions for North Region hospitals are provided by the Washington State Trauma Fund these contributions may not be sufficient to maintain trauma capacity in North Region's designated trauma hospitals when considering expected population growth. For example, while the State's population is projected to grow by approximately 20 percent between 2005 and 2020, the population in the North Region is projected to grow by almost 31 percent.

According to the Navigant Consulting Study report, the size of the prehospital emergency response and transportation system has increased slightly since 2001. While the number of EMS agencies has remained virtually unchanged, the total number of personnel certified by the Department of Health has increased 6.2 percent, and the number of licensed EMS vehicles has increased by approximately 9.3 percent. Based on trends in the number of providers, it appears that the capacity of the system is continuing to grow.

Based on the survey results of Navigant Consulting, the revenues received by publicly funded, not-for-profit prehospital providers for trauma-related services have been covering the expenses incurred in providing these services. However, with the recent national economic stability crisis affecting all levels of government jurisdictions, many agencies in the North Region anticipate potential economic challenges over the next few years to cover many traditional expenses and maintain the same standards of care.

For those prehospital providers that are publicly funded not-for-profit agencies, the revenues generated to fund prehospital services come from public sources, such as tax revenues and district, municipal and county government appropriations. For these providers, the citizens supporting these tax revenues determine the level and adequacy of funding, and the resulting quality of related services. It should also be noted, however, that not all publicly funded not-for-profit agencies have the same tax base to support their operations. The tax base may vary depending on location, and therefore, the funds available to these agencies can vary as well.

On the other hand, the private for-profit and not-for-profit agencies in the North Region generally do not benefit from these publicly funded revenue sources. These agencies are more dependent upon rates paid for prehospital services by commercial insurers, Medicare and Medicaid, and in some instances, the individuals receiving the services. To the extent that the rates paid for these services do not provide sufficient revenue to cover related expenses, it will become increasingly

more difficult for these private providers to justify their business model and continue to provide services in the marketplace. According to Navigant Consulting, it is clear that the Medicaid rates paid for prehospital services are significantly lower than the rates paid by Medicare. It is also assumed that these rates are below those of the commercial payers in the State and the Region. As such, it is believed that Medicaid rates for these services should be closely examined to determine if adjustments, and potentially increases, are appropriate.

For hospitals, Navigant Consulting estimated that on average, the total cost of providing hospital trauma services in the State will increase at a rate of 9.9 percent per year, assuming no change in the definition of hospital trauma-related services in future periods. Similarly, they estimated that trauma physician costs in the State will increase at a rate of 10.0 percent per year, again assuming no change in the definition of trauma-related services in future periods. And finally, they estimated that the costs of providing prehospital services in the state will increase at a rate of 10.0 percent a year.

Sustainable funding has been and continues to be a challenge for all providers involved across the continuum of patient care within the Regional System. Inconsistent or inadequate funding threatens the stability of the system as a whole. **North Region stakeholders need to remain involved in and participate in Regional and State EMS and Trauma System planning efforts to ensure stable funding.**

**State and Regional Grants:** The State Department of Health has traditionally provided two grants for prehospital agencies. The annual Participation Grant and the bi-annual Prehospital Needs Grant is coordinated by DOH with a focus to assist all trauma verified services to help meet DOH requirements for prehospital services to the public. The Council staff assists with the coordination of this grant activity between the local agencies and the state.

The Regional Council also receive grant funding through the performance contracts with State Department of Health for specified system work. The Region Council uses funds to maintain Council operations and to provide funding for Local EMS County Council support, prehospital provider training, and injury prevention and public education (IPPE). The regional grant objectives are discussed in the Injury Prevention and Prehospital sections of this plan. **The Regional Council needs to continue assist with the coordination of the State funded prehospital grants at the agency level, as well as providing annual grant funding to special projects and rural community needs for prehospital agencies and injury prevention advocates.**

**DOH Performance and Financial Contract:** Each year, the Regional Council negotiates a performance contract with the State Department of Health to perform work that is tied to the implementation of the North Region Plan. This funding has been stable and consistent for the past twelve years or more. There have been no increases to contract funding, yet the expectations and expenses have increased over the years.

The Regional Council reviews the contract and statement of work each year and develops a work plan and tools for effective reporting and delivery of the contractual deliverables. This contact is also the baseline of the budget that is developed annually. **As the need to effectively prioritize work and maintain and/or create effective processes to get the contractual work done on time.**

<b>- Goal #11 -</b>	
There is consistent and sustainable funding to ensure a financially viable regional EMS and Trauma Care System.	
<b>Objective 1:</b> By <u>June 2010, 2011 and 2012</u> , the North Region Council will develop and distribute to North Region stakeholders an updated list of potential grant resources available to prehospital services and hospital facilities.	<b>Strategy 1:</b> By <u>January 2010, 2011 and 2012</u> , the North Region Council Staff will start the process of collecting updated grant resources from state and national grant funding agencies.
	<b>Strategy 2:</b> By <u>June 2010, 2011 and 2012</u> , the Region Council staff will disseminate the resources for grant dollars available to EMS services to all regional stakeholders.
<b>Objective 2:</b> <u>Bimonthly (July 2009 – June 2012)</u> the North Region Council will meet the bi-monthly contract deliverable requirements to ensure continuous funding to the Regional Council during the plan cycle.	<b>Strategy 1:</b> By <u>July Annually</u> , North Region Office staff will develop and post annual calendar of contract reporting deliverables and due dates.
	<b>Strategy 2:</b> By <u>August annually</u> , the Regional Council Administrator will use the Regional Plan Gantt Chart to develop a work plan to meet the DOH contact deliverables.
	<b>Strategy 3:</b> <u>Bimonthly</u> , during Regional Council meetings, the Executive Board and Council Administrator will monitor the plan work to meet the DOH contract deliverables.

## CLINICAL COMPONENTS

### INJURY PREVENTION & CONTROL

Injury prevention is the focus of trauma systems of the future because it offers the greatest potential for reducing the burden - financial and otherwise - of trauma care, as well as morbidity and mortality. Community-based injury prevention programs have been demonstrated to avert injury-related morbidity and mortality and to reduce health care costs, although there is a huge gap between what is known to be effective and what is done at the local level.

#### Regional Injury Data

Fatal Injuries 2000 – 2006	Island	San Juan	Skagit	Snohomish	Whatcom	North Region	WA State
MVT – Occupant	10.1	10.6	12.5	6.1	6.7	7.3	7.9
Falls	14.7	7.9	12.3	8.0	6.4	8.7	9.0
Poisoning	6.1	*	11.6	11.8	8.8	10.8	10.0
Drowning	1.6	*	1.8	1.5	2.4	1.7	1.8

Non-Fatal Injuries Hospitalizations 2000-2006	Island	San Juan	Skagit	Snohomish	Whatcom	North Region	WA State
Falls	281.0	289.3	352.9	235.2	288.7	261.2	285.5
MVT – Occupant	45.9	18.5	58.0	36.5	46.7	41.0	41.0
Poisoning	19.5	15.9	26.3	34.1	34.1	31.9	32.7
Struck by or against	12.5	7.9	16.9	14.8	15.6	14.9	15.7
MVT – Motorcyclist	9.3	9.2	16.5	11.2	8.9	11.2	10.3

Note: Injury rates per 100,000 population, \* denotes rates not calculated for values <5 Source: DOH Website 2000

**North Region Injury Data of High-Risk Focus Areas:** Motor vehicle trauma, poisonings, falls and drowning were the most common causes of death in the North Region during the 2000-2006 reporting period. Falls, motor vehicle trauma and poisonings were the most common mechanism for non-fatal injuries. Analysis of rate changes from the data indicates that injuries, both fatal and non-fatal, from falls and poisoning are increasing, while serious motor vehicle trauma is decreasing. Injuries to motorcyclists also replaced injuries from fire/flame on the Non-Fatal Injury table as the rates were higher among motorcyclists.

Data analysis provides the information we need to develop and institute *more focused* prevention programs throughout the North Region. The Regional Council and Regional Injury Prevention Committee plan to: 1) financially support evidence-based injury prevention programs in the region; 2) provide region-wide education on leading injury mechanisms in the North Region; and 3) develop strategies that complement and add value to successful, existing programs.

The following leading mechanisms of injury will become the focus for the North Region Injury Prevention programs in the Region: Falls, Motor Vehicle Trauma, Poisoning and Drowning. Poisoning death and injury rates continue to increase and the DOH reports that over 90% of these deaths are caused by prescription drug overdoses. These issues are currently being addressed by the Medical Disciplinary Board and the Pharmacy Board. However, the Regional Council has elected to focus efforts on education for the community and providers on poisoning deaths and injuries.

**Injury Prevention Mission Statement:** Provide regional leadership and focus, including resources and technical assistance to agencies and programs to ensure success and continuation of injury prevention programs throughout the region.

#### **Current Injury Prevention Resources and Efforts in North Region**

Several of the Injury Prevention Resources and Efforts currently supported financially and administratively by the Regional Council and Office include:

**Injury Prevention Mini-Grant Program:** Each year, the Regional Council and the Regional Injury Prevention Committee provide mini-grants to injury prevention programs within the North Region. Awards range from \$500 – to \$1,500 and funding is focused on programs that target leading mechanisms of injury and demonstrate a strong evaluation component that will produce measurable results.

**Regional Injury Prevention Symposium:** The Regional Council and Regional Injury Prevention Committee host an Annual Prevention Symposium to provide education to the Region's injury prevention stakeholders. Education is focused on at least one of the leading injury mechanisms in the North Region. The Symposium also provides attendees an opportunity to network and share resources.

**Safe Kids Chapters & Coalitions:** On average, children under 15 comprise 20% of each county's population in the North Region. The two Safe Kids Coalitions in the North Region, Skagit County and Snohomish County focus their injury prevention activities on this age group. Each Safe Kids organization strives to address the leading mechanisms of fatal and non-fatal injuries for children under 15 years of age, including motor vehicle crashes, falls, drowning and injuries from fire/flame.

**DUI Prevention:** Statistics from 2006 show that approximately 57% of North Region traffic fatalities were alcohol related. The Regional Council partners with the three existing DUI Task Forces and the Washington Traffic Safety Commission in our efforts to reduce this number. The Task Forces in Skagit, Snohomish and Whatcom Counties all have robust programs with an emphasis on enforcement and countermeasures. Brief Interventions with chemically impaired trauma patients are conducted in each of the hospitals in the North Region. Studies show a 40-50% reduction in recidivism in this patient population.

**Child Passenger Safety:** North Region EMS & Trauma Care Council funds many child passenger safety programs through the mini-grant program each year. Each county has a Child Passenger Safety program ranging from performing a few safety inspections per year to monthly inspections with various local partners. Car seat distribution also occurs at least monthly in each county with seats being distributed to low income families, newborns and ICU families from hospitals, pediatric patients, and referrals from DSHS and WIC.

- **Child Passenger Safety Awareness Courses:** In 2008, the Region's Safe Kids Coalitions partnered with NREMS to implement a Child Passenger Safety Awareness Course to be taught around the Region. This course offers four hours of awareness level education on the proper installation and use of child safety seats. The course targets fire, EMS, DSHS, public health and other personnel and offers Continuing Education Credits through a partnership with Providence Everett Medical Center. These courses are still bringing in high demand from the community and the Regional IPPE Committee appreciates the value the courses provide. The Committee will continue to seek out other sources to fund and support the courses.

## REGIONAL INJURY PREVENTION PROGRAM SUMMARY

The table below details several of the current programs within the Region. In the counties that have a Safe Kids Chapter/Coalition, many other safety genres are represented in addition to those listed.

COUNTY	Safe Kids	Safety Camp	Water Safety	CPS	Mock Crashes	Bike Safety	Fire Prevention	Brief Intervention	Pedestrian Safety
Island County		●	●	●			●	●	
San Juan County			●	●		●	●	●	
Skagit County	●			●	●	●	●	●	●
Snohomish County	●	●	●	●	●	●	●	●	●
Whatcom County	●	●	●	●		●	●	●	●

**Current Regional Council Involvement with IPPE Activities:** The Regional Council reviews bi-monthly reports from the NREMS Injury Prevention Coordinator and makes suggestions accordingly. The Council is also involved in approving or rejecting applications for the North Region Injury Prevention Mini-Grant, as well as reviewing reports regarding the progress and impact of programs funded by the Mini-Grant to ensure that continuation of the Mini-Grant program is the best use of council funds.

The North Region Injury Prevention Committee also works in collaboration with the Regional Council and makes suggestions/recommendations on the Regional Injury Prevention Symposium and mini-grant recipients to the Regional Council. Regional Staff is directly involved in the Safe Kids meetings and other prevention groups throughout the region.

**Needs Statement:** Regional system stakeholders have identified the following needs/gaps to be addressed in the following goals, objectives and strategies:

1. **Regional IPPE Committee and Infrastructure:** Sustainability of a Regional IPPE Committee, to include representation from hospital, prehospital, law enforcement and Native American Tribes. Committee roles include:
  - Review, analyze and prioritize regional injury prevention activities and programs and seek additional funding for both local and region-wide programs.
  - Review IPPE Mini-Grant Applications and recommend grant recipients to the Regional Council for approval.
  - Provide updates to the Regional Council regarding past, current, and upcoming injury prevention activities in each county.
  - Support the development and implementation of an Annual Regional Injury Prevention Symposium.
  - Contribute to the development of the Injury Prevention Section of the North Region EMS and Trauma System Plan, as well as the Injury Prevention Work Plan.
2. **Leading Mechanisms of Injury Focus:** Support and further develop prevention programs that address the two leading mechanisms of injury in the Region:
  - **Falls** – specifically focusing on fall prevention in the elderly population
  - **Motor Vehicle Trauma** – specifically focusing on child passenger safety and teen driving issues
  - **Poisonings** – specifically focusing on providing education regarding overdose/overuse of prescription medication by adults.

## INJURY PREVENTION & CONTROL

### - Goal #12 -

Preventable/premature death and disability due to injury is reduced through targeted injury prevention activities and programs.

<p><b>Objective 1:</b> During the <u>Plan Cycle</u> (July 2009 – June 2012), the North Region Council will provide coordination of a Regional Injury Prevention Committee, which will focus on stakeholder awareness of high-risk injury groups; reduced duplication of efforts and maximizing results.</p>	<p><b>Strategy 1:</b> By <u>May annually</u>, the North Region Injury Prevention Committee will facilitate one Prevention Symposium, focusing education on a high-risk injury group and providing an opportunity to coordinate efforts and maximize results of current programs that address the high-risk injury groups.</p>
	<p><b>Strategy 2:</b> By <u>June annually</u>, the North Region Council will update the direction and work for the Regional Injury Prevention Committee based on analysis of regional data to determine high-risk injury groups.</p>
	<p><b>Strategy 3:</b> By <u>September 2011</u>, the North Region Injury Prevention Committee will work with local agencies to gather and disseminate data on prevalent injury mechanisms within geographic areas.</p>
<p><b>Objective 2:</b> By <u>July annually</u>, the North Region Council and Regional Injury Prevention Committee will administer the Annual IPPE Mini-Grant (July – June funding cycle) to focus funding on programs that target leading mechanisms of injury and demonstrate a strong evaluation component that will produce measurable results.</p>	<p><b>Strategy 1:</b> By <u>April annually</u>, North Region office staff will release the Mini-Grant application electronically to all regional stakeholders and post on the North Region website.</p>
	<p><b>Strategy 2:</b> By <u>June annually</u>, the IPPE Committee Selection group will review applications and select recipients based on the North Region Council's standardized review criteria.</p>
	<p><b>Strategy 3:</b> By <u>July annually</u>, the Injury Prevention Committee will provide a recommendation to the Regional Council of IPPE programs and grant recipients to be funded. .</p>
	<p><b>Strategy 4:</b> By <u>July annually</u>, the Regional Council Administrator and IPPE Coordinator reviews the mini-grant evaluations that demonstrate measurable results and authorizes payment to grant recipients.</p>
<p><b>Objective 3:</b> By <u>January 2010</u>, the North Region Injury Prevention Committee will facilitate the initial development of the North Region Senior Falls Prevention Coalition.</p>	<p><b>Strategy 1:</b> By <u>October 2009</u>, the Injury Prevention Committee will identify key partners in falls prevention for inclusion in the Regional Senior Falls Prevention Coalition.</p>
	<p><b>Strategy 2:</b> By <u>January 2010</u>, Injury Prevention Committee will set the date for the first North Region Senior Falls Prevention Coalition Meeting.</p>

## PREHOSPITAL

EMS delivery in North Region is quite diverse at the local level, including a variety of configurations, funding, staffing, geography and mode of delivery (e.g., volunteer, municipal, private, etc.). Regional resources include ninety-four (94) trauma verified prehospital EMS agencies within the regional boundaries of which four (4) are private ambulance organizations. There are also seven (7) dispatch agencies, and ten (10) trauma designated trauma services within these same boundaries. There are five (5) County Medical Program Directors (MPDs) that provide medical control to its 2,842 (as of January 2008) certified personnel (approximately 50/50 percent career/volunteer ratio).

Air ambulance service is currently provided within the North Region and is one of the highest use areas of the state for air ambulance services, mostly due to the geographic challenges of San Juan County. The State of Washington's Air Medical Plan has allocated a minimum of one and maximum of three air medical service for the region.

Ongoing research and evaluation of prehospital performances and data are reviewed by each agency and by the County MPD. Most the region's MPDs have placed a greater focus on County QI Program development, with several of counties developing written Prehospital QI Plans (currently in draft format). MPDs now also have an opportunity in the near future to securely review, evaluate and comment on all incidents within their county through WEMISIS, the web-based data collection tool that is provided by the State DOH at no cost to all prehospital agencies. The system contains numerous standard QI reports and allows MPDs and prehospital agencies to review and quickly determine the quality of runs being entered by their prehospital personnel.

Essential planning pieces for the success of North Region's prehospital agencies also include prehospital training programs, prehospital patient care procedures and medical protocols, and need and distribution of prehospital services. Currently, North Region Council Staff, and the Prehospital and Education Committees conduct regular resource assessments of the following:

- Annual Training and Equipment Need Assessment in each County
- Review of Min/Max Numbers (Prehospital Responder Agencies) in each County

**North Region Council Staff in collaboration with the Prehospital and Education Committees need to continue regular prehospital resource and training assessments in order to respond to the patient care needs of the Region.**

There are areas of disproportion in distribution of EMS resources in North Region. The " rural areas farthest from a hospital often have the greatest need for EMS yet have the most trouble maintaining those services because of limited funding available for training and equipment needs. In the region's urban areas, there are increasing problems of hospital overcrowding, resulting in ambulance diversion placing greater stress on prehospital personnel to deliver patients to the closest hospital "with essential resources".

**Rural Communities Needs:** Emergency services in many of North Region's rural communities today still depend on a depleting pool of volunteer personnel and dated equipment. Studies of rural EMS conducted since 1985 repeatedly point out the same problems. Because of the low annual volume of calls and thin tax base, it is difficult to finance the universally high fixed cost of an ambulance operation. **The Regional Council needs to continue identifying rural communities needs in regards to training and equipment.**

**Prehospital Training Resources:** The Regional Council has established an annual commitment to provide education and training funds through a Community Based Training (CBT) Grant. Local County EMS Councils receive Regional Council funding for initial training, Ongoing Training and Evaluation (OTEP), and continuing education prioritized by local county MPDs. Special care is taken to emphasize the training needs of rural and volunteer providers.

The North Region Council has budgeted for training and education which is generally distributed evenly to the five county EMS councils/commissions in the region to distribute to their local agencies. Providing these funds to local EMS Councils supports a more adequate prehospital work force through initial training support and continuing education for re-certification. Additionally, these funds ensure local prehospital services can meet verification requirements. **The North Region Council needs to continue providing education and training funds to support training needs in the Region, with an emphasis on the training needs of rural and volunteer providers.**

**Regional Patient Care Procedures:** The organization of Regional EMS and Trauma System operations is based on Regional Patient Care Procedures, County Operating Procedures, and Public Service Access Point (PSAP) Dispatch Procedures. As defined in RCW 18.73.030 "Patient Care Procedures" (PCP) means; written operating guidelines adopted by Region EMS and Trauma Care Council, in consultation with the Local EMS and Trauma Care Councils, emergency communication centers, and EMS Medical Program Director (MPD), in accordance with statewide minimum standards. The patient care procedures identify the level of medical care personnel to be dispatched to an emergency scene, procedures for triage of patients, the level of trauma care facility to first receive the patient, the name and location of other trauma facilities to receive the patient should an interfacility transfer be necessary.

**County Operating Procedures:** County Operating Procedures (COPs) have been developed at the county level to address county specific issues related to patient care procedure. Periodic review and update of the Regional Patient Care Procedures and County Operating Procedures will maintain system stability over time. Public Service Access Point (PSAP) Dispatch Procedures dictate the activation and dispatch of the EMS and Trauma prehospital system agencies. It is important that the dispatch procedures, the Regional Patient Care Procedures, and County Operating Procedures are in alignment. A comparative analysis of these documents will identify procedural conflicts and will foster a better understanding of the system fundamentals.

**Need and Distribution of Verified Aid and Ambulance Services:** Recently, there has been some activity with agency consolidation and/or collaboration of fire departments in forming a Regional Fire Authority, which will affect Maximum numbers in planning. **North Region Council and staff will need to continue to work closely with local EMS councils and agencies to stay abreast of these types of activities to maintain accurate levels of verification licensure distribution records.**

## PREHOSPITAL

<b>- Goal #13 -</b>	
There is a sustainable region-wide prehospital EMS system utilizing standardized, evidence-based procedures and performance measures that address both trauma and medical emergencies.	
<b>Objective 1:</b> By <u>January 2011</u> , the Region Council, a Regional Council appointed committee/workgroup will review and update Regional Patient Care Procedures (PCP)	<b>Strategy 1:</b> By <u>May 2010</u> the Regional Council appointed committee/workgroup will draft a meeting schedule and work plan to complete the PCP review/update project.
	<b>Strategy 2:</b> By <u>October 2010</u> the Regional Council appointed committee/workgroup will review the Regional Patient Care Procedures, develop and submit recommended revisions to the Region Council for approval.
	<b>Strategy 5:</b> By <u>January 2011</u> , the Region Council will adopt the revised Regional Patient Care Procedures for inclusion in the 2012-2017 North Region EMS and Trauma Care System Plan.
<b>Objective 2:</b> By <u>June 2011</u> , the Local County Councils will provide a recommendation on minimum / maximum numbers of trauma verified services to the Region Council for the Regional Council use in developing the next North Region EMS and Trauma System Plan 2012 - 2017.	<b>Strategy 1:</b> By <u>December 2010</u> , the Regional Council and Administrator will request that local EMS Councils begin their work to update the local need for verified aid and ambulance services and make recommendations to the Regional Council for Min/Max numbers.
	<b>Strategy 2:</b> By <u>April 2011</u> , the Regional Council and Administrator will collect recommendations and schedule presentations to go before Council Committees.
	<b>Strategy 3:</b> By <u>April 2011</u> , the Regional Council will review the Min/Max data developed by local councils and provided by the Regional Prehospital Committee.
<b>Objective 3:</b> By <u>October annually</u> the Region Council will utilize the regional process to identify needs and allocate available funding to support prehospital training.	<b>Strategy 1:</b> By <u>May annually</u> the Region Council will conduct a regional training needs assessment for the following fiscal year.
	<b>Strategy 2:</b> By <u>July annually</u> the Region Council Administrator will review appropriate documentation needed for training reimbursement and will draft checks to local EMS Councils for training conducted in the prior year.
	<b>Strategy 3:</b> By <u>August annually</u> , the Region Council will establish a budget for prehospital training support.
	<b>Strategy 4:</b> By <u>September annually</u> , the Regional Education Committee and Council staff will develop a Regional Training Grant RFP and send out electronically to all Local Council Chairs, Administrators and Education representatives as well as a copy of the Training Needs Assessment results from the previous year for their use in developing their grant application and proposal for funding.
	<b>Strategy 5:</b> By <u>October annually</u> the Education

	Committee will review each county's application and proposal for funding and make recommendations for funding distribution.
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## ACUTE HOSPITAL

Emergency Department (ED) overcrowding and ambulance diversion have been increasingly significant at both the national level and in the North Region. The problem has developed because of multiple factors including increased ED volume, growing numbers of uninsured and deceased reimbursement for uncompensated care. Initial position statements from major organizations, including The Joint Commission and the General Accounting Office, suggests the problem of overcrowding is due to inappropriate use of emergency services by those with no urgent conditions. More recently, the problem of overcrowding includes capacity issues - the inability to transfer emergency patients to inpatient beds as the single most important factor contributing to ED overcrowding. These issues are reiterated by the Trauma Coordinators and hospital leadership throughout the North Region.

In the 2007 Washington State DOH Navigant Cost Study, the North Region was reported to appear to have low hospital capacity relative to its current and projected population. The North Region currently lacks a Level II trauma hospital (adult or pediatric) and has the State's second highest ratio of population-to-total-beds and population-to-staffed emergency department beds, which translate into the second-lowest bed capacity per capita in the State. The North Region's 2020 projected population is almost identical to the West Region, but the West Region has 3 Level II adult trauma hospitals, 1 Level II pediatric trauma hospital, and 852 more available trauma designated hospital beds and 64 more staffed emergency room beds. Given the North Region's substantial projected growth, it must either increase its hospital capacity or increasingly rely upon hospital resources in other EMS and Trauma Regions.

The North Region has ten designated trauma services within the regional boundaries. Seven hospital facilities in the region have recently undergone construction and added additional beds to keep up with growing needs of their communities.

Inter-Island Medical Center is currently planning for expansion in the next several years, possibly into a 25 bed Critical Access Hospital, expanding from its current Level V designation as a community clinic.

In September 2008, Providence Regional Medical Center Everett broke ground on a 12-story, 680,000-square-foot medical tower on the current Colby Campus to include a 368-bed tower. The project's main purpose was to ensure that the medical center is equipped to continue providing health care to a region expected to reach one million county residents in the next two decades. An entire floor will be dedicated to emergency and trauma services. The two current emergency rooms will consolidate to accommodate a predicted 120,000 to 130,000 patient visits per year. Construction is expected to be complete in 2011. At that time, it is expected that Providence Regional Medical Center Everett will have requested a Level II trauma designation.

**The North Region Council and the Hospital Facilities Committee need to evaluate routine surge capacity at the hospitals in the North Region and develop strategies for improved planning system-wide.**

**North Region Hospital Designation Planning:** Through evaluation of data, the Hospital Facilities Committee can make recommendations to the Regional Council regarding minimum and maximum numbers of trauma care facilities in the region. The Region assesses methodology options for determination of min/max numbers for designation, using State criteria. Several hospitals in the North Region are identified as "under designated" resulting in the appearance of

gaps for some levels and too many designations for other levels. DOH assists hospitals interested in upgrading with interpretation of state approved min/max numbers.

Trauma designation rules require that DOH conduct a competitive application process every three years. The designation process allows for hospitals to designate, maintain current level of designation, or apply for a different level of designation. Additionally, the designation process provides an opportunity for the hospital and physicians to reaffirm their commitment to trauma care.

**The Regional Council needs to continue to provide a planning forum, facilitate discussion for the designation review of trauma centers by hospital representatives from Hospital Facilities Committee;** however, the Council does not have a formal role in designation beyond assessing the need for designated trauma centers and recommending the number and levels of trauma centers required in the regional system.

**Hospital Facilities Committee Min/Max Review:** The Committee has reviewed the Min/Max numbers for the Region's hospitals. The Committee discussed several hospitals in the Region that are considering to applying for a higher level designation and the Min/Max numbers should allow for these possible changes. The focus for the changes made to the Min/Max numbers is to continue to encourage facilities to apply for higher designation, while maintaining realistic expectations for designation based on regional resources and needs.

**The Hospital Facilities Committee needs to conduct an analysis for need and distribution of trauma services at all levels when needed, using the established DOH criteria; and support efforts of the regional hospitals to obtain at least one Level II trauma designated facility.**

**North Region Trauma Patient Transfers:** Trauma centers in the North Region transfer many patients each year to a higher level of care. As the only Level I hospital facility in Washington State, Harborview Medical Center receives almost all of these transfers. According to Trauma Registry Data, North Region hospitals transferred nearly 700 patients to Harborview in 2007, a 17% increase from the previous year.

Each designated trauma hospital has transfer criteria in place that reflect their ability to care for injured patients. Each hospital adheres to its own transfer criteria and has transfer agreements in place with Harborview. Several hospitals in the North Region are reviewing transfer criteria because of Harborview's ongoing capacity issues. In the past two years, the importance of inter-facility transfer capabilities has become more apparent and the emphasis has been placed on finding solutions for keeping patients in the Region.

One of the biggest issues with inter-facility transfers is that there is no mechanism in place to make the transfer as seamless as possible between the region's facilities. When transferring patient out of the Region, particularly to Harborview, hospitals can place one phone call to arrange the transfer. This is not the case in regional inter-facility transfers because there is no Regional Transfer Center that can function in that capacity.

**Harborview Transfers:** Harborview Medical Center being the only Level I hospital in the state has it challenges, regularly operating at capacity. Some regions in the state are having a difficult time transferring patients because Harborview is so over capacity, asking hospitals to hold their transfer patients as long as possible. This affects the hospitals designation reviews conducted by DOH, as patients that should have been transferred, per the hospitals transfer criteria, must remain at the facility because Harborview does not have the capacity to receive the patients.

According to the Chief of Trauma at Harborview Medical Center, Harborview could handle more major trauma transfers, if they weren't inundated with minor injuries. Many of the hospitals in

the region are now discussing and reviewing transfer criteria and working with Harborview for best possible patient care.

**The Regional Council and Hospital Facilities Committee need to continue to evaluate the issues regarding inter-facility transports and support the efforts of the region’s hospitals to review transfer criteria and establish methods to improve inter-facility transports within the region.**

**Hospital/Emergency Department Overcrowding:** Hospitals in the region both continue to experience 1) substantial increases in trauma patient volume and 2) overall “high census” in sick patients presenting in the emergency room for treatment, according to reports from the North Region Trauma Coordinators

Several hospitals in the North Region have doubled their trauma patient volume over a four-year period. And when patients don’t have a primary care physician and/or insurance, they go to the hospital emergency room to be treated. Data also shows that patient usage of the emergency department continues to dramatically increase, overcrowding the system.

Mental health patients are a significant contributing factor in overcrowding as discussed by members of the North Region Hospital Facilities Committee. According to a study by the *American College of Emergency Physicians*, a surge in the number of people with mental illness seeking treatment in emergency departments is taking a significant toll on patient care and hospital resources nationwide. The number of beds in state mental health facilities dropped 32% between 1992 and 1998, according to the *Emergency Nurses Association*. More patients with psychiatric issues not only are flooding already overcrowded and overtaxed EDs, they stay up to 42% longer than other emergency patients. In many cases, these patients receive fairly rapid medical clearance, but cannot be discharged because no mental health facility beds are available for the uninsured or underinsured.

Additionally, Emergency Department overcrowding ultimately results in more patient diversions and transfers. Emergency department overcrowding is compounded by limited ICU, surgery and bed capacity, as well as limited “specialty surgeons”, resulting in patient transfers to facilities with appropriate personnel and equipment. The increase in uninsured or underinsured patients also adds to the strain of overcrowded Emergency Departments.

**The Regional Council and Hospital Facilities Committee need to review, evaluate and provide education regarding diversion policy solutions from other areas throughout the state; as well as provide education on the state’s bed tracking system.**

**Ongoing Training:** All of the region’s hospitals participate in the initial and ongoing training of prehospital EMS providers. Skills training opportunities are provided through scheduled time in the emergency departments and operating rooms. This training allows the providers especially the rural providers to maintain their patient care skills proficiency. The hospitals also open enrollment to prehospital providers for education seminars and training events.

Emergency Department regular operations are impacted by routine patient surge demands. As a result, hospitals have an emergency department diversion mechanism in place. The prehospital EMS agencies need to be informed and educated to further a working understanding of emergency department diversion.

**The Regional Council needs to support ongoing skills training for prehospital providers within the region’s hospitals and disseminate education on diversion practices throughout the region.**

## ACUTE HOSPITAL

### - Goal #14 -

There is a sustainable region-wide system of designated trauma services that provides appropriate capacity and distribution of resources to support high-quality trauma patient care

<p><b>Objective 1:</b> By <u>June 2011</u>, North Region hospitals will recommend minimum/maximum numbers of trauma designated services to the regional council for system planning.</p>	<p><b>Strategy 1:</b> By <u>September 2010</u> the Regional Council will request hospitals review current minimum/maximum numbers, using State and other standardized tools.</p>
	<p><b>Strategy 2:</b> By <u>April 2011</u> the hospitals will conduct a review and provide recommendations to the Regional Council.</p>
	<p><b>Strategy 3:</b> By <u>June 2011</u> the Regional Council will review recommendations and incorporate changes into the 2012-2017 North Region EMS and Trauma System Strategic Plan.</p>
<p><b>Objective 2:</b> By <u>December 2010</u>, the North Region Council Hospital Facilities Committee will review and evaluate diversion practices and report the Regional Council for system planning.</p>	<p><b>Strategy 1:</b> At <u>quarterly meetings in 2009 and 2010</u>, the Hospital Facilities Committee members will review and evaluate current diversion practices in the region and develop a summary report.</p>
	<p><b>Strategy 3:</b> By <u>December 2010</u>, the Hospital Facilities Committee will provide a Diversion Summary Report to the Region Council for use in system planning.</p>
<p><b>Objective 3:</b> By <u>January 2011</u>, the North Region Council Hospital Facilities Committee will evaluate the capacity at hospitals for clinical experience needed by EMS students within the region and use the information to identify gaps to be addressed in the Regional Plan.</p>	<p><b>Strategy 1:</b> By <u>May 2010</u>, the Regional Council will identify the appropriate evaluation and assessment methods that will be used to evaluate the clinical training needed by EMS students in the region.</p>
	<p><b>Strategy 2:</b> By <u>September 2010</u>, the North Region Hospital Facilities Committee and the Education Committee will implement the evaluation and assessment methods identified by the Regional Council and develop a summary report that identifies the gaps in the system for EMS students needing clinical training in regional hospitals.</p>
	<p><b>Strategy 3:</b> By <u>January 2011</u>, the North Region Hospital Facilities Committee and Education Committee will present a joint summary report to the Regional Council to be used for regional planning.</p>
<p><b>Objective 4:</b> By <u>June 2010</u>, North Region prehospital agencies and hospital facilities will be aware of the various incident management features of WATrac and participate in the State's bed tracking system.</p>	<p><b>Strategy 1:</b> By <u>July 2009</u>, the region's hospitals will work with the Region 1 Hospital Emergency Preparedness Committee to identify level of WATrac participation within the region.</p>
	<p><b>Strategy 2:</b> By <u>July 2009</u>, the region's hospitals will participate in scheduled drills facilitated by the Region 1 Hospital Emergency Preparedness Committee, using the various WATrac tools.</p>
	<p><b>Strategy 3:</b> By <u>September 2009</u>, the North Region Council will notify all prehospital agencies in the region regarding the availability of WATrac to prehospital agencies highlighting the first features of resource and</p>

	pharmaceutical tracking as well as the Knowledgebase.
	<b>Strategy 4:</b> By <u>October 2009</u> , the North Region Council will host and facilitate a Kickoff Meeting and Workshop to include both hospital and prehospital stakeholders and introduce the implementation process for WATrac.
	<b>Strategy 5:</b> By <u>November 2009</u> , the North Region Council will identify facilities and agencies that will participate including their WATrac Specialists.
	<b>Strategy 6:</b> By <u>December 2009</u> , the North Region Council will make decisions regarding WATrac uses for prehospital agencies and hospital facilities.
	<b>Strategy 7:</b> By <u>February 2010</u> , the North Region Council will organize and implement WATrac training for hospitals and prehospital agency stakeholders.
	<b>Strategy 8:</b> By <u>June 2010</u> , the hospitals will work with the Hospital Emergency Preparedness committee to identify participation gaps and training needed to actively participate.
	<b>Strategy 9:</b> By <u>June 2010</u> , the North Region hospitals will be actively participating in the additional WATrac features.

## PEDIATRIC

According to Safe Kids Worldwide, injury results in more deaths in children and adolescents than all other causes combined. It is estimated that 1 in 4 children sustain an unintentional injury that requires medical care each year. The Washington State Department of Health, Center for Health Statistics, Comprehensive Hospital Abstract Reporting System (CHARS), shows that the leading causes of non-fatal and total injuries in the North Region for children that are under 15 years of age are suffocation, falls, poisonings, and fire/flame. These injury mechanisms receive consistent focus from the two Safe Kids Coalitions in the North Region.

Survivors of childhood trauma may suffer lifelong disability and require long-term skilled care. Improving outcomes for the injured child requires an approach that recognizes childhood injury as a significant public health problem. **Efforts need to be made in North Region to improve injury-prevention programs, emergency medical care, and trauma systems for pediatric patients.**

The North Region provides pediatric care through a sustainable region-wide EMS and Trauma Care System that integrates pediatric care in the system continuum. The regional licensed and trauma verified prehospital EMS agencies maintain pediatric patient care equipment on responding units. EMS providers are trained to care for pediatric patients and in the use of pediatric specialty equipment. The regional hospital receiving facilities are equipped, trained and dedicated to providing pediatric patient care.

Currently, Providence Everett Medical Center Everett is the only pediatric trauma designated hospital facility in the region. Their trauma designation level is currently pediatric Level III. Because North Region trauma centers do not have the resources to care for all of the injured children within region, the most seriously injured children are stabilized and transported to Harborview or Children's Hospital in Seattle.

Pediatric patients make up a minority of the EMS and trauma patient volume within the North Region. Due to the infrequency of prehospital pediatric emergency calls, added emphasis is given to the ongoing training of prehospital providers in pediatric emergency care. This training is provided through initial certification, Ongoing Training and Evaluation Programs (OTEP) and specialty courses and conferences.

### **PREHOSPITAL**

Prehospital emergency care providers in the North Region are often not as familiar with pediatric emergency management issues as they are with adult care because of infrequent exposure of most EMS personnel to critically ill or injured children. This lack of experience is typically addressed by continuing education efforts for EMS personnel through established courses such as Pediatric Education for Prehospital Professionals, Basic Trauma Life Support, Prehospital Trauma Life Support, or practical experience that is gained in children's hospitals.

Pediatric readiness may also be facilitated by the presence of a pediatric emergency coordinator and advocate within each EMS system. No matter how education is accomplished, mechanisms for knowledge and skill retention and continuous evaluation of performance are crucial for prehospital personnel. The method for maintaining skills may include continuous evaluation of performance. Direct feedback to the provider in the field is required to improve outcomes for injured children. There is a relative lack of data supporting the best practices for pediatric resuscitation in the field, including fluid administration, cervical spine stabilization, and airway management of children.

**Ongoing prehospital pediatric education and evaluation of performances needs to be supported and/or sponsored by the North Region Council.**

#### **TRAUMA CENTERS**

It has been shown that younger and more seriously injured children have better outcomes at a trauma center within a children's hospital or at a trauma center that integrates pediatric and adult trauma services. The ability to provide a broad range of pediatric services, including the presence of physicians trained in pediatric emergency medicine, pediatric surgical specialists, pediatric anesthesiologists, and pediatric medical sub-specialists, is important.

Pediatric protocols for imaging and diagnostic testing and a child-centered and family-centered environment for care should be duplicated in trauma centers that are not part of children's hospitals whenever possible. Hospitals caring for pediatric trauma patients should have specific pain-management and sedation protocols and the ability to provide a full range of pediatric pain strategies for children, including systemic analgesics, regional and local pain control, anxiolysis, and distraction techniques. Pain management is critically important in managing trauma patients and transitioning them to rehabilitation. Continuing education on trauma for hospital providers is important and is best accomplished by current verification in the American College of Surgeons Advanced Trauma Life Support course.

**Ongoing education on pediatric trauma for hospital providers is needed.**

#### **INJURY PREVENTION**

Injury prevention is the cornerstone of any discussion concerning pediatric trauma. Injury prevention initiatives work. However, these initiatives are not promoted equally across the board, often because of limited resources. Providence Regional Medical Center Everett and Skagit County EMS Commission serve as the Lead Agencies for the Safe Kids Coalitions in Snohomish and Skagit Counties, respectively. Each of the trauma designated facilities in both counties is involved in the local Safe Kids Coalitions. All of the North Region's Level III Trauma Facilities participate in injury prevention programs as part of their designation requirements, whether through participation in Safe Kids while others have in-house programs.

Skagit, Snohomish and Whatcom Counties boast successful and active Child Passenger Safety teams, including technicians from hospital and prehospital services. These teams regularly partner with agencies in Island and San Juan Counties to provide Child Passenger Safety education and events.

While prehospital participation in Safe Kids Snohomish County is significant, the overall lack of prehospital participation injury prevention programs has been identified as a gap in the North Region.

**North Region needs to promote and support the incorporation and/or development of injury-prevention activities and programs in both prehospital agencies and trauma facilities as well as community-based intervention programs.**

## PEDIATRIC

<b>- Goal #15 -</b>	
There is a sustainable region-wide EMS and Trauma Care System that integrates pediatric care into the system continuum (prevention, prehospital, hospital, rehabilitation and system evaluation).	
<b>Objective 1:</b> By <u>April 2010</u> the North Region Council will facilitate a regional seminar including a focus on pediatric training needs within the region.	<b>Strategy 1:</b> By <u>October 2009</u> the Regional Injury Prevention and Regional Education Committees will draft an outline of program topics and potential speakers for the Regional Pediatric Seminar.
	<b>Strategy 2:</b> By <u>December 2009</u> the Regional Council office staff will contact and secure speakers for the seminar.
	<b>Strategy 3:</b> By <u>February 2010</u> , Regional Council staff will draft and distribute an agenda and Save the Date flyer to all regional stakeholders.
	<b>Strategy 4:</b> By <u>March 2010</u> , Regional Council staff will secure continuing education credit (CEUs) for seminar attendees through a partnership with Providence Regional Medical Center Everett.
	<b>Strategy 5:</b> By <u>April 2010</u> , the North Region Council will facilitate a pediatric training seminar.
<b>Objective 2:</b> By <u>January</u> annually, Regional Injury Prevention Committee will assist the North Region's Safe Kids Coalitions in and providing education related to pediatric injuries.	<b>Strategy 1:</b> By <u>December</u> annually, the Injury Prevention Coordinator or alternate will attend Safe Kids Annual Planning meetings and provide local and regional data, and assist in the development of annual Work Plans to address pediatric injuries.
	<b>Strategy 2:</b> By <u>December</u> annually, regional office staff will post a Calendar of Events for each Safe Kids Coalition on regional website ( <a href="http://www.northregionems.com">www.northregionems.com</a> ) to assist Coalitions with publicity and recruitment for educational events and planning meetings.
	<b>Strategy 3:</b> By <u>January</u> annually, the Regional Injury Prevention Coordinator will compile each of the Coalitions' accomplishments in providing education relating to pediatric injuries and develop a regional summary report.
<b>Objective 3:</b> By <u>April 2012</u> , the North Region Council will provide financial support for a regional QI forum that includes the assessment and evaluation of pediatric emergency medical and trauma care.	<b>Strategy 1:</b> By <u>September 2009</u> , North Region Council will recruit regional representative to participate in Pediatric TAC and provide feedback (protocols, care standards, and training opportunities) at bi-monthly Regional Council meetings.
	<b>Strategy 2:</b> By <u>April 2011</u> , the North Region QI Committee will pick a topic and potential speakers for the QI Forum that addresses pediatric patient care.
	<b>Strategy 3:</b> By <u>December 2011</u> , North Region Council staff will contact and confirm speakers for the Pediatric QI Forum.

	<b>Strategy 4:</b> By <u>February 2012</u> , North Region Council staff will draft an agenda and Save the Date flyer for the QI Forum and distribute to regional stakeholders.
	<b>Strategy 5:</b> By <u>March 2012</u> , the North Region Council staff will secure continuing education credits (CEUs) for the QI Forum participants through a local hospital facility.
	<b>Strategy 6:</b> By <u>April 2012</u> , the North Region Council will provide administrative and financial for a Regional QI Forum that includes the assessment and evaluation of pediatric emergency medical and trauma care in the North Region.

## TRAUMA REHABILITATION

The Washington State trauma system has placed an emphasis on rehabilitation of the trauma patient. In an effort to develop standards for trauma rehabilitation teams, in the early 1990's, the state's Department of Health developed criteria for state certification of trauma rehabilitation services, the criteria parallel those for acute care trauma service designations. Certification criteria for trauma rehabilitation services are written into law as part of the Washington Administrative Code (WAC) and attempt to distinguish between three different levels for trauma rehabilitation care; from the most comprehensive (level I) to the less comprehensive (level III).

### North Region Trauma Rehabilitation Service Designation Status

Region	State Approved		Current Status	Facility	# Rehab Beds	Aver Daily Census	% Occupancy
	Min	Max					
Level II - Rehab							
North	2	3	2	St. Joseph Hospital	12	7.6	63%
				Providence Everett Medical Center	19	12	63%

*Note: Data Collected by Linda Thompson/Rehabilitation TAC Chair*

Currently, there is a network of Level 1 designated rehabilitative service's in Seattle. One unit at Harborview Medical Center and another unit at the Children's Hospital and Medical Center which is accessed by most hospital facilities in the state. According to Harborview Medical Center, nearly half of all spinal cored injury survivors are discharged from the hospital to a rehabilitation facility.

Providence Regional Hospital/Everett (19 beds) and St. Joseph Hospital in Bellingham (12 beds) are the two Washington State Designated Trauma Rehabilitation Services in the North Region. They are accredited by The Joint Commission and CARF (Commission on Accreditation of Rehabilitation Facilities) to help assure the highest level of care is provided. North Region's two designated level II trauma rehabilitation services provide comprehensive inpatient and outpatient rehabilitation treatment to trauma patients with any disability or level of severity or complexity within the services capabilities and delineated admission criteria.

#### **St. Joseph Hospital in Bellingham/Bellingham**

St. Joseph Hospital in Bellingham is certified for 12 inpatient beds with a dining room and recreation room. It is comprised of seven semi-private rooms that are set up for clients with inpatient rehabilitation needs. Each has a wheelchair accessible bathroom. An elevator connects the unit to the Therapy Departments. There is 24 hour nursing care provided with 24 hour Psychiatry coverage as well.

Fifty-five to sixty percent of the admissions are people who have suffered strokes. The rest of the admissions have diagnoses fairly evenly spread among orthopedic conditions, amputee, brain injury, spinal cord injury and neurological conditions. Admissions range from adolescence to older adult. The average age of patients is 66 years old. Approximately 90% of the patients are 45 years or older and approximately 35% over the age of 75.

### **Providence Regional Medical Center/Everett**

The rehabilitation unit at Providence Regional Medical Center in Everett is located at Pacific Campus. The 19-bed Inpatient Rehabilitation unit cares for nearly 300 patients each year, providing the therapy and support patients need to manage pain, blood pressure changes, respiratory functioning, diabetes, bladder problems or other debilitating issues so they can become more mobile and better able to dress, bathe, feed and care for themselves. The Inpatient Rehabilitation Program also prepares families to meet ongoing care needs once the patient is discharged.

The Inpatient Rehabilitation Program significantly exceeds national averages for the amount of function gained per patient. This means that for every day of rehabilitation, patients make faster-than-average progress towards greater independence. The program provides 24-hour-a-day nursing care, has therapy available seven days a week and coordinates care with attending physicians.

The Providence Regional Inpatient Rehabilitation Program has placed in the top 10 percent of inpatient rehabilitation facilities in the country, receiving the 2009 Top Performer Award from Uniform Data System for Medical Rehabilitation (UDSMR).

### **Other Rehabilitation Resources**

Currently, there is not a clear understanding of the other resources (outpatient) that are available in the North Region and whether or not those resources are adequate for our demographic and geographic area. Other valuable information to review would include saturation levels, the complexity of rehab patients in the region and if current outpatient services are sufficient.

**North Region EMS & Trauma Care Council needs to inventory current resources in the region outside of the rehab designated facilities.**

### **North Region Trauma Rehabilitation Planning**

Trauma rehabilitation planning in the North Region is a new. Currently, there is no planning infrastructure in place to support regional planning. Building a planning infrastructure would include North Region participation in the State Rehabilitation TAC, as well as recruiting a rehabilitation stakeholder representative to participate in regional planning.

**North Region EMS & Trauma Care Council needs to identify, create and implement a planning infrastructure for regional planning.**

## TRAUMA REHABILITATION

### - Goal #16 -

There is a sustainable region-wide system of designated trauma rehabilitation services that provides adequate capacity and distribution of resources to support high-quality trauma rehabilitation care.

**Objective 1:** By December 2010, the North Region Council Hospital Facilities Committee will recruit one representative from trauma rehab facilities to participate in the Regional Council's Hospital Facilities Committee.

**Strategy 1:** By September 2010, the Regional Council's Hospital Committee will identify rehab facilities contacts and invite them to a committee meeting.

**Strategy 2:** By December 2010, the Regional Council will incorporate rehab partners Regional Council's Hospital Facility Committee and planning.

**Objective 2:** By April 2011, the North Region Council will provide financial and administrative support for a regional QI Forum that includes the assessment and evaluation of rehabilitation services in the North Region.

**Strategy 1:** By December 2010, the North Region QI Committee will pick a topic and potential speakers for the QI forum that addresses rehabilitation patient care.

**Strategy 2:** By January 2011, the North Region Council staff will draft an agenda and Save the Date flyer for the QI Forum and distribute to regional stakeholders.

**Strategy 3:** By April 2011, the North Region Council will provide administrative and financial support for a Regional QI Forum that includes the assessment and evaluation of rehabilitation services in the North Region.

**Objective 3:** By August 2011, the rehabilitation facilities in the regional system will recommend minimum/maximum numbers of rehabilitation services to the regional council for system planning.

**Strategy 1:** By March 2011, the Regional Council will request that rehabilitation facilities review current minimum/maximum numbers.

**Strategy 2:** By May 2011, the rehabilitation facilities will conduct a review and provide recommendations to the Regional Council.

**Strategy 3:** By August 2011, the Regional Council will review recommendations and incorporate them into the 2012-17 North Region EMS and Trauma System Plan.

## SYSTEM EVALUATION

### DATA MANAGEMENT

**Hospital Trauma Data:** An important resource for the North Region trauma system is the Washington State Collector Trauma Registry data base. Patient data is provided by transporting prehospital agencies that leave Medical Incident Report Forms (MIRF) or equivalent at the hospitals as required by WAC 246-976-330. These patient record reports are completed for all patients, not just trauma patients. North Region's trauma facilities enter the available prehospital trauma patient care information in their records (Collector) and submit data to DOH. Designated trauma facilities are required to submit data within 90 days after a quarter has been completed.

Currently, the region's Level III trauma designated hospitals rotate the leadership responsibility of planning and facilitating regional QI planning activities. The Regional QI Program is structured to be multi-disciplinary, representing prehospital, hospital and other trauma system partners, such as rehab or dispatch. Any review or analysis of confidential information (patient or provider, data or case review) is discussed in the protected confidential forum. The Regional Council's role is to provide administrative support to coordinate this forum.

North Region Council and the Hospital Facility Committee have expressed the need to better understand the capacity of Collector Trauma Registry. It has been noted by the State that the Trauma Registry is rich with data and has great potential to be utilized more comprehensively by the North Region and in more meaningful ways.

**Prehospital Data Management:** The North Region Council and regional stakeholders have been involved at various levels in the development and implementation of the Washington State EMS Information System (WEMSIS), a web-based data reporting system. WEMSIS will enable North Region agencies to securely collect, analyze and report EMS data.

Currently, two counties (Skagit and Island) in North Region have made the commitment and financial investment to participate in the WEMSIS program. Both counties are in the early stages of collecting data. Skagit County has focused and been involved in the web-based data collection for several years, but only recently (November 2008) switched to the WEMSIS program. As of February 2009, Island County set up the 911 CAD bridge interface necessary to implement their program needs. Friday Harbor in San Juan County is reporting on WEMIS and it's expected that the other agencies in San Juan County will eventually come on board. The two larger counties in North Region, Snohomish and Whatcom are both interested in WEMSIS, but are currently reviewing costs for the various bridge interfaces needed to implement county-wide programs.

Through the work identified in state's "WEMSIS Mentor Contract" with North Region, every agency in the region has been provided basic information on the opportunities of WEMIS. The region facilitated several orientations of the WEMSIS Program, and facilitated a Mentor Training that resulted in 25 representatives receiving Mentor Training and 11 of the participants (including the North Region Administrator) agreeing to be Mentors. The expectation for the Regional Mentors is to be willing to assist other prehospital agencies with a basic overview of the WEMSIS Program opportunities and/or be the point of contact within their community to assist other agencies interested in the WEMSIS program.

**The Regional Council needs to identify and address barriers to prehospital agency participation in the WEMSIS program throughout the region and continue to coordinate and support implementation of the program.**

#### **EVALUATION**

**North Region Trauma Quality Improvement Program:** the North Region Trauma QI Program is defined in law and is the responsibility of the Level II and III designated trauma services in the region. There are currently no Level II designated trauma services. The region's Level III trauma designated hospitals rotate the leadership responsibility of planning and facilitating regional Trauma QI planning activities. The Regional Trauma QI Program is structured to be multi-disciplinary, representing prehospital, hospital and other trauma system partners, such as rehab or dispatch. Any review or analysis of confidential information (patient or provider, data or case review) is discussed in the protected confidential forum. The Regional Council provides administrative support to this forum.

The State DOH Trauma Research & Data Analyst is generally present at all regional QI committee meetings and provides the North Region with custom Trauma Registry QI reports. This State representative assists the region by providing specific data requested for research, education and performance improvement.

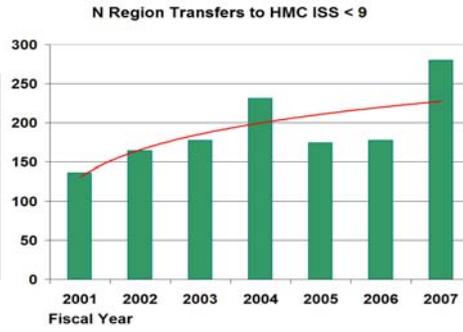
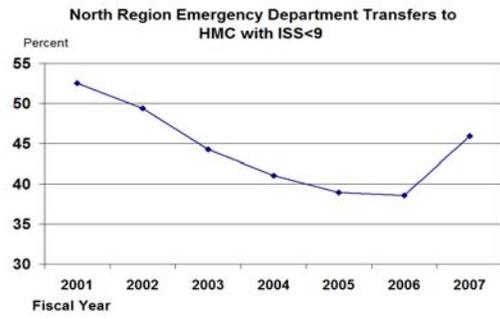
The North Region Council has expressed the desire to better identify performance areas that need to be evaluated. This would include routine measurement of specific data elements, as well as identifying the questions that need to be asked and answered with the data.

Increased utilization of Collector data would be beneficial for individual hospital facilities and for the county and regional levels in the development of more effective QI and Evaluation Programs. Ideally, these vested individuals also need to investigate potential threats to valid and unbiased data and that the data measurement collected is consistent.

**The Regional Council needs to better understand the capacity of the Trauma Registry and seek out training opportunities that will provide improved report development and report interpretation / analysis skills. These are needed for general system evaluation outside of the Regional Trauma QI Program**

**North Region stakeholder representatives need to routinely measure, monitor and evaluate at a minimum the following Trauma Registry performance improvements:**

- 1. Analysis of flow of patients out of region and developing a guide as to how to assess this patient flow: example might be an acceptable over-triage rate from field to HMC of 20% as a goal.**
- 2. Analysis of hospital transfers out, and what services are missing that would minimize transfer out less severely injured patients, e.g. ISS < 9. The charts below currently show an increased trend.**



## SYSTEM EVALUATION

<b>- Goal #17 -</b>	
The Regional EMS and Trauma Care System have data management capabilities to support evaluation and improvement.	
<b>Objective 1:</b> By <u>August 2010</u> , the Region Council will conduct a survey of the North Region licensed prehospital EMS agencies to evaluate the use of WEMSIS throughout the region and identify barriers that need to be addressed to reach improved capacity for WEMSIS use within the plan period.	<b>Strategy 1:</b> By <u>January 2010</u> , the Regional Prehospital Committee and Council Administrator will work with State DOH in the development of a survey which will evaluate the use of WEMSIS by prehospital agencies within the North Region.
	<b>Strategy 2:</b> By <u>March 2010</u> , the Council Administrator will conduct a WEMSIS evaluation survey of the licensed prehospital EMS agencies.
	<b>Strategy 3:</b> By <u>August 2010</u> , the Regional Council with DOH assistance, will analyze the survey results, write a summary report and provide the report to local councils, to DOH, and other groups determined for use in planning the 2012-2017 North Region Plan.
<b>Objective 2:</b> By <u>May 2011</u> 90% of licensed prehospital EMS agencies in the North Region will have the capability to access WEMSIS and will be collecting and submitting EMS run data, using WEMSIS reports	<b>Strategy 1:</b> By <u>September 2010</u> , the Regional Council will utilize WEMSIS survey data and barrier analysis to determine strategies for assisting any prehospital EMS agencies not using WEMSIS to be able to do so.
	<b>Strategy 2:</b> By <u>May 2011</u> , the Regional Council will partner with DOH to assist non participating agencies in collecting EMS run data and all agencies in using WEMSIS reporting capabilities.
<b>Objective 3:</b> By <u>May 2011</u> , the North Region Council will enhance system QI by facilitating the sharing of local quality improvement programs and processes.	<b>Strategy 1:</b> By <u>January 2011</u> , the Regional Council and Administrator will identify and survey the existence of QI/QA programs currently in place at the local level.
	<b>Strategy 2:</b> By <u>May 2011</u> , the Regional Council and Administrator will summarize and communicate summary of existing QI programs within the region.

<b>- Goal #18 -</b>	
The EMS and Trauma Care System has comprehensive, data-driven quality improvement (QI) processes at the local and regional levels.	
<b>Objective 1:</b> <u>Throughout July 2009 – June, 2012</u> , the Regional QI Committee will utilize aggregated data during QI committee meetings to evaluate patient care and other areas of system performance and will provide summary reports to the Region Council and MPDs for system evaluation planning.	<b>Strategy 1:</b> By <u>December annually</u> , the Regional QI Committee will request and use State DOH data in regular Regional QI Committee meetings.
	<b>Strategy 2:</b> By <u>December annually</u> , the Regional QI Committee will provide a written summary report at a Regional Council meeting and to MPDs on system level issues and findings for use in ongoing regional system evaluation and planning.
<b>Objective 2:</b> By <u>December 2010</u> ,	<b>Strategy 1:</b> By <u>September 2010</u> , the Council will work

<p>region and local councils will use system data at least annually to evaluate the EMS and Trauma System and plan for system development.</p>	<p>with DOH and identify system reports available from State DOH data bases that are useful in the regional system and select standard reports to receive at regional and local council levels.</p>
	<p><b>Strategy 2:</b> By <u>September 2010</u>, the Council will adopt a process for analyzing the data reports and making information available at regional and local county levels.</p>
	<p><b>Strategy 3:</b> By <u>December 2010</u>, both region and local councils will use selected data reports to develop system recommendations for planning and system development.</p>
<p><b>Objective 3:</b> By <u>December 2010</u>, the Regional Council will develop, implement and begin monitoring system performance measures in conjunction with state performance measures.</p>	<p><b>Strategy 1:</b> By <u>June 2010</u>, the Council will develop an initial set of system performance measures.</p>
	<p><b>Strategy 2:</b> By <u>December 2010</u>, the Council will implement the performance measures.</p>
	<p><b>Strategy 3:</b> By <u>December 2010</u>, the Council will develop and implement a performance measure monitoring system.</p>

## APPENDICES

### Appendix 1

**Approved Min/Max numbers of Verified Trauma Services by Level and Type by County** (repeat for each county)

<i>North Region</i> County	Service Type	DOH Approved		Current
		Minimum	Maximum	
<b>North Region Summary</b>	Aid – BLS	31	1	41
	Aid – ILS	0	0	0
	Aid – ALS	0	0	0
	Amb – BLS	40	73	31
	Amb – ILS	0	4	0
	Amb – ALS	19	24	22
	<b>REGION TOTALS</b>	<b>115</b>	<b>202</b>	<b>90</b>

<b>Island County</b>	Aid – BLS	4	5	4
	Aid – ILS	0	0	0
	Aid – ALS	0	0	0
	Amb – BLS	2	2	1
	Amb – ILS	0	0	0
	Amb – ALS	1	3	2
	<b>TOTALS</b>	<b>7</b>	<b>10</b>	<b>7</b>

<b>San Juan</b>	Aid – BLS	0	9	0
	Aid – ILS	0	0	0
	Aid – ALS	0	0	0
	Amb – BLS	1	10	1
	Amb – ILS	0	0	0
	Amb – ALS	1	4	3
	<b>TOTALS</b>	<b>2</b>	<b>23</b>	<b>4</b>

<b>Skagit</b>	Aid – BLS	13	27	23
	Aid – ILS	0	0	0
	Aid – ALS	0	0	0
	Amb – BLS	13	27	1
	Amb – ILS	0	0	0
	Amb – ALS	3	3	3
	<b>TOTALS</b>	<b>29</b>	<b>57</b>	<b>27</b>

<b>Snohomish</b>	Aid – BLS	10	10	8
	Aid – ILS	0	0	0
	Aid – ALS	0	0	0
	Amb – BLS	12	15	14
	Amb – ILS	0	4	0
	Amb – ALS	13	13	13
	<b>TOTALS</b>	<b>35</b>	<b>42</b>	<b>35</b>

<b>Whatcom</b>	Aid – BLS	0	20	4
	Aid – ILS	0	0	0
	Aid – ALS	0	0	0

<i>North Region</i>		DOH Approved		
<i>County</i>	<i>Service Type</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Current</i>
	Amb – BLS	12	19	16
	Amb – ILS	0	1	0
	Amb - ALS	1	1	1
	<b>TOTALS</b>	<b>13</b>	<b>41</b>	<b>21</b>

## Appendix 2

### Trauma Response Areas by County

#### Trauma Response Areas – Island County

Area #	ISLAND COUNTY – DESCRIPTION	# Verified Services, by level					
		A	B	C	D	E	F
1	Camano Island, including Camano Island State Park and Cama Beach.	-	-	-	-	-	1
2	North Whidbey Island, within boundaries of North Whidbey Fire & Rescue #2, excluding City of Oak Harbor. Also includes boundaries of Deception State Park and Joseph Whidbey State Park.	1	-	-	-	-	1*
3	NAS Whidbey (Federal military property)-Ault Field Base: Boundary North of Ault Field Road, South of De Graff Road and West of the Highway 20. <u>Seaplane Base</u> : East of the City of Oak Harbor, South of Crescent Harbor Road.	-	-	-	1	-	1*
4	City of Oak Harbor	1	-	-	-	-	1*
5	Central Whidbey Island, within the boundaries of Central Whidbey Fire & Rescue #5, including the City of Coupeville. Also includes Fort Ebey State Park and Fort Casey State Park.	1	-	-	-	-	1*
6	South Whidbey Island, within boundaries of South Whidbey Island Fire & Rescue #3, including the cities of Langley and Clinton. Also includes South Whidbey State Park.	1	-	-	-	-	1*
	<b>WHITE AREA:</b> <i>Island County Sherriff's Department provides helicopter response to the smaller islands when Island County agency marine vessels are not available.</i>	Wilderness areas – service “as soon as possible” from nearest available units, regardless of county or verification status. Backup response from nearest available trauma verified service.					
7	<b>Islands of:</b> Baby, Ben Ure, Kalamut, Minor, Smith and Strawberry. All seven of these islands are located on the Whidbey Island part of the county.	**1					**1
8	<b>Island of:</b> Deception. This island, located within the Island County boundaries, actually has a Skagit County agency response by Erie Fire Department for BLS and Anacortes Fire for ALS response.	-	-	-	***1	-	***1

\*ALS service provided by Whidbey General Hospital

\*\*The islands are located off the shores of Whidbey Island and are under the jurisdiction of the Island County Sherriff's Department. Local fire department agencies will respond via Marine rescue if equipment is available. Otherwise, the Sherriff's Department will respond with their Search & Rescue helicopter.

\*\*\*This island (Deception) is located in Island County, but response is provided for by Skagit County, Mount Erie Fire Department for BLS response and Anacortes Fire Department for ALS response.

**KEY:** **A** (Aid-BLS), **B** (Aid – ILS), **C** (Aid – ALS), **D** (Amb – BLS), **E** (Amb – ILS) and **F** (Amb – ALS)

#### Trauma Response Areas – San Juan County

Area #	SAN JUAN COUNTY - DESCRIPTION	# Verified Services, by level					
		A	B	C	D	E	F
1	<b>Orcas Island</b> , within the boundaries of San Juan County FD#2. To include Skull Island, Picnic Island, Victims Island and Double Island.	-	-	-	-	-	1
2	<b>Lopez Island</b> , within the boundaries of San Juan County FD#4. To include Flower Island, Boulder Island, Castle Island	-	-	-	1	-	-

Area #	SAN JUAN COUNTY - DESCRIPTION	# Verified Services, by level					
		A	B	C	D	E	F
	and Colville Island.						
3	<b>Shaw Island</b> , within the boundaries of San Juan County FD#5	1	-	-	-	-	-
4	<b>San Juan Island</b> , within the boundaries of San Juan County Public Hospital District #1, San Juan EMS. To include Henry, Stuart, Spieden, Brown, Johns, and Pearl Islands.	-	-	-	-	-	1
4	<b>Stuart Island, Satellite Island:</b> North of Roche Harbor; North of Posey Island, North of Henry Island and North of San Juan Island. West of Waldron Island and Northwest of John's Island.	-	-	-	-	-	1
4	<b>Johns Island, Ripple Island:</b> North of Roche Harbor, Southeast of Stuart Island, North of Posey Island, North of Henry Island and North of San Juan Island. West of Waldron Island and Southeast of Stuart and Satellite Islands.	-	-	-	-	-	1
4	<b>Spieden Island, Sentinel Island and Cactus Islands:</b> South of John's Island. West of Flat Top Island.	-	-	-	-	-	1
4	<b>Baren Island:</b> Northwest shore of San Juan Island. South of Sentinel and Spieden Islands. North of Posey and Pearl Island.						
4	<b>Posey Island:</b> Northwest shore of San Juan Island. North of Roche Harbor: South of Stuart Island Johns Island, Spieden Island and Sentinel Island. North of Henry Island and North of San Juan Island.	-	-	-	-	-	1
4	<b>Pearl Island:</b> Northwest shore of San Juan Island. Northwest of Roche Harbor: South of Stuart Island Johns Island, Spieden Island and Sentinel Island. Northeast of Henry Island and North of San Juan Island.	-	-	-	-	-	1
4	<b>Henry Island:</b> Northwest shore of San Juan Island. West of Roche Harbor, South of Stuart Island, John's Island and Spieden and Sentinel Islands.	-	-	-	-	-	1
4	<b>Guss Island:</b> Northwest shore of San Juan Island. In a cove South of Roche Harbor. North of Heron Lane and East of Shorett Road.	-	-	-	-	-	1
4	<b>O'Neal Island:</b> Off northeast shore of San Juan Island in Rocky Bay. Opposite side of Roche Harbor.	-	-	-	-	-	1
	<b>WHITE AREAS:</b> <i>San Juan County Sheriff's Department provides helicopter response to the smaller island, but are contracted with San Juan EMS to provide ALS personnel and Equipment.</i>	Wilderness areas – service “as soon as possible” from nearest available units, regardless of county or verification status. Backup response from nearest available trauma verified service.					
4	<b>Battleship Island:</b> Northwest shore of San Juan Island. Northwest of Henry Island.	-	-	-	-	-	*1
5	<b>Patos Island:</b> North of Sucia and Matia Islands, and North of East Sound, Orcas Island. Includes Patos Island State Park.	-	-	-	-	-	*1
6	<b>Sucia Island:</b> North of Matia Island, Sound of Patos Island, and North of East Sound, Orcas Island.	-	-	-	-	-	*1
7	<b>Matia Island, Puffin Island and Fig Island:</b> South of Patos and Sucia Islands, North of East Sound, Orcas Island.	-	-	-	-	-	*1
8	<b>Clark Island, Barns Island and The Sisters Islands (3 small islands):</b> East of East Sound, Orcas Island. South of Matia Island.	-	-	-	-	-	*1
9	<b>Waldron Island and Skip Jack Island:</b> Northwest of East Sound, Orcas Island. East of Johns Island and Stuart Island.	-	-	-	-	-	*1
10	<b>Flat Top Island:</b> Southwest of Waldron Island, and west of Spieden Island.	-	-	-	-	-	*1
11	<b>Jones Island:</b> Northwest of Shaw Island. West of Roche Harbor and East of Deer Harbor. Located between Orcas Island and San Juan Island.	-	-	-	-	-	*1
12	<b>Crane Island, Yellow Island McConnell Island, Reef Island and Cliff Island and Bell Islands:</b> Northwest of Shaw Island.	-	-	-	-	-	*1

Area #	SAN JUAN COUNTY - DESCRIPTION	# Verified Services, by level					
		A	B	C	D	E	F
	Southwest of Orcas Island, Northwest of San Juan Island. South of Jones Island.						
13	<b>Obstruction Island:</b> North of Blakely Island.	-	-	-	-	-	*1
14	<b>Blakely Island, Frost Island and Willow Island:</b> North of Decatur Island, Northwest of Lopez Island.	-	-	-	-	-	*1
15	<b>Decatur Island, Trump Island, Center Island and Ram Island:</b> West of Lopez Island, South of Blakely Island.	-	-	-	-	-	*1
16	<b>Center Island:</b> East of Lopez Island, West of Decatur Island North of Center Island. Includes Center Island Airport.	-	-	-	-	-	*1
17	<b>James Island:</b> East of Decatur Island. Includes James Island St. Park.	-	-	-	-	-	*1
18	<b>Charles Island, Buck Island, Long Island, Hall Island:</b> South of Lopez Island on west side.	-	-	-	-	-	*1

\*These islands are under the jurisdiction of San Juan Sheriff's Department, but are contracted with San Juan EMS to provide ALS personnel and equipment.

**KEY:** **A** (Aid-BLS), **B** (Aid – ILS), **C** (Aid – ALS), **D** (Amb – BLS), **E** (Amb – ILS) and **F** (Amb – ALS)

### Trauma Response Areas – Skagit County

Area #	SKAGIT COUNTY – DESCRIPTION	# Verified Services, by level					
		A	B	C	D	E	F
1	City of Anacortes, as well as three islands outside the City of Anacortes boundaries, Burrows Island, Young Island and Allan Island.	-	-	-	1	-	1*
2	City of Burlington	-	-	-	-	-	1*
3	City of Concrete	-	-	-	-	-	1*
4	City of Hamilton	1	-	-	-	-	1*
5	City of La Conner	1	-	-	-	-	1*
6	City of Lyman	1	-	-	-	-	1*
7	City of Mount Vernon	1	-	-	-	-	1*
8	City of Sedro Woolley	1	-	-	-	-	1*
9	Just outside the city limits of Mount Vernon, within boundaries of Skagit County Fire District #1 (part of Burlingame Road, River Bend Road, by Crosby Drive and area off Little Mountain).	1	-	-	-	-	1*
10	West of Mount Vernon, within boundaries of Skagit County Fire District #2 (McLean Road)	1	-	-	-	-	1*
11	Area surrounding Conway, within boundaries of Skagit County Fire District #3 (Conway)	-	-	-	-	-	1*
12	East of Mount Vernon, within boundaries of Skagit County Fire District #4 (Clear Lake)	1	-	-	-	-	1*
13	Northwest of Mount Vernon, within boundaries of Skagit County Fire District #5 (Bow and parts of Edison)	1	-	-	-	-	1*
14	Surrounding City of Burlington, within boundaries of Skagit County Fire District #6	-	-	-	-	-	1*
15	East of Mount Vernon, within boundaries of Skagit County Fire District #7 (Lake Cavanaugh)	1	-	-	-	-	1*
16	North and East of Sedro Woolley, within boundaries of Skagit County Fire District #8	1	-	-	-	-	1*
17	East of Mount Vernon, within boundaries of Skagit County Fire District #9 (Big Lake)	1	-	-	-	-	1*
18	Area surrounding Concrete, within boundaries of Skagit County Fire District #10	-	-	-	-	-	1*
19	Southwest of Anacortes, within boundaries of Skagit County Fire District #11 (Mt. Erie)	1	-	-	-	-	1*
20	West of Mount Vernon, within boundaries of Skagit County	1	-	-	-	-	1*

Area #	SKAGIT COUNTY – DESCRIPTION	# Verified Services, by level					
		A	B	C	D	E	F
	Fire District #12 (Bay View and parts of Edison)						
21	East of Anacortes, within boundaries of Skagit County Fire District #13 (Hope Island/Summit Park)	1	-	-	-	-	1*
22	North of Mount Vernon, within boundaries of Skagit County Fire District #14 (Alger)	1	-	-	-	-	1*
23	East of Conway, within boundaries of Skagit County Fire District #15 (Lake McMurray)	1	-	-	-	-	1*
24	West of Concrete, within boundaries of Skagit County Fire District #16 (Day Creek)	1	-	-	-	-	1*
25	Guemes Island, within boundaries of Skagit County Fire District #17	1	-	-	-	-	1*
26	East of Concrete, within boundaries of Skagit County Fire District #19 (Rockport/Marblemount)	1	-	-	-	-	1*
27	North of Darrington, within boundaries of Aero Skagit response area and Rockport Fire Department	1**	-	-	-	-	1**
28	Swinomish Reservation	1	-	-	-	-	1*
29	Upper Skagit Tribe – “Helmic” area	1	-	-	-	-	1*
30	Upper Skagit Tribe – “Casino” area	1	-	-	-	-	1*
31	North Cascades National Park	Wilderness areas – service “as soon as possible” from nearest available units, regardless of county or verification status. Backup response from nearest available trauma verified service.					
32	Mount Baker Snoqualmie National Forest						
33	Okanogan National Forest						
	<b>WHITE AREAS:</b> <i>Skagit County does not have a county search and rescue. In area A, B, C, D and E, the area is either an island that is uninhabited most of the time or is DNR Land. If response was needed in these areas, the forest service personnel would have to get the patient to the nearest Skagit County Fire District.</i>	Wilderness areas – service “as soon as possible” from nearest available units, regardless of county or verification status. Backup response from nearest available trauma verified service.					
A	Cypress Island, Sinclair and Vandovi Islands: NO RESPONSE.	-	-	-	-	-	-
B	Burrows & Allan Islands – UNPROTECTED National Forest and/or State DNR Land		-	-	-	-	-
C	Hat Island – UNPROTECTED National Forest and/or State DNR Land	-	-	-	-	-	-
D	East of Chuckanut Drive along Whatcom County Border; West of Lk Samish Road; North of Wood Road – UNPROTECTED National Forest and/or State DNR Land	-	-	-	-	-	-
E	Between Alger/Cain Lake Road and Hwy 9; North of Prairie Road – UNPROTECTED National Forest and/or State DNR Land	-	-	-	-	-	-
F	South of Prairie Road; East of F&S Grade Road; West of I-5; North of Kelleher Road and within the boundaries of Fire District #6 (BLS); ALS: Skagit EMS Commission	1	-	-	-	-	1*
G	West of Sterling Road; East of Sedro Woolley; North of Francis/Asplund Road; North of Skagit River and within the Boundaries of Fire District #8 (BLS); ALS: Central Valley Medic One	1	-	-	-	-	1*
H	West of Sterling Road; East of Sedro Woolley; North of Francis/Asplund Road; South of Skagit River and within the Boundaries of Fire District #4 (BLS); ALS: Central Valley Medic One	1	-	-	-	-	1*
I	West of Fruitdale Road; West of River Lane; North of Francis Road – NO PROTECTION Island/Underwater at High Tide	-	-	-	-	-	-

Area #	SKAGIT COUNTY – DESCRIPTION	# Verified Services, by level					
		A	B	C	D	E	F
J	South of Hickox Road; West of E. Stackpole Road and within the Boundaries of Fire District #3 (BLS); ALS: Central Valley Medic One	1	-	-	-	-	1*
K	East of Hwy. 9; North of Hwy. 534 – NO PROTECTION Back of Little Mountain; National Forest and/or State DNR Land	-	-	-	-	-	-
L	North of Lyman/Concrete to Whatcom County Border; West of Hwy. 9 to Hwy. 20 and beyond the boundaries of Fire District #19 to Okanogan County Border – NO PROTECTION National Forest and/or State DNR Land	-	-	-	-	-	-
M	South of Lyman/Concrete to Snohomish County Border; West of Hwy. 9 to Hwy. 20 and beyond the boundaries of Districts #19, #10, & #24 to Okanogan County Border – NO PROTECTION National Forest and/or State DNR Land	-	-	-	-	-	-
O	West of Kamb Road, South of Calhoun Road; East of Samish Fork Skagit River; North of Hickox Road – NO PROTECTION National Forest and/or State DNR Land	-	-	-	-	-	-

\*All areas of Skagit County are provided ALS Services by: Anacortes Fire, Aero Skagit, and Central Skagit Medic One via contracts with Skagit County EMS Commission.

\*\*Service is provided by EMS agencies based in Snohomish County.

**KEY:** **A** (Aid-BLS), **B** (Aid – ILS), **C** (Aid – ALS), **D** (Amb – BLS), **E** (Amb – ILS) and **F** (Amb – ALS)

### Trauma Response Areas – Snohomish County (Need to check what “2” means)

Area #	SNOHOMISH COUNTY – DESCRIPTION	# Verified Services, by level					
		A	B	C	D	E	F
1	City of Arlington	-	-	-	-	-	1
2	City of Bothell (in Snohomish Co.)	-	-	-	-	-	2*
3	City of Darrington plus area within boundaries of Aero Skagit Response	-	-	-	2	-	1
4	Cities of Edmonds and Woodway	-	-	-	-	-	1
5	City of Everett	-	-	-	-	-	1
6	City of Lynwood	-	-	-	-	-	1
7	City of Marysville plus areas within boundaries of Snohomish County Fire District #15	-	-	-	-	-	1
8	City of Monroe plus area within boundaries of Snohomish County Fire District #3	-	-	-	-	-	1
9	City of Mukilteo	-	-	-	1	-	1
10	City of Stanwood and Camano Island Fire & Rescue	1	-	-	-	-	1
11	South of Everett, within boundaries of Snohomish County Fire District #1 (including cities of Brier, Mountlake Terrace and Silver Lake)	-	-	-	-	-	1
12	City of Snohomish and area within boundaries of Snohomish County Fire District #4	-	-	-	1	-	1
13	City of Sultan and area within boundaries of Snohomish County Fire District #5	-	-	-	1	-	1
14	West of Snohomish, including city of Mill Creek and area within boundaries of Snohomish County Fire District #7	-	-	-	-	-	1
15	City of Lake Stevens and area within boundaries of Snohomish County Fire District #8	-	-	-	-	-	1
16	Area surrounding the part of Bothell located in Snohomish County, including area within boundaries of Snohomish County Fire District #10	-	-	-	1*	-	2*
17	Area surrounding city of Stanwood, within boundaries of Snohomish County Fire District #14	-	-	-	1	-	1
18	Area West of Marysville within boundaries of Snohomish	1	-	-	-	-	1

Area #	SNOHOMISH COUNTY – DESCRIPTION	# Verified Services, by level					
		A	B	C	D	E	F
	County Fire District #15						
19	Area surrounding Lake Roesiger, within boundaries of Snohomish County Fire District #16	1	-	-	-	-	2
20	City of Granite Falls, and surrounding area within boundaries of Snohomish County Fire District #17	-	-	-	1	-	1
21	Bryant, within boundaries of Snohomish County Fire District #18	-	-	-	1	-	1
22	Sylvana, within boundaries of Snohomish County Fire District #19	1	-	-	-	-	1
23	Arlington Heights, within area of Snohomish County Fire District #21	1	-	-	-	-	1
24	Getchell, within boundaries of Snohomish County Fire District #22	-	-	-	1	-	2
25	Robe Valley, within boundaries of Snohomish County Fire District #23	1	-	-	1	-	1
26	Oso, within boundaries of Snohomish County Fire District #25	-	-	-	1	-	1
27	City of Darrington and the boundaries of Snohomish County FD#24.						
28	City of Goldbar, plus area within boundaries of Snohomish County Fire District #26	-	-	-	-	1	1
29	City of Index, plus area within boundaries of Snohomish County Fire District #28	-	-	-	1	-	1
30	Hat Island, (A.K.A. Gedney Island) is a private island, located in Puget Sound, in Snohomish County Washington. The island is west of Everett, between Whidbey Island and Camano Island. The island is small, only 1.5 miles long by a .5 mile wide.	-	-	-	1	-	1
31	Snohomish County Paine Field Airport	1	-	-	2	-	1
32	US Naval Station – Everett	1	-	-	2	-	1
33	Evergreen Speedway	-	-	-	1	-	1
34	Mt Baker Snoqualmie National Forest	Wilderness areas - service "as soon as possible" from nearest available units, regardless of county or verification status. Backup response from nearest available trauma verified service.					
	<b>WHITE AREAS</b>	Wilderness areas - service "as soon as possible" from nearest available units, regardless of county or verification status. Backup response from nearest available trauma verified service.					
A	N Mount Baker Snoqualmie National Forest National Forest and/or State DNR Land: <i>West of Darrington. Parcel of land that is South of White Area F and West of White Area E and has one road running through it, French Creek Road at the southeast corner of the parcel. Contiguous to SCFD#21 to the west and contiguous to SCFD#25 to the north. East and South is National Forest Land.</i>	-	-	-	-	-	1**
B	Mount Baker Snoqualmie National Forest National Forest and/or State DNR Land: <i>Southwest of the City of Darrington, South of White Area A and North of White Area C. Southern border is the Mountain Loop Hwy. Also includes Mud Lake. Contiguous to SCFD#21 to the west and contiguous to SCFD#17 to the south and east is National Forest Land.</i>	-	-	-	-	-	1**
C	Mount Baker Snoqualmie National Forest National Forest and/or State DNR Land: <i>Southwest of the City of Darrington. South of White Area B with a northern boundary of Mountain Loop Hwy. Directly to the west is SCFD#17. Southern boundary is SCFD#19. Northeast</i>	-	-	-	-	-	1**

Area #	SNOHOMISH COUNTY – DESCRIPTION	# Verified Services, by level					
		A	B	C	D	E	F
	boundary is SCFD#23 and southwest boundary is White Area H and National Forest Land.						
D	Mount Baker Snoqualmie National Forest National Forest and/or State DNR Land: Southern boundary is north of SCFD#23. Northern boundary touches White Area B. North and east boundaries are National Forest Land.	-	-	-	-	-	1**
E	Mount Baker Snoqualmie National Forest National Forest and/or State DNR Land: <i>Contiguous to the south side of the City of Darrington and West of the City of Darrington.</i>	-	-	-	-	-	1**
F	Mount Baker Snoqualmie National Forest National Forest and/or State DNR Land: <i>Contiguous to the Skagit County/Snohomish County boundary to the north. SCFD#25 is the western boundary.</i>	-	-	-	-	-	1**
G	Mount Baker Snoqualmie National Forest National Forest and/or State DNR Land: <i>Contiguous</i>	-	-	-	-	-	1**
H	Mount Baker Snoqualmie National Forest National Forest and/or State DNR Land: <i>Sultan Basin that surrounds Spade Lake (Reservoir for the City of Everett). Also the parcel includes other lakes, East Boardman Lake, Big Greider Lake, Boulder Lake, Wallace Lake, and parts of Lake Chaplain (a City of Everett reservoir).</i>	-	-	-	-	-	1**
I	Tulalip Reservation and Boeing Field: North, east and south boundaries is Snohomish County Fire District #15 (Marysville).	-	-	-	-	-	1**
J	SWAMP LAND: West of Lake Stevens/East of Everett. NO RESPONSE.	-	-	-	-	-	1**
K	SWAMP LAND AND FARM LAND: 38 <sup>th</sup> Street SE runs west to east and is perpendicular to 43 <sup>rd</sup> Avenue SE, which SCFD#4 provides response to when needed. On the northeast boundary, SCFD#8 provides response when needed.	-	-	-	-	-	1**
L	BIG HILL: Eastern boundary of the City of Everett, contiguous to SCFD#4 to the southeast and SCFD#8 to the northeast. NO RESPONSE.	-	-	-	-	-	1**
M	Shoreline of the City of Woodway with rail running north and south. South of the City of Edmonds and north of Richmond Beach in King County.	-	-	-	-	-	1**
N	Bob Herman Wildlife Park: Surrounded by SCFD#1 to the north, SCFD#8 to the south and SCFD#4 to the east to provide response when needed.	-	-	-	-	-	1**
O	FARM LAND: Northern boundary of SCFD#4, eastern boundary with SCFD#3 who responds when need and the southwest boundary is along SCFD#7.	-	-	-	-	-	1**
P	Borders King County to the south and has the access road of 119 <sup>th</sup> Avenue SE to Paradise Lake in King County runs north and south. This piece is in Mill Creek and SCFD#7 provides services when needed.	-	-	-	-	-	1**
Q	Borders King County to the south and is contiguous to SCFD#3 Monroe. 157 <sup>th</sup> Avenue SE and 155 <sup>th</sup> Avenue SE run north and south of the property. This piece is in Mill Creek and SCFD#7 provides services when needed.	-	-	-	-	-	1**
R	Borders King County to the south is placed centrally in the SCFD#3 Monroe service area. This area is gated and includes King Lake, Lake Fontal and Lake Hannan.	-	-	-	-	-	1**

\* Area trauma response is from King County.

\*\*Trauma response from Snohomish County Sheriff's Department/Snohomish County Search and Rescue.

**KEY:** **A** (Aid-BLS), **B** (Aid – ILS), **C** (Aid – ALS), **D** (Amb – BLS), **E** (Amb – ILS) and **F** (Amb – ALS)

### Trauma Response Areas - Whatcom County

Area #	Description <i>Whatcom Co.</i>	# Verified Services, by level					
		A	B	C	D	E	F
1	City of Bellingham	-	-	-	-	-	1
2	Bellingham, within boundaries of Whatcom County Fire District #3	-	-	-	1	-	1
3	Bellingham, within boundaries of Whatcom County Fire District #4	-	-	-	1	-	1
4	Marietta, within boundaries of Whatcom County Fire District #8	1	-	-	-	-	1
5	Lake Samish, within boundaries of Whatcom County Fire District #9	-	-	-	1	-	1
6	Bellingham, within boundaries of Whatcom County Fire District #10	1	-	-	-	-	1
7	City of Lynden	-	-	-	1	-	1
8	City of Ferndale	-	-	-	-	-	1
9	Ferndale, within boundaries of Whatcom County Fire District #7	1	-	-	-	-	1
10	City of Blaine	-	-	-	-	-	1
11	City of Everson	-	-	-	-	-	1
12	Everson, within boundaries of Whatcom County Fire District #1	-	-	-	1	-	1
13	City of Sumas	-	-	-	-	-	1
14	Sumas, within boundaries of Whatcom County Fire District #14	-	-	-	1	-	1
15	City of Nooksack	-	-	-	-	-	1
16	City of Newhalem	-	-	-	-	-	1*
17	Geneva, within boundaries of Whatcom County Fire District #2	-	-	-	1	-	1
18	Point Roberts, within boundaries of Whatcom County Fire District #5	-	-	-	1	-	1**
19	Chuckanut, within boundaries of Whatcom County Fire District #6	-	-	-	1	-	1
20	Lummi Island, within boundaries of Whatcom County Fire District #11	-	-	-	1	-	1
21	Birch Bay, within boundaries of Whatcom County Fire District #13	-	-	-	1	-	1
22	Acme, within boundaries of Whatcom County Fire District #16	-	-	-	-	-	1
23	Sandy Point, within boundaries of Whatcom County Fire District #17	1	-	-	-	-	1
24	S. Lake Whatcom, within boundaries of Whatcom County Fire District #18	1	-	-	-	-	1
25	Glacier, within boundaries of Whatcom County Fire District #19	-	-	-	1	-	1
26	Mount Baker Snoqualmie National Forest	Wilderness areas - service "as soon as possible" from nearest available units, regardless of county or verification status. Backup response from nearest available trauma verified service.					
27	North Cascades National Park						
28	Okanogan National Forest						
<b>WHITE AREAS</b>							
A	South of Aldrich Road; West of Rural Ave.	-	-	-	1	-	1
B	South of Frost Road; West of Kendall Lake and N. Fork Rd; - NO PROTECTION National Forest and/or State DNR Land	-	-	-	-	-	-
C	South of Eagle Flyway; West of Hillside Road; East of Y Road; North of White Area F - NO PROTECTION National Forest and/or State DNR Land	-	-	-	-	-	-

Area #	Description	# Verified Services, by level					
		A	B	C	D	E	F
	<b>Whatcom Co.</b>						
D	South of Lake Whatcom; North of Skagit County line and White Area E - NO PROTECTION National Forest and/or State DNR Land	-	-	-	-	-	-
E	North of Skagit County Line; East of Coast - NO PROTECTION National Forest and/or State DNR Land	-	-	-	-	-	-
F	South of Canadian Border; East of Silver Lake Road; North of Maple Falls - NO PROTECTION National Forest and/or State DNR Land	-	-	-	-	-	-
G	South of Maple Falls; to Skagit County Line; East of Mosquito Lake Road - NO PROTECTION National Forest and/or State DNR Land	-	-	-	-	-	-

Response is from a Skagit County trauma verified service.

\*\*Airlift Northwest provides primary ALS service.

**KEY:** **A** (Aid-BLS), **B** (Aid – ILS), **C** (Aid – ALS), **D** (Amb – BLS), **E** (Amb – ILS) and **F** (Amb – ALS)

**\*Key: For each level the type and number should be indicated**

Aid-BLS = A                      Ambulance-BLS = D

Aid-ILS = B                      Ambulance-ILS = E

Aid-ALS = C                      Ambulance-ALS = F

\*\*Explanation: The *type and number* column of this table accounts for the level of care available in a specific trauma response area that is provided by verified services. Some verified services (agencies) may provide a level of care in multiple trauma response areas therefore the **total type and number of verified services depicted in the table may not represent the actual number of State verified services available in a county; it may be a larger number in Trauma Response Area table.** The verified service minimum/maximum table will provide accurate verified service numbers for counties.

### Appendix 3

**A. Approved Minimum/Maximum (Min/Max) numbers of Designated Trauma Care Services in the Region (General Acute Trauma Services) by level**

Level	State Approved		Current Status
	Min	Max	
II	1	1	1
III	1	1	1
IV	3	3	3
V	1	2	0
II P	0	1	0
III P	0	1	1

**B. Approved Minimum/Maximum (min/max) numbers of Designated Rehabilitation Trauma Care Services in the Region by level**

Level	State Approved		Current Status
	Min	Max	
II	1	1	2
III*			

\*There are no restrictions on the number of Level III Rehabilitation Services

## **Appendix 4**

# **NORTH REGION**

## **Regional Patient Care Procedures (PCPs)**



# NORTH REGION EMS & TRAUMA CARE SYSTEM

## Operational Guidelines

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### PATIENT CARE PROCEDURES #1

#### Access to Prehospital EMS Care

##### OBJECTIVE

To define elements of the Regional EMS and trauma system necessary to assure rapid universal access to 911 and E-911, rapid identification of emergent situations, rapid dispatch of medical personnel, management of medical pre-arrival needs, rapid identification of incident location.

##### STANDARD 1

Region-wide access to emergency response shall be by 911 from all private and public telephones. Enhanced 911 is the preferred access capability, where available.

##### STANDARD 2

Emergency medical dispatch training for all dispatchers is the recommended standard of care. It is recommended that dispatch centers require emergency medical training for all dispatchers. The format shall be approved by the county MPD. A reference system for use by trained dispatchers shall provide dispatch decision criteria consistent with county patient care and level of care standards. Pre-arrival instructions for patient care should be a component.

##### STANDARD 3

Each county shall participate in a regional program of residence identification to enhance rapid EMS arrival. Establishing standards for addressing and emergency indicators are program elements.

# NORTH REGION EMS & TRAUMA CARE SYSTEM

## Operational Guidelines

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### PATIENT CARE PROCEDURE #2

#### Identification of Major Trauma Patients

#### OBJECTIVE

To define which patient injuries and severities are classified as major trauma for the purpose of:

- field triage
- hospital resource team activation
- registry inclusion
- regional quality improvement program

#### STANDARD 1

Major trauma patients will be identified in the initial EMS field assessment using the most current State of Washington Prehospital Trauma Triage Procedures as published by DOH-EMS and Trauma Section.

#### STANDARD 2

Major trauma patients will be identified by the region's hospitals for the purpose of trauma resource team activation including the trauma surgeon using the Prehospital Index (PHI) score of 4 or greater as a minimum threshold for trauma team activation for adults and children over 14 years old. For children 14 and younger, the Pediatric Trauma Score will be used and a score of 8 or less will be used for activation of the trauma resource team, or the decision for direct air transport to a designated Level 1 Pediatric Trauma Center.

A trauma resource team activation for adult PHI score of 4 or greater and Pediatric Trauma Score of 8 or less will be described by all North Region hospitals in their designation proposal as the trauma resource team activation threshold.

#### STANDARD 3

Major trauma patients will be identified by the region's Prehospital services and hospitals for the purposes of state trauma registry inclusion using the trauma registry inclusion criteria as outlined in WAC 246-976-430.

#### STANDARD 4

Major trauma patients will be identified for the purposes of regional quality improvement as:

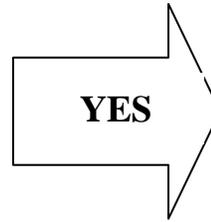
- patients who meet the Trauma System Activation criteria of the most current version of the State of Washington Prehospital Triage Procedures Step 1 and 2 and others per Medical Control, and
- patients who activate hospital recourse teams and those who meet the hospital trauma patient registry inclusion criteria.

**STATE OF WASHINGTON PREHOSPITAL TRAUMA TRIAGE [DESTINATION] PROCEDURES**

- Prehospital triage [is based on the following 3 steps: Steps 1 and 2 require Prehospital EMS personnel to modify medical control and activate the Trauma System. Activation of the Trauma System in Step 3 is determined by medical control]\*\*

**STEP 1**  
**ASSESS VITAL SIGNS & LEVEL OF CONSCIOUSNESS**

- Systolic BP <90\*
- HR > 120\*
  - for pediatric (< 15y) pts. use BP <90 or capillary refill >2 sec.
  - for pediatric (< 15y) pts. use HR <60 or >120
- Respiratory Rate < 10 > 29 associated with evidence of distress



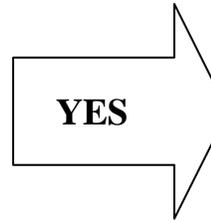
1. Take patient to the highest level trauma center within 30 minutes transport time via ground or air transport according to DOH approved regional patient care procedures
2. Apply "Trauma ID Band" to patient.

\*\*If Prehospital personnel are unable to effectively manage airway, consider rendezvous with ALS, or intermediate stop at nearest facility capable of immediate definitive airway management.



**STEP 2**  
**ASSESS ANATOMY OF INJURY**

- Penetrating injury of head, neck, torso, groin: OR
- Combination of burns >= 20% or involving face or airway; OR
- Amputation above wrist or ankle; OR
- Spinal cord injury; OR
- Flail chest; OR
- Two or more obvious proximal long bone fractures.

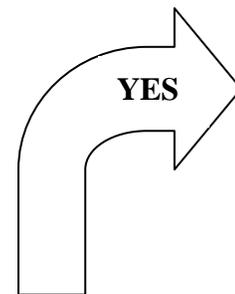


1. Take patient to the highest level trauma center within 30 minutes transport time via ground or air transport according to DOH approved regional patient care procedures
2. Apply "Trauma ID Band" to patient.

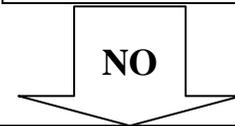


**STEP 3**  
**ASSESS BIOMECHANICS OF INJURY AND OTHER RISK FACTORS**

- Death of same care occupant; OR
- Ejection of patient from enclosed vehicle; OR
- Falls >= 20 feet; OR
- Pedestrian hit at >= 20 mph or thrown 15 feet
- High energy transfer situation
  - Rollover
  - Motorcycle, ATV, bicycle accident
  - Extrication time of > 20 minutes
- Extremes of age < 15 or > 60
- Hostile environment (extremes of heat or cold)
- Medical illness (such as COPD, CHF, renal failure, etc.)
- Second/Third trimester pregnancy
- Gut feeling of medic



**CONTACT  
MEDICAL  
CONTROL  
FOR  
DESTINATION**



**TRANSPORT PATIENT PER REGIONAL PATIENT CARE PROCEDURES**

## STATE OF WASHINGTON PREHOSPITAL TRAUMA TRIAGE (DESTINATION) PROCEDURE

### Purpose

The purpose of the Triage Procedure is to ensure that major trauma patients are transported to the most appropriate hospital facility. This procedure has been developed by the Prehospital Technical Advisory Committee (TAC), endorsed by the Governor's EMS and Trauma Care Steering Committee, and in accordance with RCW 70.168 and WAC 246-976 adopted by the Department of Health (DOH).

The procedure is described in the schematic with narrative. Its purpose is to provide the Prehospital provider, with quick identification of a major trauma victim. If the patient is a major trauma patient, that patient or patients must be taken to the highest level trauma facility within 30 minutes transport time, by either ground or air. To determine whether an injury is major trauma, the Prehospital provider shall conduct the patient assessment process according to the trauma triage procedure.

### Explanation of Process

- A. Any certified EMS and Trauma person can identify a major trauma patient and activate the trauma system. This may include requesting more advanced Prehospital services or aero-medical evacuation.
- B. The first step (1) is to assess the vital signs and level of consciousness. The words "Altered mental status" mean anyone with an altered neurological exam ranging from completely unconscious, to someone who responds to painful stimuli only, or a verbal response which is confused, or an abnormal motor response.

The "and/or" conditions in Step 1 mean that any one of the entities listed in Step 1 can activate the trauma system.

Also, the asterisk (\*) means that if the airway is in jeopardy and the on-scene person cannot effectively manage the airway, the patient should be taken to the nearest medical facility or consider meeting up with an ALS unit. These factors are true regardless of the assessment of other vital signs and level of consciousness.

- C. The second step (2) is to assess the anatomy of injury. The specific injuries noted require activation of the trauma system. Even in the assessment of normal vital signs or normal levels of consciousness, the presence of any of the specific anatomical injuries does require activation of the trauma system.

Please note that steps 1 and 2 also require notifying Medical Control.

- D. The third step (3) for the Prehospital provider is to assess the biomechanics of the injury and address other risk factors. The conditions identified are reasons for the provider to contact and consult with Medical Control regarding the need to activate the system. They do not automatically require system activation by the Prehospital provider.

Other risk factors, coupled with the "gut feeling" of savers injury, means that Medical Control should be consulted and consideration given to transporting the patient to the nearest trauma facility.

Please note that certain burn patients (in addition to those listed on Step 2) should be considered for immediate transport or referral to a burn center/unit.

**Patient Care Procedures**

To the right of the attached schematic you will find the words "according to DOH approved regional patient care procedures." These procedures are developed by the regional EMS and Trauma council in conjunction with local councils. They are intended to further define how the system is to operate. They identify the level of medical care personnel who participated in the system, their roles in the system, and participation of hospital facilities in the system. They also address the issue of inter-hospital transfer, by transfer agreements for identification, and transfer of critical care patients.

In summary, the Prehospital Trauma Triage Procedures and the Regional Patient Care Procedures are intended to work in a "hand in glove" fashion to effectively address EMS and Trauma patient care needs. By functioning in this manner, these two instruments can effectively reduce morbidity and mortality.

If you have any questions on the use of either instrument, you should bring them to the attention of your local or regional EMS and Trauma council or contact 1-800-458-5281.

**Pediatric Trauma Score (14 years old or less)**

ASSESSMENT	SCORE		
	+ 2	+ 1	- 1
Size/Weight	Child/Adolescent > 44 lbs ( > 22 kg)	Toddler 24 - 44 lbs ( 11 - 20 kg)	Infant < 24 lbs ( < 11 kg)
Airway	Normal	Oral or Nasal Airway	Intubated
Blood Pressure	> 90 mmHg; or good peripheral pulses, perfusion	50 - 90 mmHg; or carotid/femoral pulses palpable	< 50 mmHg; or weak or no pulses
Level of Consciousness	Completely awake	Obtunded or history of loss of consciousness	Comatose/Unresponsive
Open Wound	None	Concussion, abrasion; laceration < 7 cm	Major or penetrating
Fractures	None	Single closed fracture anywhere	Open or multiple fracture
TOTALS:			
<b>TOTAL:</b>			<input type="text"/>
<p><i>8 or less - Major Trauma</i></p> <ul style="list-style-type: none"> <li>• Incoming via ground - Activate Trauma Code</li> <li>• Incoming via MedFlight - transport to Harborview</li> </ul> <p><i>9 or greater - Minor Trauma</i></p> <ul style="list-style-type: none"> <li>• Treat in Emergency Department</li> </ul>			

Systolic BP	> 100	0
	86 - 100	1
	75 - 85	2
	0 - 74	5

Pulse	> 120	3
	51 - 119	0
	< 50	5
Respirations	Normal	0
	Labored/shallow	3
	< 10 min. or Intubated	5
Consciousness	Normal	0
	Confused/combatative	3
	Incomprehensible words	5
Penetrating Injury to neck, chest abdomen		4
0 - 3	Minor trauma	
4 - 24	Major trauma -- trauma code activation	
<b>PHI:</b>		

# NORTH REGION EMS & TRAUMA CARE SYSTEM

## Operational Guidelines

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### PATIENT CARE PROCEDURE # 3

#### Trauma System Activation

##### OBJECTIVE

To define the components of trauma system activation on a regional level.

To clarify that the Prehospital component of trauma system activation includes identification of major trauma patients in the field (using the State of Washington Prehospital Trauma Triage [Destination] Procedure), and early notification and consultation with medical control, trauma center transport and data collection and submission.

To clarify that the hospital component of trauma system activation includes recognition of the critical trauma patients need to ED and surgical intervention and activation of the hospitals trauma resources, and data collection and submission.

##### STANDARD 1

Dispatch center personnel shall identify major trauma calls using the State of Washington Prehospital Trauma Triage [Destination] Procedure and shall dispatch verified trauma services according to the regional standard for identification of the level of medical care personnel to be dispatched to the scene of major trauma and to transport major trauma and state law. (Patient Care Procedure #4)

##### STANDARD 2

The response and transport services dispatched to the scene will confirm the patient meets major trauma patient parameters according to the State of Washington Prehospital Trauma Triage [Destination] Procedure.

##### STANDARD 3

The response and transport service personnel providing care shall place a trauma patient identification number band on all patients who activate the Trauma System according to the State of Washington Prehospital Trauma Triage [Destination] Procedure.

##### STANDARD 4

The transporting service will provide a patient report to medical control identifying each major trauma patient transported that meets the triage criteria. For STEP 1 patients to a 20 minute ETA notification is required to facilitate trauma surgeon arrival in the ED.

##### STANDARD 5

Trauma verified transport services shall take identified trauma patients who activate the Trauma System to designated trauma centers in accordance with state requirements and the regional standard *transport of patients to designated trauma centers* (Patient Care Procedure #8). (This standard will not apply until the state trauma center designation process is complete. Until then, Prehospital services will transport major trauma patients to the local facility that can provide the appropriate level of care needed by the patient.)

**STANDARD 6**

The response and transport services will provide patient data to the Department of Health for all patients identified as meeting the triage criteria (major trauma patients requiring transport to trauma centers) on the State of Washington Prehospital Trauma Triage [Destination] Procedure for trauma registry use. The transport service will provide written documentation of the call 95% of the time prior to leaving the ED.

**STANDARD 7**

On-line Medical Control at the receiving hospital will utilize the Pre-Hospital Index (PHI) trauma patient scoring system for adults and children over 14 years old to identify the *minimum threshold of activation of a hospital Trauma Team response*. For pediatric major trauma patient 14 years of age or younger, the Pediatric Trauma Score will be utilized. Trauma Team activation includes notification of the Trauma Surgeon.

**STANDARD 8**

Designated trauma centers will collect and submit data on major trauma patients for trauma registry use in accordance with WAC requirements.

**STANDARD 9**

Injured patients who **do not meet** Prehospital triage criteria for activation of the trauma system and all other patients will be transported to local facilities based on county Prehospital patient care protocols and procedures.

# NORTH REGION EMS & TRAUMA CARE SYSTEM

## Operational Guidelines

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### PATIENT CARE PROCEDURE # 4

#### Identification of the Level of Medical Care Personnel to be Dispatched to the Scene of Major Trauma and to Transport Major Trauma

##### OBJECTIVE

To define the role of BLS and ALS services (agency and its units) in emergency response to reported major trauma incidents.

To define the role of BLS and ALS services in transporting major trauma patients.

##### STANDARD 1

For initial response to reported major trauma incidents the closest, designated local ALS or BLS trauma verified EMS service shall respond.

##### STANDARD 2

Where the closest designated local trauma verified service is BLS, a trauma verified ALS service shall respond simultaneously for all reported major trauma patient.

##### STANDARD 3

For transport of identified major trauma patients in Steps 1 and 2 of the State of Washington Prehospital Trauma Triage [Destination] Procedure, a designated local trauma verified ALS service shall provide transport.

##### STANDARD 4

For transport of identified major trauma patients in the "consult medical control portion of the State of Washington Prehospital Trauma Triage [Destination] Procedure", ALS or BLS transport shall be at the discretion of Medical Control from the receiving trauma center. In either case, the transport service shall be trauma verified, including air transport service.

##### STANDARD 5

For multi-casualty, major trauma incidents which exhaust resources of the local EMS system, mutual aid from BLS and ALS verified trauma services shall be activated using the county and inter-county procedures. Trauma verified ALS services shall transport the Step 1 and Step 2 patients as identified through the State of Washington Trauma Triage [Destination] Procedure tool when possible. Transport designated trauma facilities will be under the direction of Medical Control or Incident Command structure depend on the magnitude of the event.

# NORTH REGION EMS & TRAUMA CARE SYSTEM

## Operational Guidelines

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### PATIENT CARE PROCEDURE # 5

#### Prehospital Response Times

#### OBJECTIVE

To define Prehospital response times for major trauma to urban, suburban, and rural and wilderness areas in the North Region.

To define urban, suburban, rural and wilderness response areas.

#### STANDARD 1

**Response:** When responding for major trauma to an urban area, initial response units will arrive at the scene within 5 minutes of 80% of the time.

**Transport:** When responding for major trauma to an urban area, ALS transport units will arrive within 8 minutes of 80% of the time.

#### STANDARD 2

**Response:** When responding for major trauma to a suburban area, initial response units will arrive at the scene within 5 minutes 80% of the time.

**Transport:** When responding for major trauma to a suburban area, ALS transport units will arrive within 10 minutes 80% of the time.

#### STANDARD 3

**Response:** When responding for major trauma to a rural area, initial response units will arrive at the scene within 12 minutes 80% of the time.

**Transport:** When responding for major trauma to a rural area, ALS transport units will arrive within 20 minutes 80% of the time.

#### STANDARD 4

**Response:** When responding for major trauma to a wilderness area, initial response units will arrive at the scene within 40 minutes 80% of the time.

**Transport:** When responding for major trauma to a wilderness area, ALS transport units will arrive within 80% of the time.

#### STANDARD 5

When the initial response unit is also the transport unit and there is no other initial Prehospital tiered response system in place, initial response time standards will apply to the dual purpose unit as follows:

- to urban areas                      5 minutes 80% of the time
- to suburban areas                 5 minutes 80% of the time

- to rural areas 12 minutes 89% of the time
- to wilderness areas 40 minutes 80% of the time

- Urban Area:** An incorporated area over 30,000; or  
An incorporated or unincorporated area of at least 10,000 people and a population density over 2,000 people per square mile.
- Suburban Area:** An incorporated or unincorporated area with a population of 10,000 to 29,999 or any area with a population density of 1,000 to 2,000 people per square mile
- Rural Area:** An incorporated or unincorporated area with total population less than 10,000 people, or with population density of less than 1,000 people per square mile.
- Wilderness Area:** Any rural area not readily accessible by public or private maintained road.

# NORTH REGION EMS & TRAUMA CARE SYSTEM

## Operational Guidelines

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### PATIENT CARE PROCEDURE # 6

#### Activation of Air Ambulance services for Field Response to Major Trauma

##### OBJECTIVE

To define how helicopter activation for major field response is accomplished in the Region.

##### STANDARD 1

The decision to activate air ambulance service for field response to major trauma in urban and rural areas shall be made by the highest trained responder, who can be a First Responder, EMT or Paramedic, from the scene *with* on-line medical control consultation when needed. Where ICS is used, the commander shall be an integral part of this process.

##### STANDARD 2

The decision to activate air ambulance services for field response to major trauma in wilderness areas shall be made by anyone familiar with EMS in the area.

##### STANDARD 3

Aero-medical programs requested to respond will follow their internal policies for accepting a field mission.

# NORTH REGION EMS & TRAUMA CARE SYSTEM

## Operational Guidelines

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### PATIENT CARE PROCEDURE # 7

#### Transport of Patients Outside of Base Area

#### OBJECTIVE

To define responsibility for patient care for major trauma transports outside base coverage areas, counties and EMS Regions.

To define the procedure for transfer of responsibility during transports outside base areas, counties and EMS Regions.

#### STANDARD 1

Patients transferred out of any local base coverage area (from either the base hospital or the field) are initially the responsibility of local on-line medical control. Local Prehospital protocols will be followed by Prehospital personnel. Initial orders, which are consistent with local Prehospital protocols, will be obtained from base station on-line medical control.

#### STANDARD 2

When transport service crosses into *destination* jurisdiction, the destination on-line medical control will be contacted and given the following information:

- brief history
- pertinent physical findings
- summary of treatment (per protocols and per orders from base medical control)
- response to therapy
- current condition

#### STANDARD 3

The destination medication control physician may add further orders if they are within the capabilities of the transport personnel and consistent with the provider's local medical protocols.

#### STANDARD 4

The nearest trauma center base station will be contacted during transport should the patient's condition deteriorate and/or assistance is needed. The transporting unit (ground or air) may divert to the closest trauma center as dictated by the patient's condition.

#### STANDARD 5

Pre-hospital providers will follow local county protocols.

# NORTH REGION EMS & TRAUMA CARE SYSTEM

## Operational Guidelines

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### PATIENT CARE PROCEDURE # 8

#### Transport of Patients to Designated Trauma Centers

##### OBJECTIVES

To define the flow of major trauma patients from the incident scene to hospitals in the region and inter-regionally.

##### STANDARD 1

Prehospital service personnel will identify injured patients as "major trauma patients" using the state of Washington Prehospital Trauma Triage [Destination] Procedure identification tool.

##### STANDARD 2

Prehospital trauma patients identified as meeting "trauma System Activation" criteria (major trauma patient in Step 1 and Step 2 and anyone in Step 3 [State of Washington Prehospital Trauma Triage [Destination] Procedure Tool] by order of medical control) shall be transported to the highest level designated trauma center hospital within 30 minutes. (The 30 minutes is calculated from the time of the departure of the transport vehicle from the scene and the ETA at the designated trauma center.)

##### STANDARD 3

For Prehospital trauma patients identified as meeting the criteria for Consulting Medical Control, the on-line medical control physician will determine if the patient activates the trauma system. If it is determined that the trauma patient does activate the trauma system, the patient shall be taken to the highest level designated trauma center within 30 minutes. If the on-line medical control physician (the only Emergency Department physician) determines the trauma patient does not activate the trauma system the medical control physician will determine the destination of the patient, which may include non-designated hospitals. It shall be on the on-line medical control physician's responsibility to communicate the patient's trauma system activation status and the destination decision to the transporting service.

##### STANDARD 4

Major trauma patients with special needs, as in head injury, burns, intra-thoracic injury, and pediatric trauma will be considered for direct transport, by ground or air, to the highest level designated inter-regional trauma center with capabilities to manage the patient. Medical control will determine the patient destination. This standard recognizes longer transport times.

# NORTH REGION EMS & TRAUMA CARE SYSTEM

## Operational Guidelines

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### PATIENT CARE PROCEDURES #9

#### Designated Trauma Center Diversion

#### OBJECTIVE

To define implications for initiation of trauma center diversion (bypass) status in the Region.

To define methods for notification of initiation of trauma center diversion.

#### STANDARD 1

Designated trauma centers in the Region will go on diversion for receiving major trauma patients based on the facilities' inability to provide initial resuscitation, diagnostic procedures and operative intervention at the designated level of care.

#### STANDARD 2

Diversion will be categorized as *partial* or *total* based on the inability of the facility to manage specific types of major trauma or all traumas at the time.

Hospitals must consider diversion when:

- Surgeon is unavailable
- OR is unavailable
- CT is down if Level II
- Neurosurgeon is unavailable if Level II
- ER unable to manage more major trauma

#### STANDARD 3

Each designated trauma center will have a hospital approved policy to divert patient to other designated facilities based on its ability to manage each patient at a particular time. A diversion log will be kept indicating the time of diversion and the reason for partial or total diversion.

#### STANDARD 4

All facilities imitating diversion must provide notification to other regional trauma centers.

# NORTH REGION EMS & TRAUMA CARE SYSTEM

## Operational Guidelines

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### PATIENT CARE PROCEDURES #10

### Activation of Hospital Trauma Resuscitation Team

#### OBJECTIVE

To define region-wide minimum activation criteria for hospital trauma resuscitation teams.

#### STANDARD 1

The Prehospital Index (PHI) (trauma patient severity scoring tool) will be utilized for trauma patients over 14 years of age. Patients with a PHI score of 4 or greater than 4 will automatically trigger the activation of the hospital trauma resuscitation team including response by the surgeon on trauma call.\* The PHI will be calculated by the medical control physician from the Prehospital medic radio report and shall be based on the patient's initial condition (prior to Prehospital treatment). When possible, the Prehospital report will be called to the Emergency Department 20 minutes prior to the estimated time of arrival, to allow for notification and response of the surgeon on call for trauma.

Trauma patients over 14 years of age, who arrive at the ED by private car or EMS transport and have a Prehospital Index score of 4 or greater on arrival will automatically trigger a hospital trauma resuscitation team activation including surgeon response.

#### STANDARD 2

The Pediatric Trauma Score (trauma patient severity scoring tool) will be utilized for pediatric trauma patients (0 to 14 years of age). Pediatric trauma patients with a Pediatric Trauma Score of 8 or less will automatically trigger the activation of the hospital trauma resuscitation team including response by the surgeon on trauma call. The Pediatric Trauma Score will be calculated by the on-line medical control physician from the Prehospital radio report and be based on the patient's initial condition (prior to Prehospital treatment). When possible, the Prehospital report will be called to the Emergency Department 20 minutes prior to the estimated time of arrival, to allow for notification response of the surgeon on call for trauma.

Pediatric trauma patients who arrive at the ED by private car or EMS transport and have a Pediatric Trauma Score of 8 or less will automatically trigger a hospital trauma resuscitation team activation including surgeon response.

#### STANDARD 3

A hospital may set a higher standard for activation of its hospital trauma resuscitation team.

# NORTH REGION EMS & TRAUMA CARE SYSTEM

## Operational Guidelines

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### PATIENT CARE PROCEDURES #11

### Inter-Facility Transfer Of Major Trauma Patients

#### OBJECTIVE

To define the referral resources for inter-facility transfers of major trauma patients requiring a higher level of care or transfer due to situational adult and pediatric inability to provide care.

To recommend criteria for inter-facility transfer of adult and pediatric major trauma patients from receiving facility to a higher level of care.

#### STANDARD 1

All inter-facility transfers will be consistent with OBRA/COBRA regulations as defined by WAC.

#### STANDARD 2

Written transfer agreements will be in place among all facilities in the region and tertiary care facilities commonly referred to which are out of the region. A standard regional transfer agreement shall be utilized.

#### STANDARD 3

Level III, IV and V facilities are recommended to consider transferring the following adult and pediatric patients to Level I or II facilities for post resuscitation care:

##### Central Nervous System Injury D<sub>3</sub>

- Head injury with any one of the following:
  - open, penetrating, or depressed skull fracture
  - CSF leak
  - severe coma (Glasgow Coma Score < 10)
  - deterioration on Coma Score of 2 or more points
  - lateralizing signs
- Unstable spine
- Spinal cord injury (any level)

##### Chest Injury D<sub>x</sub>

- Suspected great vessel or cardiac injuries
- Major chest wall injury
- Patients who may require protracted ventilation

##### Pelvis Injury D<sub>x</sub>

- Pelvic ring disruption with shock requiring more than 5 units of blood transfusion
- Evidence of continued hemorrhage
- Compound/open pelvic fracture or pelvic visceral injury

##### Multiple System Injury D<sub>x</sub>

- Severe facial injury with head injury

- Chest injury with head injury
- Abdominal or pelvic injury with head injury
- Burns with head injury

**Specialized Problems**

- Burns > 20% BSA or involving airway
- Carbon monoxide poisoning
- Barotrauma

**Secondary Deterioration (Late Sequelae)**

- Patient requiring mechanical ventilation
- Sepsis
- Organ system(s) failure (deterioration in CNS, Cardiac, Pulmonary, Hepatic, Renal, or Coagulation systems)
- Osteomyelitis

**STANDARD 4**

All pediatric patients < 15 years who are triaged under Step 1 or Step 2 of the Prehospital triage tool or are unstable after ED resuscitation or emergent operative intervention at hospitals with general designations should be considered for immediate transfer to a Level I designated pediatric trauma center hospital.

**STANDARD 5**

For inter-facility transfer of critical major trauma patients, air or ground ALS transport is the standard. Transport of patients out of base area, standards (Patient Care Procedure #7) shall be followed. Trauma verified services shall be used for inter-facility transfers.

# NORTH REGION EMS & TRAUMA CARE SYSTEM

## Operational Guidelines

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### PATIENT CARE PROCEDURES #12

#### Regional All Hazards (Mass Casualty Incident)

**I. STANDARD:** EMS personnel, licensed ambulance and licensed aid services shall respond to a Mass Casualty Incident (MCI) as identified in this document.

1. All verified ambulance and verified aid services shall respond to an MCI per the county MCI plans.
2. Licensed ambulance and licensed aid services shall assist during an MCI per county MCI plans when requested by command through dispatch in support of county MCI Plan and/or support of verified EMS services.
3. EMS certified first response personnel shall assist during an MCI per county MCI plans when requested by command through dispatch in support of county MCI Plan and/or in support of verified EMS services.
4. Pre-identified patient mass transportation, EMS staff and equipment to support patient care may be used.
5. All EMS agencies working during an MCI event shall operate within the National Incident Management System (NIMS) or the Incident Command System (ICS) as identified in the jurisdiction that has authority, protocol and MCI plan.

#### **II. PURPOSE:**

1. To develop and communicate the information or regional trauma plan section VII prior to an MCI.
2. To implement county MCI plans during an MCI.
3. **Severe Burns:** *To provide trauma and burn care to severely injured adults and pediatric patients per region.*
4. To provide safe mass transportation with pre-identified EMS personnel, equipment, and supplies per the approved County Disaster Plan and/or the Hazardous Mitigation Plan.

#### **III. PROCEDURES:**

1. Incident Commander (IC) shall follow the county MCI Plan to inform medical control and possible appropriate medical facilities when an MCI condition exists. (Refer to county specific Department of Emergency Management Disaster Plan).
2. Medical Program directors agree that protocols being used by the responding agency should continue to be used throughout the transport of the patient, whether it is in another county, region or state. This ensures consistent patient care will be provided by personnel trained to use specific medicines, equipment, procedure, and/or protocols until delivery at the receiving facility has been completed.
3. EMS personnel may use the **Prehospital Mass Casualty Incident General Algorithm** (attached) during the MCI incident.

#### **IV. QUALITY IMPROVEMENT:**

The North Region Education and Prehospital Committees will review this PCP upon receipt of suggested modifications from a regional provider, the North Region Quality Improvement (QI) Committee, the Department of Health, or any other entity suggesting modifications to the document, at least biennially.

**V. DEFINITIONS:**

- **CBRNE** – Chemical, Biological, Radiological, Nuclear, Explosive
- **County Disaster Plan** – County Emergency Management Plan (CEMP)
- **Medical Control** – MPD authority to direct medical care provided by certified EMS personnel in the prehospital system.
- **Hospital Control** – Hospital identified in the county MCI plan as the control hospital.

**Prehospital Mass Casualty Incident (IC) General Algorithm**

Receive dispatch

Respond as directed

Arrive at scene and establish Incident Command (IC)

Scene assessment and size-up

Determine if mass casualty conditions exist

Implement county MCI plan

Request additional resources as needed

The dispatch center shall coordinate notification and dispatch of required agencies and resources including notification of the County Department of Emergency management (DEM) and hospital control. The Local Health Jurisdiction (LHJ) shall be notified in events where a public health threat exists.

Identify hazards and determine needs to control or eliminate them. Take immediate action to isolate and deny access (Site Access Control) or mitigate the hazards as necessary to prevent additional injuries. Consider possibility of terrorist attack (WMD, secondary device).

Initiate START

Reaffirm additional resources

Initiate ICS 201 or similar tactical worksheet (see attached)

Upon arrival at Medical Center, transfer care of patients to medical center’s staff (medical center should activate their respective MCI Plan as necessary)

Prepare transport vehicle and return to service

## **Appendix 5**

### **July 2009- June 2012 Regional Plan Gantt Chart**

## APPENDICES - ADDITIONAL

### Appendix A

The following are the current licensed and verified EMS agencies serving the region:

ISLAND COUNTY			
1	15D01	Island County Fire District #1	ALS Verified Ambulance
2	15D02	North Whidbey Fire & Rescue	BLS Verified Aid Vehicle
3	15D03	Island County Fire District #3	BLS Verified Aid Vehicle
4	15D05	Island County Fire District #5	BLS Verified Aid Vehicle
5	15M04	Oak Harbor Fire Department	BLS Verified Aid Vehicle
6	15S01	Naval Region NW F&R/NAS Whidbey	N/A Licensed Ambulance
7	15X01	Whidbey General Hospital EMS	ALS Verified Ambulance
8	15X02	Naval Hospital Oak Harbor EMS	BLS Verified Ambulance
SAN JUAN COUNTY			
1	28D02	San Juan County Fire District #2	ALS Verified Ambulance
2	28D04	San Juan County Fire District #4	ALS Verified Ambulance
3	28D05	San Juan County Fire District #5	BLS Verified Ambulance
4	28X02	San Juan Island EMS	ALS Verified Ambulance
SKAGIT COUNTY			
1	29D01	Skagit County Fire District #1	BLS Verified Aid Vehicle
2	29D02	Skagit County Fire District #2	BLS Verified Aid Vehicle
3	29D03	Skagit County Fire District #3	BLS Verified Aid Vehicle
4	29D04	Skagit County Fire District #4	BLS Verified Aid Vehicle
5	29D05	Skagit County Fire District #5	BLS Verified Aid Vehicle
6	29D06	Skagit County Fire District #6 Burlington Fire Department	BLS Verified Aid Vehicle
7	29D07	Skagit County Fire District #7	BLS Verified Aid Vehicle
8	29D08	Skagit County Fire District #8	BLS Verified Aid Vehicle
9	29D09	Skagit County Fire District #9	BLS Verified Aid Vehicle
10	29D10	Skagit County Fire District #10	BLS Verified Aid Vehicle
11	29D11	Skagit County Fire District #11 Mt. Erie	BLS Verified Aid Vehicle
12	29D12	Skagit County Fire District #12	BLS Verified Aid Vehicle
13	29D13	Skagit County Fire District #13	BLS Verified Aid Vehicle
14	29D14	Skagit County Fire District #14	BLS Verified Aid Vehicle
15	29D15	Skagit County Fire District #15	BLS Verified Aid Vehicle
16	29D16	Skagit County Fire District #16	BLS Verified Aid Vehicle
17	29D17	Skagit County Fire District #17	BLS Verified Aid Vehicle
18	29D19	Skagit County Fire District #19	BLS Verified Aid Vehicle
19	29M01	Anacortes Fire Department	ALS Verified Ambulance
20	29M04	Hamilton Fire Department	BLS Verified Aid Vehicle
21	29M05	La Conner Fire Department	BLS Verified Aid Vehicle
23	29M07	Mount Vernon Fire Department	BLS Verified Aid Vehicle
24	29M09	Sedro Woolley Fire Department	BLS Verified Aid Vehicle
25	29X01	Aero-Skagit Emergency	ALS Verified Ambulance
26	29X02	Island Hospital	BLS Licensed Ambulance
27	29X05	Skagit County Search & Rescue	N/A Licensed Aid Vehicle
28	29X06	Skagit Speedway	BLS Licensed Aid Vehicle
29	29X07	Skagit EMS Commission	ALS Verified Ambulance
SNOHOMISH COUNTY			
1	31C02	Snohomish Co Airport/Paine Field	BLS Verified Aid Vehicle
2	31D01	Snohomish County Fire District #1	ALS Verified Ambulance
3	31D04	Snohomish County Fire District #4	ALS Verified Ambulance

4	31D05	Snohomish County Fire District #5	BLS Verified Ambulance
5	31D07	Snohomish County Fire District #7	ALS Verified Ambulance
6	31D08	Snohomish County Fire District #8	ALS Verified Ambulance
7	31D14	Snohomish County Fire District #14	ALS Verified Ambulance
8	31D15	Snohomish County Fire District #15	BLS Verified Aid Vehicle
9	31D16	Snohomish County Fire District #16	BLS Verified Aid Vehicle
10	31D17	Snohomish County Fire District #17	BLS Verified Ambulance
11	31D18	Snohomish County Fire District #18	BLS Verified Ambulance
12	31D19	Snohomish County Fire District #19	BLS Verified Ambulance
13	31D21	Snohomish County Fire District #21	BLS Verified Aid Vehicle
14	31D22	Snohomish County Fire District #22	BLS Verified Ambulance
15	31D23	Snohomish County Fire District #23	BLS Verified Aid Vehicle
16	31D24	Snohomish County Fire District #24	BLS Verified Aid Vehicle
17	31D25	Snohomish County Fire District #25	BLS Verified Ambulance
18	31D26	Snohomish County Fire District #26	ALS Verified Ambulance
19	31D27	Snohomish County Fire District #27	BLS Verified Ambulance
20	31D28	Snohomish County Fire District #28	BLS Verified Ambulance
21	31D29	Island County Fire District #1 Stanwood/Camano Fire & Rescue	ALS Verified Ambulance
22	31M01	Arlington City Fire Department	ALS Verified Ambulance
23	31M03	Edmonds Fire Department	ALS Verified Ambulance
24	31M07	Lynnwood Fire Department	ALS Verified Ambulance
25	31M08	Marysville Fire Department	ALS Verified Ambulance
26	31M09	Monroe Fire Department	ALS Verified Ambulance
27	31M11	Mukilteo Fire Department	BLS Verified Ambulance
28	31M13	Stanwood Fire Department	BLS Verified Aid Vehicle
29	31S03	Navy Region NW F&E	BLS Verified Aid Vehicle
30	31X03	Darrington Ambulance	BLS Verified Ambulance
31	31X04	Rural/Metro Ambulance	BLS Verified Ambulance
32	31X09	Evergreen Speedway	BLS Verified Ambulance
33	31X11	American Medical Response	BLS Verified Ambulance
34	31X12	Northwest Ambulance	BLS Verified Ambulance
<b>WHATCOM COUNTY</b>			
1	37D01	Whatcom County Fire District #1	BLS Verified Ambulance
2	37D02	Whatcom County Fire District #2	BLS Verified Ambulance
3	37D04	Whatcom County Fire District #4	BLS Verified Ambulance
4	37D05	Whatcom County Fire District #5	BLS Verified Ambulance
5	37D06	Whatcom County Fire District #6	BLS Verified Ambulance
6	37D07	Whatcom County Fire District #7	BLS Verified Ambulance
7	37D08	Whatcom County Fire District #8	BLS Verified Ambulance
8	37D09	Whatcom County Fire District #9	BLS Verified Ambulance
9	37D10	Whatcom County Fire District #10	BLS Verified Aid Vehicle
10	37D11	Whatcom County Fire District #11	BLS Verified Ambulance
11	37D14	Whatcom County Fire District #14	BLS Verified Ambulance
12	37D16	Whatcom County Fire District #16	BLS Verified Ambulance
13	37D17	Whatcom County Fire District #17	BLS Verified Aid Vehicle
14	37D18	Whatcom County Fire District #18	BLS Verified Aid Vehicle
15	37D19	Whatcom County Fire District #19	BLS Verified Ambulance
16	37D21	North Whatcom Fire & Rescue Services	BLS Verified Ambulance
17	37M01	Whatcom Medic One	ALS Verified Ambulance
18	37M07	Lynden Fire Department	BLS Verified Ambulance
19	37M08	New Halem/Diablo Volunteer Fire Department	BLS Licensed Aid Vehicle
20	37X02	Cascade Ambulance Service	BLS Verified Ambulance
21	37X03	Rural Metro Ambulance	BLS Verified Ambulance

## Appendix B

### Designated Trauma Services in the North Region

Hospital Facilities	Location	Designation Level	Licensed Beds
<b>ISLAND COUNTY</b> *Whidbey General Hospital	Coupeville	Level III	25
<b>SAN JUAN COUNTY</b> Inter-Island Medical Center	Friday Harbor	Level V	
<b>SKAGIT COUNTY</b> Island Hospital Skagit Valley Hospital *United General Hospital	Anacortes Mount Vernon Sedro Woolly	Level III Level III Level IV	43 137 25
<b>SNOHOMISH COUNTY</b> Cascade Valley Hospital Providence Regional Hospital/Everett Stevens Healthcare Valley General Hospital	Arlington Everett Edmonds Monroe	Level IV Level III / IIIP / IIR Level IV Level IV	48 362 192 72
<b>WHATCOM COUNTY</b> St. Joseph Hospital	Bellingham	Level III/ IIR	253

**\*Critical Access Hospital** **TOTAL LICENSED BEDS 1,157** (Several hospitals in the region are currently under construction with additional licensed beds.)